

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

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

COST (In Millions)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
Total Program Element (PE) Cost	37828	53015	90293	83323	77623	64553	40462	33854	Continuing	Continuing
C2270 Command Post Systems	6027	10218	23109	23490	14966	11282	10471	10063	Continuing	Continuing
C2271 Maneuver C2 Systems	1486	2067	986	446	403	305	0	0	0	5693
C2272 Intelligence C2 Systems	2702	4348	12839	7831	8493	8264	5288	5459	Continuing	Continuing
C2273 Air Operations C2 Systems	4355	6289	16415	25747	23083	8612	6768	4094	Continuing	Continuing
C2274 C2 Warfare Systems	3384	3939	8387	3504	4374	5046	3213	3403	Continuing	Continuing
C2275 Radio Systems	3293	1733	0	0	0	0	0	0	0	5387
C2276 Communications Switching and Control System	1850	1888	1841	229	0	0	0	0	0	5808
C2277 Systems Engineering and Integration	1922	7155	6966	6762	6906	6624	6628	6466	Continuing	Continuing
C2278 Air Defense Weapons Systems	744	2001	9759	9350	9688	11537	2741	3618	Continuing	Continuing
C2315 Training Devices/Simulators	7203	9368	8850	4881	9021	12342	5093	491	Continuing	Continuing
C2500 Close Range UAV Data Links	4862	0	0	0	0	0	0	0	0	4692
C2510 MAGTF CSSE & SE	0	0	1141	1083	689	541	260	260	Continuing	Continuing
C2664 Jount Task Force Enhanced Communications	0	4009	0	0	0	0	0	0	0	0
Quantity of RDT&E Articles										

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 1 of 89)

UNCLASSIFIED

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

DATE

February 1999

BUDGET ACTIVITY

7 - Operational System Development

PE NUMBER AND TITLE

**0206313M Marine Corps Communications
Systems**

(U) **Mission Description and Budget Item Justification:** This program element provides funding to develop the command and control (C2) support and information infrastructures for the Fleet Marine Force and supporting establishment. Doctrinally, the C2 support system and the information infrastructure form two parts of a triad of capabilities which permits command and control systems to be transformed into a complete operating system. The third element of the triad is command and control organization and is not covered in this program element. USMC command and control is divided into six functional areas and one supporting functional area as follows: maneuver C2, intelligence C2, fire support C2, air operations C2, combat service support C2, warfare C2, and C2 support (information processing and communications). Within this program element, subprojects have been grouped by C2 functional area for more efficient planning. Air defense weapons systems have been added to facilitate planning and a separate project is used for systems assigned to the supporting establishment. Subprojects which support the commander's decision processes have been collected into the Command Post Systems project since these systems must work in close cooperation to ensure effective C2 of Marine Air Ground Task Forces. The Coastal Battlefield Reconnaissance and Analysis (COBRA) system is a passive multispectral sensor system capable of operating in a PIONEER unmanned aerial vehicle (UAV). Imagery recorded on the UAV or disseminated via data link is analyzed by the COBRA ground station. Ground station algorithm processing provides near real-time automatic minefield detection with Differential Global Positioning System (DGPS) location accuracy.

(U) **Justification for Budget Activity:** This program is funded under OPERATIONAL SYSTEMS DEVELOPMENT because it encompasses engineering and manufacturing development for upgrade of existing, operational systems.

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 2 of 89)

UNCLASSIFIED

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

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2270

COST (In Millions)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
C2270 Command Post Systems	6027	10218	23109	23490	14966	11282	10471	10063	Continuing	Continuing
Quantity of RDT&E Articles										

A. (U) Mission Description and Budget Item Justification: Systems assigned to this project are to be used by commanders and their staffs to process, fuse, and tailor information to assist decision-making and enhance situational awareness. They will integrate and share information from sources both internal and external to the Marine Air-Ground Task Force (MAGTF) to provide a shared understanding of the battlespace.

1. Decision support integrates information from the seven Command and Control (C2) functional areas and the support function. The information is tailored to support the users' specific needs. As a result of the MAGTF C4I Baseline subproject, an integrated migration strategy is being incorporated into the MAGTF software baseline which will be common across and used by all MAGTF C4I programs.
2. The Tactical Command Operations (TCO) will provide systems to the command post which support Maneuver C2. Maneuver C2 is the executive layer of decision support that pulls and fuses information from other functional areas.
3. The Intelligence Analysis Systems (IAS) supports the employment of reconnaissance, surveillance, and target acquisition resources and the timely planning and processing of all-source intelligence; it ensures that tactical intelligence is tailored to meet specific mission requirements. A Marine Expeditionary Force (MEF) IAS variant will also process signals intelligence.
4. Advanced Field Artillery Tactical Data Systems (AFATDS) will consist of fire support command and control software fielded on Marine Corps common hardware. AFATDS will provide the MAGTF with an automated ability to rapidly integrate, all supporting arm assets into maneuver plans.
5. The Advanced Tactical Air Command Center (ATACC) functions as the operational command post of the MAGTF ACE. It provides automated assistance for planning and executing tactical air operations, and provides voice and data interface with joint and combined Air C2 agencies. The Phase I ATACC was fielded 1st Qtr FY96. The Improved Direct Air Support Center (IDASC) links information and systems needed to conduct Air Operations C2 with Maneuver C2 of the ground combat element of the MAGTF.
6. The Expeditionary Integrated Combat Operations Center (EICOC)/Unit Operations Center (UOC) project develops and transitions two Command and Control Imperative ATDs (the Expeditionary Integrated Combat Operations Center (EICOC) and the Joint Tactical Communications ((JT COMMs) ATDs) into various Marine Corps and Joint Engineering and Manufacturing Development (E&MD) efforts. EICOC development efforts focus on: Cognitive Task Analysis (CTA); enhanced ergonomic physical design; evaluation of advanced multimedia hardware; integration and networking with advanced development communication

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 3 of 89)

UNCLASSIFIED

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

DATE

February 1999

BUDGET ACTIVITY

7 - Operational System Development

PE NUMBER AND TITLE

**0206313M Marine Corps Communications
Systems**

PROJECT

C2270

systems; and advanced software development to support systems integration and advanced battlefield visualization concepts. EICOC developments are tailored to support transition of software and hardware developments as PIPs to the established MAGTF C4I baseline. EICOC is the interim name for the Unit Ops Center (UOC). The UOC name will replace the EICOC name starting with FY00. Unit Operations Center (UOC) will provide a facility and components for the integration of current and planned battlefield automation systems. It will be, in essence a "system of systems" designed to optimize the positioning, interaction, and flow of information among the various staff agencies (G-2, G-3, Operations Directorate, etc.) and their automated information systems and between the unit and higher, adjacent or subordinate units or headquarters. The Marine corps deploys Component/Joint Task Force (JTF/Marine Air Ground Task Force (MAGTF)) command elements throughout the world to fulfill operational requirements, often in joint/combined forces arenas. The UOC is designed in garrison and tactical versions. The tactical version is called the Combat Operations Center (COC) which is an outgrowth of the integrated COC (ICOC), COC-Interim (COC(I)), and the Enhanced COC (ECOC) developments over the last two years. The garrison version is called the Command Center (CC).

PROGRAM ACCOMPLISHMENTS AND PLANS:**(U) FY 1998 Accomplishments:**

- (U) \$ 200 TCO: Completed Phase III ORD requirements.
- (U) \$ 0 TCO: Completed Phase III ORD requirements. (This effort forwarded financed with \$400 FY97 funds.)
- (U) \$ 134 TCO: Initiated the integration of software and hardware changes into existing system and perform testing.
- (U) \$ 517 TCO: Initiated the incorporation of Phase IV ORD requirements.

- (U) \$ 70 TCO: Completed automatic relay message routing.
- (U) \$ 152 IAS: Continued testing of new standard software applications.
- (U) \$ 50 IAS: Continued interoperability testing with system hardware and software modifications.
- (U) \$ 80 IAS: Initiated and tested prototype IAS Workstations.
- (U) \$ 0 IAS: Initiated and tested prototype IAS Workstations. This effort financed with \$117K of FY 97 funds.
- (U) \$ 257 IDASC: Investigated hardware ECPs for the HMD DASC system for improved digital communications capabilities and for computer hardware upgrades
- (U) \$ 0 IDASC: Investigated hardware ECPs for the HMD DASC system for improved digital communications capabilities and for computer hardware upgrades. This effort financed with \$100K of FY 97 funds.
- (U) \$ 229 IDASC: Incorporated and tested new standard software applications which will allow automated communication between the DASC and the fire support coordination center.
- (U) \$ 60 IDASC: Conducted interoperability testing with system modifications to ensure that incorporated modifications will allow automated communications between USMC and joint command and control systems.

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 4 of 89)

UNCLASSIFIED

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE
BUDGET ACTIVITY 7 - Operational System Development		February 1999
PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems		PROJECT C2270
• (U) \$	331 IAS MOD: Initiated hardware ECPs for MEF IAS and IAS suites.	
• (U) \$	150 IAS MOD: Follow-on testing of ECPs and program management support.	
• (U) \$	747 MAGTF C4I Baseline: Continued software development of the MSBL developed to the DII COE . Includes enhanced open system, distributed directory services, distributed file service and enhanced security.	
• (U) \$	448 MAGTF C4I Baseline: Continued software integration to the MSBL.	
• (U) \$	298 MAGTF C4I Baseline: Continued developmental and battle lab testing of MSBL.	
• (U) \$	304 EICOC/UOC: Began investigating GOTS/COTS software/hardware to support automation of Command Post Systems.	
• (U) \$	309 EICOC/UOC: Began integration efforts of GOTS/COTS software/hardware into the Command Post System.	
• (U) \$	148 EICOC/UOC: Began developmental testing of Command Post System.	
• (U) \$	1502 AFATDS: Continued developmental and interoperability efforts with the Army on AFATDS 98 software. This effort will include migration to the DII COE, adding additional fire support functionality, continuing work on identifying a smaller computer for the USMC, preparing test units for a Multi-Service Limited Users Test of AFATDS 98, and in obtaining a Procurement Decision. Army achieves MSIII.	
• (U) \$	0 AFATDS: Continued developmental and interoperability efforts with the Army on AFATDS 98 software. This effort will include migration to the DII COE, adding additional fire support functionality, continuing work on identifying a smaller computer for the USMC, preparing test units for a Multi-Service Limited Users Test of AFATDS 98, and in obtaining a Procurement Decision. This effort financed with \$612K of FY97 funds.	
(U)\$	41 ATACC: Multiple Source Correlation System (MSCS) ECP 97012 for CTT3 integration	
(U)Total \$	6,027	
(U) FY 1999 Planned Program:		
• (U) \$	1098 TCO: Initiate Phase IV ORD requirements.	
• (U) \$	230 TCO: Integrate software changes into existing systems and perform testing.	
• (U) \$	155 IAS: Investigate Hardware/Software interoperability issues in regards to Marine Corps C4I and Joint intelligence and operations systems.	
• (U) \$	548 IAS: Begin development of intelligence applications into the CZPC software baseline.	
• (U) \$	364 IDASC: Investigate hardware ECPs for the HMD DASC system for migration towards a common USMC Aviation Comand and Control Communications System.	
• (U) \$	242 IDASC: Continue testing new standard software applications. Continue interoperability testing with system modifications.	
• (U) \$	231 IAS MOD: Continue investigation of hardware ECPs for MEF IAS and IAS Suites.	
R-1 Line Item 169		Budget Item Justification

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

DATE
February 1999

BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2270
---	---	--------------------------------

- (U) \$ 168 IAS MOD: Continue program management for testing of ECPs.
- (U) \$ 424 MAGTF C4I BASELINE: Continue software development of the MSBL developed to the (DIICOE). Includes enhanced open system, distributed directory services, distributed file service, and enhanced security.
- (U) \$ 284 MAGTF C4I BASELINE: Continue software integration to the MSBL.
- (U) \$ 189 MAGTF C4I BASELINE: Continue developmental and battle lab testing of the MSBL.
- (U) \$ 784 MAGTF C4I BASELINE: Initiate the integration (system level) of Enhanced Position Location Reporting System (EPLRS) with MAGTF C4I tactical data systems.
- (U) \$ 245 MAGTF C4I BASELINE: Initiate the integration (network level) and fusion of EPLRS and MAGTF C4I tactical data systems into a seamless and integrated data network that provides command, control, and situational awareness data connectivity
- (U) \$ 867 MAGTF C4I BASELINE: Begin software development necessary to allow the integration of the Combat Operations Center Interim (COC(I)) into the MAGTF C4I software baseline.
- (U) \$ 375 EICOC/UOC: Continue investigating GOTS/COTS software/hardware to support automation of Command Post Systems.
- (U) \$ 478 EICOC/UOC: Continue integration efforts of GOTS/COTS software/hardware into the Command Post Systems.
- (U) \$ 313 EICOC/UOC: Continue developmental testing of Command Post System.
- (U) \$ 2291 AFATDS: Continue developmental and interoperability efforts with the Army on AFATDS 98 software. This effort will include migration to the DII COE), adding additional fire support functionality, continuing work on identifying a smaller computer for the USMC, preparing test units for a Multi-Service Limited Users Test of AFATDS 98, and in obtaining a Procurement Decision.
- (U) \$ 775 TCAC PIP: M65 Multi land family and integration of CA & TN tools. Integration iwht Joint Signet Systems, complete the Signet analysis toolkit , matches integration
- (U) \$ 157 SBIR: 157K portion of extramural program reserved for Small Businee Innovation Reserch assessment in accordance with 15 USC 638.
- (U)Total \$ 10,218

(U) FY 2000 Planned Program:

- (U) \$ 976 TCO: Begin incorporating Phase V ORD requirements.
- (U) \$ 417 TCO: Complete Phase IV ORD reqt. and Integrate software changes into existing system and perform testing. Complete Phase II ORD requirements.
- (U) \$ 400 TCAC: Develop software to maintain compatability with Signals Intelligence systems.
- (U) \$ 495 TCAC: Integrate signals intelligence correlator.
- (U) \$ 152 IAS MOD: Investigate MEF IAS system Performance enhancement.
- (U) \$ 53 IAS MOD: Conduct system software enhancement

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 6 of 89)

UNCLASSIFIED

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 1999
BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2270
<ul style="list-style-type: none"> • (U) \$ 100 IAS MOD: Conduct system interoperability testing with Marine Corps and Joint systems to include: TCO,GCCS, ASAS, AFATDS,and other emerging systems as needed to ensure Marine Corps compatibility in the joint arena. • (U) \$ 200 IAS MOD: Begin ECP documentation and integration. • (U) \$ 249 IAS MOD: Continue C2PC Intel software development. • (U) \$ 1000 MAGTF C4I BASELINE: Continue the development of improved software in order to maintain pace with the DII COE[GCCS(DISA) & GCCS-M(Navy)]. • (U) \$ 3283 MAGTF C4I BASELINE: Begin the migration of additional functionality segments (11) to the MSLB. • (U) \$ 1802 MAGTF C4I BASELINE: Integration of new software with the systems and existing software. • (U) \$ 1283 MAGTF C4I BASELINE: Continue the certification & security testing of new software to ensure interoperability (Battlelab) (GCCS-M version 3.2 & C2PC version 6.0). • (U) \$ 450 MAGTF C4I BASELINE: Update/Improve the Requirements Traceability Matrix (RTM) & Revalidate the REVIC model estimates. • (U) \$ 2273 AFATDS: Continue developmental and interoperability efforts with the Army on AFATDS 98 software. This effort will include migration to the DII COE), adding additional fire support functionality, continuing work on identifying a small computer for the USMC, preparing test units for a Multi-Service Limited Users Test of AFATDS 98, and in obtaining a Procurement Decision. • (U) \$ 6984 UOC: Begin system engineering development, integration, and manufacture Engineering Development Models (EDMs). • (U) \$ 997 UOC: Begin Tactical Data System (TDS) NT development, engineering, integration and manufacture. • (U) \$ 1995 UOC: System testing and assessment. <p>(U)Total \$ 23,109</p>		
B. (U) <u>Project Change Summary</u>	<u>FY 1998</u>	<u>FY 1999</u>
(U) Previous President's Budget	7,067	9,778
(U) Adjustments to Previous President's Budget	-1,040	+440
(U) Current Budget Submit	6,027	10,218
<p>(U) Change Summary Explanation:</p> <p style="margin-left: 40px;">(U) Funding: FY98: Internal reprogramming actions; \$988K, SBIR assessment in accordance with U.S.C. 638 (f) (1); \$133K. FY00: adjustments due to prioritization of program's within the Marine Corps and minor affordability adjustments.</p> <p style="margin-left: 40px;">(U) Schedule: N/A</p> <p style="margin-left: 40px;">(U) Technical: N/A</p>		
R-1 Line Item 169		Budget Item Justification

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 1999	
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems				PROJECT C2270	

C. (U) <u>Other Program Funding Summary</u>		<u>FY 1998</u>	<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>		
										<u>To</u>	<u>Total</u>
										<u>Compl</u>	<u>Cost</u>
(U) PMC BLI# 463100 TCO		9349	1560	0	0	0	0	0	0	0	10909
(U) PMC BLI# 474700 IAS		9561	10153	0	0	0	0	0	0	0	19714
(U) PMC BLI# 463600 IDASC		3008	1402	0	0	0	0	0	0	0	4410
(U) PMC BLI# 474900 IAS MOD		1383	1658	1407	1445	1369	1379	1406	1419	CONT	CONT
(U) PMC BLI# 463100 AFATDS		0	3553	3074	2958	2341	0	480	2637	0	15043
(U) PMC BLI# 463100 UOC		0	0	0	0	17529	23704	48924	77403	CONT	CONT
(U) TCO (O&MMC)		447	169	707	728	554	570	582	595	CONT	CONT
(U) MEF IAS (O&MMC)		574	1529	1848	1761	0	0	0	0	CONT	CONT
(U) IDASC (O&MMC)		187	144	148	152	155	160	164	168	CONT	CONT
(U) AFATDS (O&MMC)		0	339	428	426	406	420	429	438	CONT	CONT
(U) TCAC (O&MMC)		0	1168	1313	1302	0	0	0	0	CONT	CONT
(U) MEWSS (O&MMC)		790	820	926	930	0	0	0	0	CONT	CONT

(U) Related RDT&E

(U) PE 0301301L (Department of Defense Intelligence and Information Systems/Military Intelligence Integrated Data System/Integrated Data Base I and II) (Defense Intelligence Agency).

(U) Navy Tactical Flag Communication and Control System.

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 8 of 89)

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

DATE **February 1999**

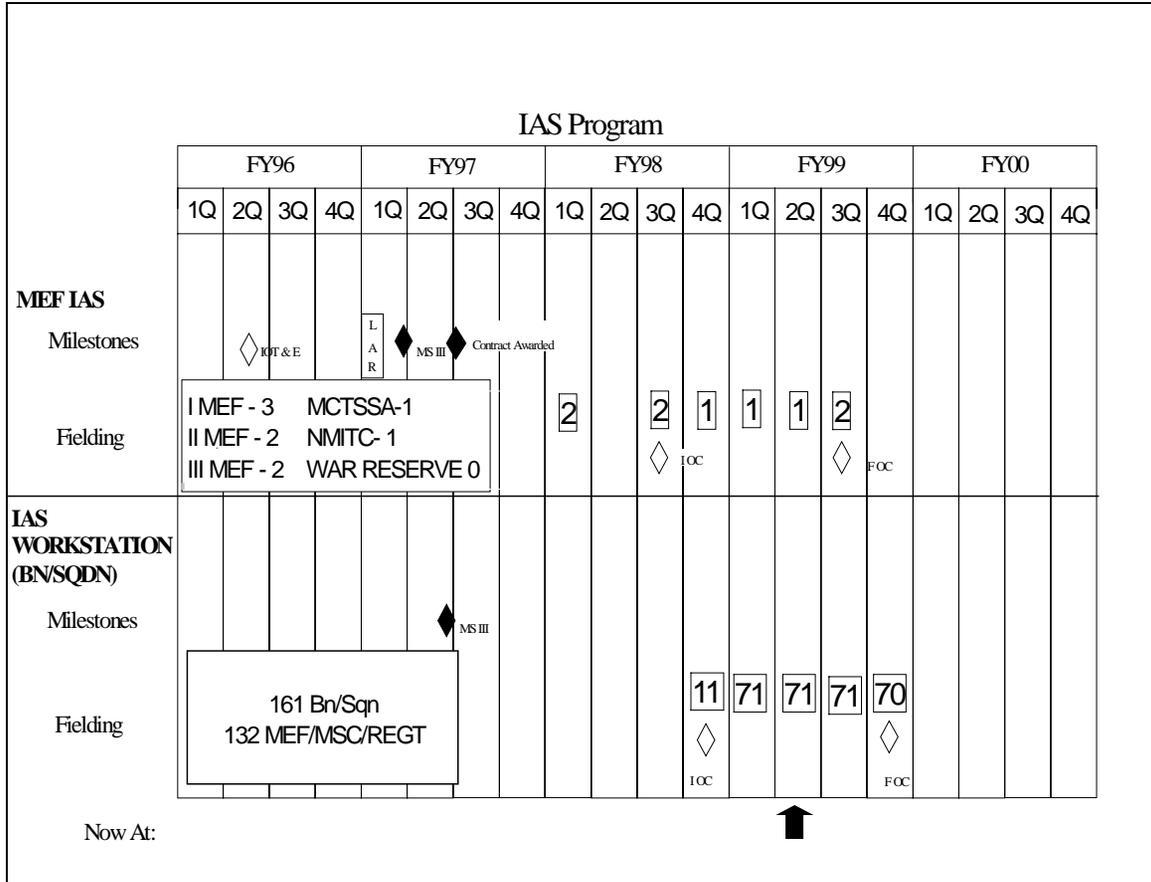
BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2270

D. (U) Schedule Profile

IAS MEF Schedule:



R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 9 of 89)

UNCLASSIFIED

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2270

IAS SUITE Schedule:

		IAS Program																			
		FY96				FY97				FY98				FY99				FY00			
		1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q
IAS SUITE	Milestones	MSIII JAN 93																			
	Fielding					25				10				35				I MEF - 19 II MEF - 16 III MEF - 11 RESERVES - 16 SUPPORT ESTABLISHMENT - 8			
	Now At:					◆ Ioc				◆ FOC				↑							

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 10 of 89)

UNCLASSIFIED

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

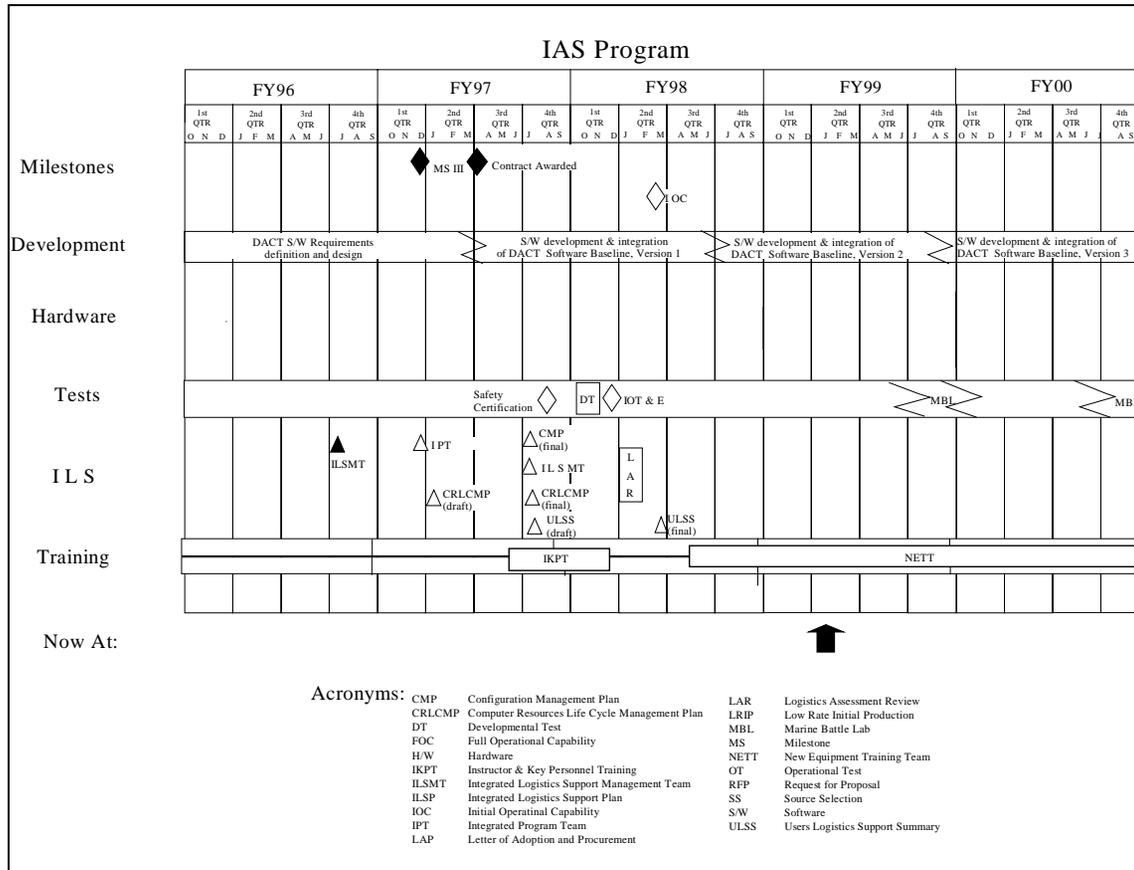
DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2270

IAS Program Schedule:



R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 11 of 89)

UNCLASSIFIED

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2270

AFATDS Schedule:



Advanced Field Artillery Tactical Data System

SW MATERIAL RELEASE

FY 98				FY 99				FY 00				FY 01			
1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4

AFATDS 98



MATERIAL RELEASE

A98 LUT

AFATDS 99



MATERIAL RELEASE

A99 LUT

AFATDS 00



MATERIAL RELEASE

A00 LUT

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 12 of 89)

UNCLASSIFIED

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

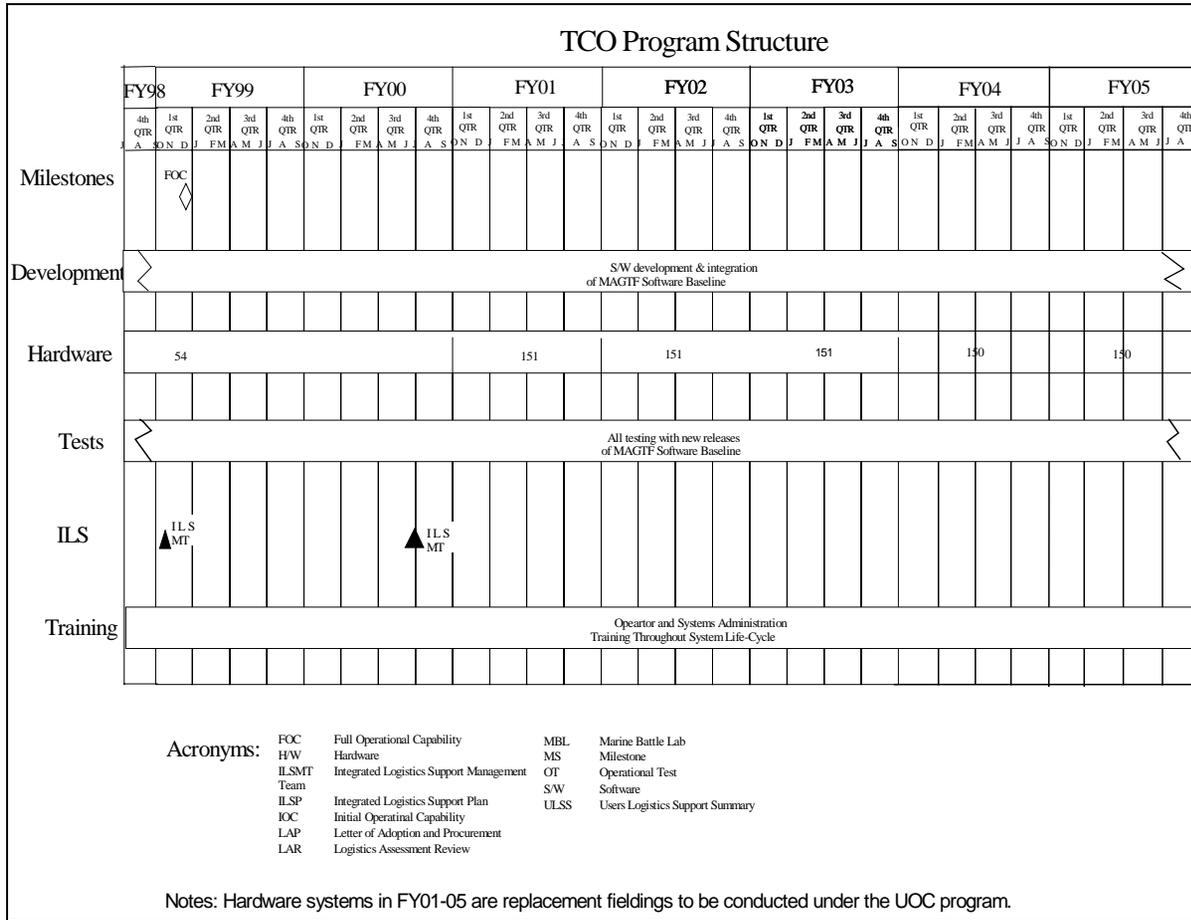
DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2270

TCO Schedule



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

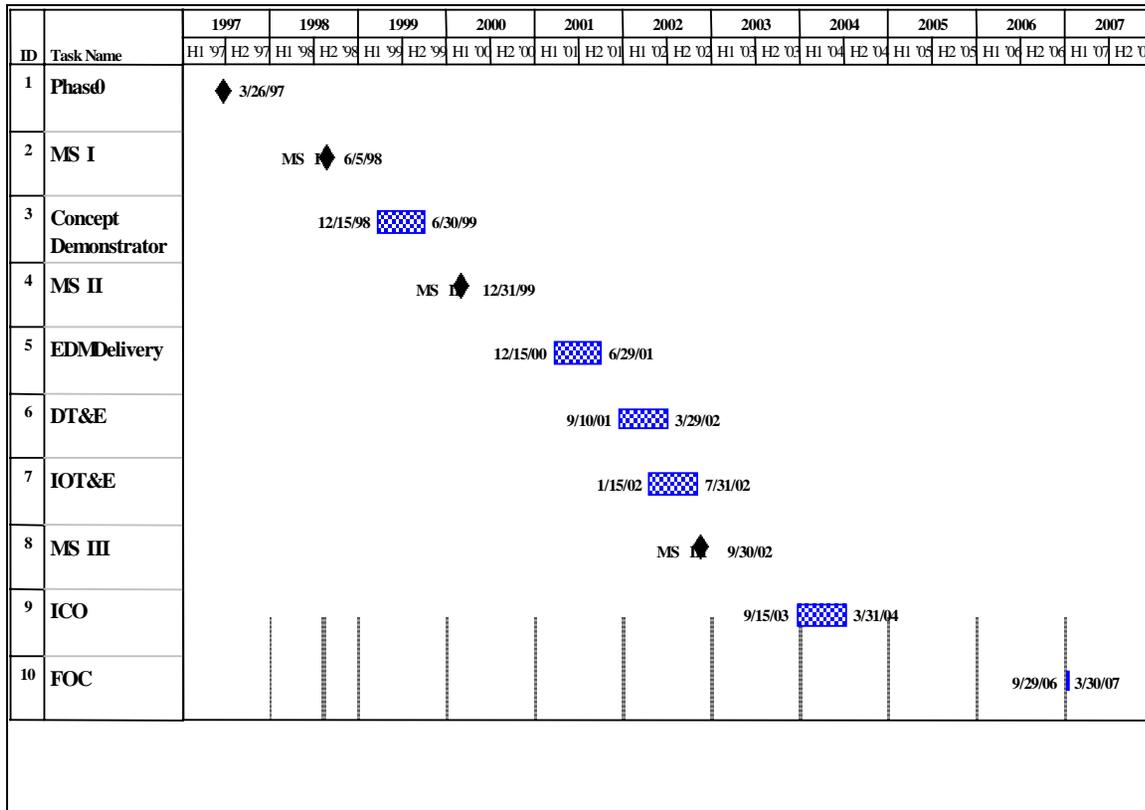
DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2270

UOC Schedule:



R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 14 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2270

A. (U) Project Cost Breakdown

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
Primary HW/SW Development	4337	6908	19730
Development Test and Evaluation	1197	1685	1879
Program Management Support	493	1625	1500
Total	6027	10218	23109

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	FY 1998	FY 1999	FY 2000	Budget to Complete	Total Program
--------------------------	---	--------------------------	-------------------------	--------------------	------------------------	---------	---------	---------	--------------------	---------------

Product Development Organizations

EICOC:

SSC Charleston	WR	Dec 99				0	0	8272	CONT	CONT
MCTSSA	RCP	Dec 99				0	0	520	CONT	CONT
SSC Charleston	WR	Dec 99				0	0	1080	CONT	CONT

TCO:

MCTSSA, Camp Pendleton, CA	RCP	Jan99			0	584	1025	959	CONT	CONT
SPAWAR Charleston, SC	WR	Oct 97			0	72	102	103	CONT	CONT

IAS:

NAWC, Pt. Mugu, CA	C/RCP	Oct 98	798	798	0	44	0	0	754	798
NSWC, Crane, IN	C/RCP	Oct 98			0	0	363	0	CONT	CONT

IAS MOD:

NSWC, Crane, IN	C/RCP	Dec 98	1182	1182	0	481	399	202	100	1182
NAWC, Pt. Mugu, CA	C/RCP	Jan 00	717	717	0	0	0	150	567	717

R-1 Line Item 169

Budget Item Justification

(Exhibit R-3, Page 15 of 89)

UNCLASSIFIED

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE
BUDGET ACTIVITY										February 1999
7 - Operational System Development					PE NUMBER AND TITLE					PROJECT
					0206313M Marine Corps Communications Systems					C2270
IDASC:										
NSWC, Crane, IN	WR	Oct 97	445	445	0	205	240	0	0	445
MCTSSA Camp Pendleton, CA	WR	Oct 97	471	471	0	229	242	0	0	471
MAGTF C4I										
BASELINE:										
SPAWAR, San Diego, CA	C/PFF/RCP	Jan 98			0	352	212	1638	CONT	CONT
MCTSSA, Camp Pendleton, CA (to OSEC)	RCP	Jan 99			0	0	0	1638	CONT	CONT
SPAWAR, San Diego, CA (to INRI)	RCP	Jan 99			0	827	319	3143	CONT	CONT
MARCORSYSCO M, CTQ; Quantico, VA TBD	RCP	Jan 99	1846	1846	0	0	1846	0	0	1846
AFATDS:										
USA, Ft. Sill, OK	CPFF/MIPR	Jan 97	1402	1402	0	1402	0	0	0	1402
MCSC, Quantico, VA	CPFF/RCP	Oct 98			0	100	0	0	0	100
USA, Ft Wayne, IN	CPFF/MIPR	Jan 99			0	0	0	0	CONT	CONT
USA, Ft Monmouth, NJ	CPFF/MIPR	Jan 00	2786	2786	0	0	1385	1130	271	2786
TCAP PIP:										
BTG, Fairfax, VA	RCP	Jan00	2580	2580	0	0	775	895	910	2580
ATACC:										
WR Robbins AFB, GA	RCP	Sep 98	41	41	0	41	0	0	0	41
Support and Management Organizations										
EICOC:										
Marcorsyscom	WR	Dec 99				0	0	104	CONT	CONT
TCO:										
R-1 Line Item 169										Budget Item Justification

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE
February 1999

BUDGET ACTIVITY	PE NUMBER AND TITLE						PROJECT				
7 - Operational System Development	0206313M Marine Corps Communications Systems						C2270				
MCTSSA, Camp Pendleton, CA	RCP	Jan99			0	97	136	137	CONT	CONT	
Logicon Stafford, VA	CPFF/RCP	9/97	88	88	0	88	0	0	0	88	
IAS MOD: SPAWAR Charleston, SC	WR	Nov 01	100	100	0	0	0	0	100	100	
IDASC: MCSC, Quantico, VA	WR	Oct 97	236	236	0	112	124	0	0	236	
MAGTF C4I											
Baseline:											
MARCORSYSCO M CTQ, Quantico, VA (Logicon Stafford, VA)	FFP/CPFF	Jan 99			0	0	100	100	CONT	CONT	
MCSC Quantico, VA	WR	Nov 99			0	16	16	16	CONT	CONT	
AFATDS:											
MCSC, Quantico, VA	CPFF/RCP	Jan 99	1459	1459	0	0	436	493	530	1459	
MCSC, Quantico, VA	WR	Sep 99	400	400	0	0	120	120	160	400	
PM AFATDS, USA Ft Monmouth, NJ	MIPR	Sep 99	1410	1410	0	0	350	530	530	1410	
EICOC:											
Logicon Stafford, VA	CPFF/RCP	9/97	732	732	0	180	186	0	366	732	
Test and Evaluation Organizations											
TCO: MCTSSA, Camp Pendleton, CA	RCP	Oct 97			0	80	65	194	CONT	CONT	
IAS:											
R-1 Line Item 169						Budget Item Justification					

(Exhibit R-3, Page 17 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE **February 1999**

BUDGET ACTIVITY				PE NUMBER AND TITLE						PROJECT	
7 - Operational System Development				0206313M Marine Corps Communications Systems						C2270	

ARL, Adelphi, MD	C/MIPR	Nov 98	125	125	0	50	75	0	0	125
MCTSSA, Camp Pendleton, CA	RCP	Oct 98	413	413	0	188	225	0	0	413
JITC, Ft. Huachuca, AZ	C/MIPR	Sep 99	40	40	0	0	40	0	0	40
IAS MOD:										
ARL, Adelphi, MD	C/MIPR	Jan 00			0	0	0	100	CONT	CONT
MCTSSA Camp Pendleton, CA	RCP	Jan 00			0	0	0	302	CONT	CONT
MAGTF C4I										
Baseline:										
MCTSSA, Camp Pendleton, CA	RCP	Jan 98	598	598	0	298	300	0	0	598
MCTSSA (to Contractor TBD)	RCP	Jan 00			0	0	0	1283	CONT	CONT
EICOC:										
MCTSSA, Camp Pendleton, CA	WR	Oct 97	3411	3411	0	581	980	0	1850	3411
SBIR TAX			157	157	0	0	157	0	0	157
					Total					
					Prior to					
					<u>FY 1998</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>Budget to Complete</u>	<u>Total Program</u>
Subtotal Product Development						4337	6908	19730	CONT	CONT
Subtotal Support and Management						493	1468	1500	CONT	CONT
Subtotal Test and Evaluation						1197	1842	1879	CONT	CONT
Total Project						6027	10218	23109	CONT	CONT

C. (U) Funding Profile: Not Applicable.

R-1 Line Item 169

Budget Item Justification

(Exhibit R-3, Page 18 of 89)

UNCLASSIFIED

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

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2271

COST (In Millions)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
C2271 Maneuver C2 Systems	1486	2067	986	446	403	305	0	0	0	5693
Quantity of RDT&E Articles										

A. (U) Mission Description and Budget Item Justification:

(U) Maneuver C2 is the executive layer of decision support that retrieves and fuses information from the functional areas. It provides an integrated representation of the battlespace or a specific area of concern. The subprojects below develop systems which report unit status and location to the Tactical Combat Operations (TCO) and Advanced Tactical Air Command Central (ATACC). They also disseminate maneuver information throughout the battlespace.

1. The Joint Tactical Information Distribution System (JTIDS) provides unit location and status in near-real-time, primarily for aircraft, ships, and air defense systems.
2. The Data Automated Communications Terminal (DACT) will extend situational awareness to echelons below the battalion level within the Marine Corps. The DACT will receive, store, retrieve, create, modify, transmit, and display map overlays, operational messages/reports, and position information via tactical radios, networks, and/or wire lines. A phased approach for fielding the full functionality of the system will be used consisting of software upgrades and enhancements to allow interoperability with other C4I systems

PROGRAM ACCOMPLISHMENTS AND PLANS

(U) FY 1998 Accomplishments:

- (U) \$ 791 DACT: Developed positional, navigational, and message application software (Phase I software).
 - (U) \$ 170 DACT: Developed DACT vehicle mount assembly.
 - (U) \$ 145 DACT: Developed program documentation, program plans, and operational concepts.
 - (U) \$ 50 JTIDS: Continued support for the Joint JTIDS Link 16 IPT.
 - (U) \$ 100 JTIDS: Continued JTIDS participation in DII COE working group.
 - (U) \$ 210 JTIDS: Initiated and developed the interface TYQ-JTIDS to other Aviation C2 Agencies..
 - (U) \$ 20 JTIDS: Program management support for various technical interchange meetings, demonstrations, and conferences.
- (U)Total \$ 1,486

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 19 of 89)

UNCLASSIFIED

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 1999	
BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2271	
(U) FY 1999 Planned Program:			
<ul style="list-style-type: none"> • (U) \$ 185 DACT: Develop Phase II software. • (U) \$ 468 DACT: Develop training package, program documentation, program plans, and operational concepts. • (U) \$ 100 DACT: Perform DACT operational testing. • (U) \$ 50 JTIDS: Continue engineering support for the Class 2/2H Terminals which will be used in JTIDS common processor. • (U) \$ 476 JTIDS: Complete ECP to AN/TYQ JTIDS for TACC operations. • (U) \$ 750 JTIDS: Commence integration of real time/non-real time data feeds to AN/TYQ JTIDS. • (U) \$ 20 JTIDS: Program management support for various technical interchange meetings, demonstrations and conferences. • (U) \$ 18 SBIR: Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638 			
(U)Total \$ 2,067			
(U) FY 2000 Planned Program:			
<ul style="list-style-type: none"> • (U) \$ 460 DACT: Develop Phase III software. • (U) \$ 150 DACT: Conduct follow-on developmental and operational testing. • (U) \$ 376 DACT: Develop training package, documentation, and operational concepts for newly developed software functionality. 			
(U)Total \$ 986			
B. (U) Project Change Summary			
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
(U) Previous President's Budget	1413	2090	1834
(U) Adjustments to Previous President's Budget	+73	-23	-848
(U) Current Budget Submit	1486	2067	986
(U) Change Summary Explanation:			
(U) Funding: Increase in FY98 funding represents net reprogramming efforts.			
FY99 Due to Revised Economic Assumption.			
FY00 adjustments due to prioritization of program's within the Marine Corps, Non Pay Inflation.			
(U) Schedule: N/A			
(U) Technical: N/A			
R-1 Line Item 169		Budget Item Justification	

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 1999		
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems				PROJECT C2271		
C. (U) <u>Other Program Funding Summary</u>	<u>FY 1998</u>	<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	Total
(APPN, BLI #, NOMEN)									<u>Compl</u>	<u>Cost</u>
(U) PMC, BLI #463200, DACT	0	12621	6838	9873	2343	0	0	0	0	31675
(U) O&M, DACT	98	257	411	423	302	199	0	0	TBD	TBD
(U) PMC, BLI #463200, JTIDS	7216	9734	0	0	0	0	0	0	0	16950
(U) Related RDT&E										
None										

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 21 of 89)

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

DATE **February 1999**

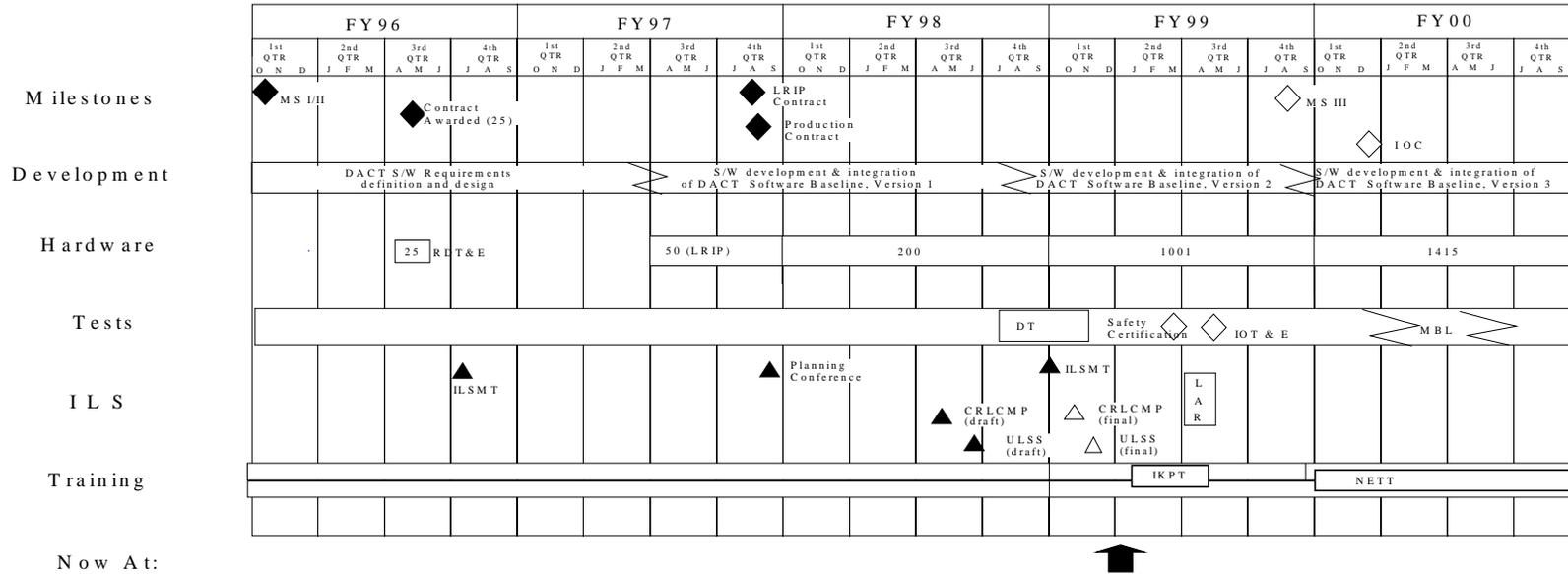
BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2271

D. (U) Schedule Profile

DACT Program Structure



- Acronyms:**
- | | | | |
|--------|---|------|---------------------------------|
| CMP | Configuration Management Plan | LAR | Logistics Assessment Review |
| CRLCMP | Computer Resources Life Cycle Management Plan | LRIP | Low Rate Initial Production |
| DT | Developmental Test | MBL | Marine Battle Lab |
| FOC | Full Operational Capability | MS | Milestone |
| H/W | Hardware | NETT | New Equipment Training Team |
| IKPT | Instructor & Key Personnel Training | OT | Operational Test |
| ILSMT | Integrated Logistics Support Management Team | RFP | Request for Proposal |
| ILSP | Integrated Logistics Support Plan | SS | Source Selection |
| IOC | Initial Operational Capability | S/W | Software |
| IPT | Integrated Program Team | ULSS | Users Logistics Support Summary |
| LAP | Letter of Adoption and Procurement | | |

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 22 of 89)

UNCLASSIFIED

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

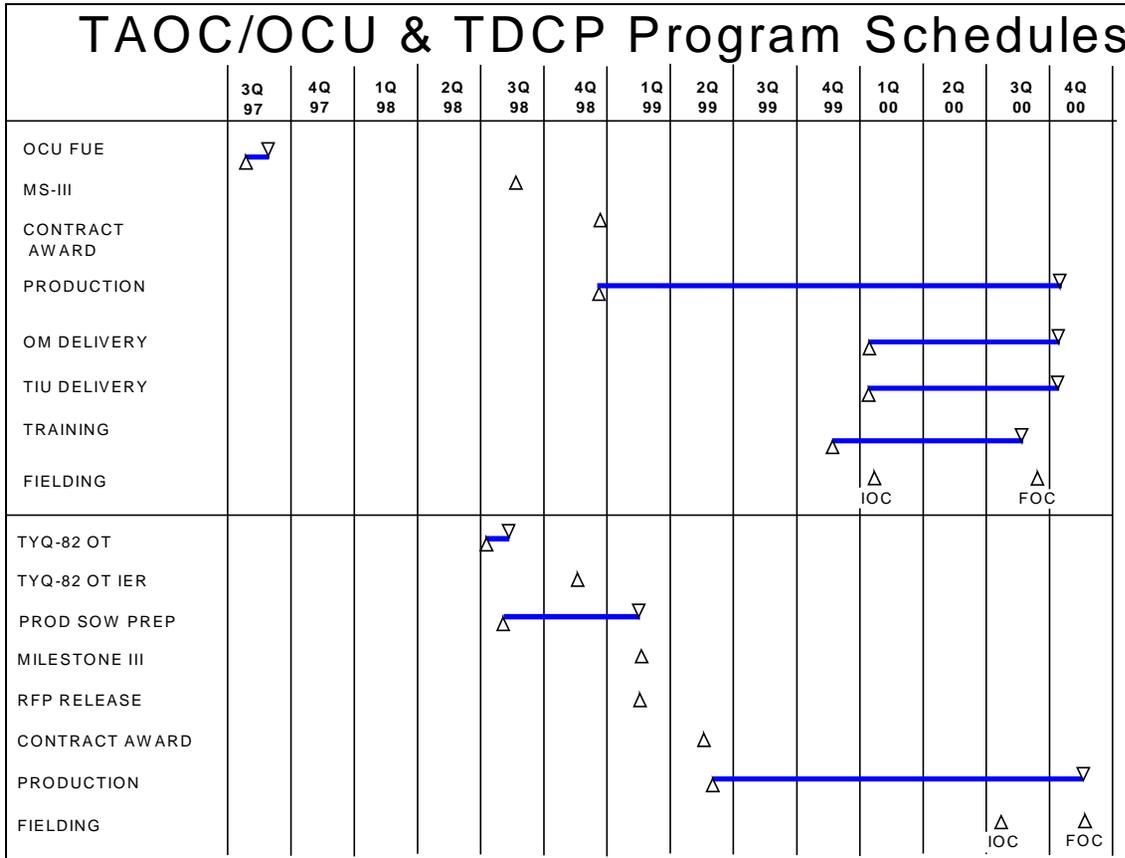
DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2271

JTIDS Schedule:



R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 23 of 89)

UNCLASSIFIED

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

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2272

COST (In Millions)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
C2272 Intelligence C2 Systems	2702	4348	12839	7831	8493	8264	5288	5459	Continuing	Continuing
Quantity of RDT&E Articles										

A. (U) Mission Description and Budget Item Justification: Intelligence Command and Control (C2) supports the employment of reconnaissance, surveillance, and target acquisition resources and the timely planning and processing of all-source intelligence. It ensures that all-source tactical intelligence is tailored to meet specific mission requirements. The systems below collect raw intelligence data on the battlefield, convert raw intelligence data into processed information and deliver the processed products to the Intelligence Analysis Systems (IAS) for analysis.

1. The MANPACAK Secondary Imagery Distribution System (SIDS) is used to distribute processed imagery throughout the Marine Corps Communications Systems.
2. Tactical Exploitation of National Capabilities (TENCAP) is a program designed to enhance the ability of tactical Marine Corps forces to exploit the capabilities of national intelligence-gathering systems. Congressionally directed, it requires close liaison with the intelligence community and involves complex and highly-sensitive activities.
3. The Topographic Production Capability (TPC) is an advanced Geographic Information System, which employs commercial computer and software to provide the framework data for the common battlefield visualization by producing both hardcopy and digital geographic intelligence.
4. The Joint Surveillance Target Attack Radar (JSTARS) connectivity program will develop software which will allow the JSTARS Moving Target Indicator (MTI), Fixed Target Indication (FTI) and Synthetic Aperature Radar (SAR) Data to be passed from the JSTARS Common Ground Station (CGS) to lower echelons within the MAGTF. The IAS and TCO will host the JSTARS Connectivity Software. Once the Connectivity Software has developed a requirement for a JSTARS CGS software, upgrade is anticipated under Joint Program Office Pre-Planned Product Improvement (P3I) initiative.
5. The Coastal Battlefield Reconnaissance and Analysis (COBRA) system is a passive multispectral sensor system capable of operating in a PIONEER unmaned aerial vehicle (UAV). Imagery recorded on the UAV or disseminated via data link is analyzed by the COBRA ground station. Ground station algorithm processing provides near real-time automatic minefield detection with Differential Global Positioning System (DGPS) location accuracy.

PROGRAM ACCOMPLISHMENTS AND PLANS:

(U) FY 1998 Accomplishments:

- (U) \$ 49 MANPACK SIDS: Completed modification of the COTS Digital Camera.

R-1 Line Item 169

Budget Item Justification

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

DATE
February 1999

BUDGET ACTIVITY	PE NUMBER AND TITLE	PROJECT
7 - Operational System Development	0206313M Marine Corps Communications Systems	C2272
<ul style="list-style-type: none"> • (U) \$ 1016 TENCAP: Demonstrated the technical feasibility and tactical utility of Enhanced National-Tactical Imagery, Communications Externals Dissemination (ENTICED) into Marine Corps C4I architecture via the RADIANT MERCURY multi-level security system. ENTICED provided enhanced IMINT, ELINT, and COMINT dissemination within existing Marine Corps C4I architecture. • (U) \$ 1017 TENCAP: Initiated a concept development effort to provide nationally and tactically collected Signal Intelligence (SIGINT) data to small tactical units and teams, on a portable, lightweight device. Project RAIDER, will focus on delivering this data to those teams conducting highly mobile, low intensity, short duration operations such as Non-combatant Evacuation Operations (NEO), and Tactical Recovery of Aircraft and Personnel (TRAP). • (U) \$ 205 TENCAP: Evaluated Tailored, Topographic Imagery Manipulation, Extraction and Dissemination (T-TIMED) project which will provide the tactical operator with the desired and required nationally derived topographic information on an as-needed basis, merged and correlated with imagery from standard workstations (i.e. IAS) and displays on laptops and DACT like devices. • (U) \$ 215 TENCAP: Continued to support TENCAP training and education efforts by providing various TENCAP simulation, scripting, and processing hardware, software and exercise support to training centers and Fleet units deployed and in garrison. • (U) \$ 200 TENCAP: Continued participation in National Intelligence Systems Data (NISI), evaluating the utility of emerging exploitation, automated and manual target recognition and detection tools, and emerging reconnaissance technologies. Formulate and submit Tactical Impact Statements (TIS) as required by Congress. • (U) \$ 0 JSTARS: Initiated the development of USMC hardware and software connectivity between the JSTARS system and the required JSTARS Connectivity sites and MAGTF C4I systems. This effort forward financed with \$229 FY97 funds from this project and PE. <p>(U)Total \$ 2,702</p> <p>(U) FY 1999 Planned Program:</p> <ul style="list-style-type: none"> • (U) \$ 200 MANPACK SIDS: Complete software upgrade to maintain NITFS standards and improve compression algorithms. • (U) \$ 1859 TENCAP: Conduct advance technology demonstrations and integration into the established MAGTF C4I architecture. • (U) \$ 356 TENCAP: Conduct technical assessments of emerging national data dissemination capabilities. • (U) \$ 461 TENCAP: Continue to support operational planning to enhance operating force capabilities to US national intelligence data witin the MAGTF C4I architecture. • (U) \$ 437 TENCAP: Evaluate the utility of emerging exploitation, automated and manual target recognition and detection tools. • (U) \$ 100 TENCAP: Continue TENCAP training and education efforts by providing the Fleet Marine Force with various TENCAP simulation, scripting, and processing hardware and software support. • (U) \$ 250 JSTARS: Perform tests and exercise with the JSTARS CGS and JSTARS connectivity prototype(s). • (U) \$ 626 JSTARS: Continue to develop connectivity software. • (U) \$ 59 SBIR: Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638. <p>(U)Total \$ 4,348</p>		
R-1 Line Item 169		Budget Item Justification

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 1999
BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2272
<p>(U) FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • (U) \$ 332 TPC: Initiate test and evaluations. • (U) \$ 765 TPC: Initiate engineering, manufacturing and development. • (U) \$ 2300 TPC: Operational systems development. • (U) \$ 100 TPC: In-house program management. • (U) \$ 138 TPC: Contractor advisory and assistance services. • (U) \$ 1966 TENCAP: Continue advance technology demonstrations and integration into the established MAGTF C4I architecture. • (U) \$ 384 TENCAP: Continue technical assessments of emerging national data dissemination capabilities. • (U) \$ 470 TENCAP: Continue to support operational planning to enhance operating force capabilities to US national intelligence data within the MAGTF C4I architecture. • (U) \$ 445 TENCAP: Continue to evaluate the utility of emerging exploitation, automated and manual target recognition and detection tools. • (U) \$ 125 TENCAP: Continue TENCAP training and education efforts by providing the Fleet Marine Force with various TENCAP simulation, scripting, and processing hardware and software support. • (U) \$ 1900 JSTARS: Continue to develop connectivity software. • (U) \$ 366 JSTARS: Engineering and technical management support for connectivity software. • (U) \$ 148 COBRA: MarCorSysCom program contractor support activities. • (U) \$ 200 COBRA: Coastal Systems Station program engineering support. • (U) \$ 2950 COBRA: Engineering, manufacturing and development. • (U) \$ 100 COBRA: Preliminary design review. • (U) \$ 150 COBRA: Pre-Critical Design Review Documentation. <p>(U)Total \$ 12,839</p>		
R-1 Line Item 169		Budget Item Justification

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

DATE
February 1999

BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2272
---	---	--------------------------------

B. (U) <u>Project Change Summary</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
(U) Previous President's Budget	2975	3507	3951
(U) Adjustments to Previous President's Budget	-273	+841	+8888
(U) Current Budget Submit	2702	4348	12839

(U) Change Summary Explanation:

(U) Funding: FY 98 adjustments are due to internal reprogramming.
 FY99 adjustment due to JSTARS moving from C2277, PE26313M, revised economic assumption and adjustments to CAAS.
 FY 00 adjustment is due to prioritization of programs within the Marine Corps.

(U) Schedule: N/A

(U) Technical: N/A

C. (U) <u>Other Program Funding Summary</u> (APPN, BLI #, NOMEN)	<u>FY 1998</u>	<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>	<u>To</u>	<u>Total</u>
									<u>Compl</u>	<u>Cost</u>
PMC BLI 474700 Intelligence Support Equipment MANPACK SIDS	3903	0	0	0	0	0	0	0	0	3791
PMC BLI 474700 Intelligence Support Equipment TPC	0	0	0	7264	6737	3999	1610	583	Cont	Cont
PMC BLI #474900 JSTARS	0	1017	982	0	973	0	973	0	Cont	Cont

- (U) Related RDT&E**
- (U) PE 0301301L (Department of Defense Intelligence and Information Systems/Military Intelligence Integrated Data System/Integrated Data Base I and II) (DefenseIntelligence Agency)
 - (U) PE 0604270A (Intelligence and Electronic Warfare Common Sensor (IEWCS), TACJAM-A)
 - (U) PE 0305885G (Tactical Cryptologic Program)
 - (U) PE 0603730A (Tactical Surveillance System - Advanced Development), Army TENCAP, Project D560(U)PE 0603766A (Tactical Electronic Surveillance System - Advance Development), Army TENCAP, Project D907
 - (U) PE 0604740A (Tactical Surveillance System - Engineering Development), OSD TENCAP, Project D662
 - (U) PE 0902398M (United States Special Operations Command), Chariot Program
 - (U) PE 0605867N (SEW Surveillance/Reconnaissance Support), Project Z1034

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2272

(U) Schedule Profile:

SIDS Schedule

**MANPACK SIDS
MILESTONE SCHEDULE**

PHASE	FY 98	FY 99	FY 00	FY 01	FY 02
MILESTONE 0					
MILESTONE I/II					
OT					
MILESTONE III					
PRODUCTION CONTRACT AWARD					
PRODUCTION					
IOC					
FOC					

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 28 of 89)

UNCLASSIFIED

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2272

TPC Schedule

Topographic Production Capability MILESTONE SCHEDULE

PHASE	FY 98	FY 99	FY 00	FY 01	FY 02	FY 03	FY 04	FY 05
MILESTONE 0								
MILESTONE I								
MILESTONE II								
OT								
MILESTONE III								
PRODUCTION CONTRACT AWARD								
IOC								
FOC								
P3I,Phase 1								
P3I,Phase 2								

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 29 of 89)

UNCLASSIFIED

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

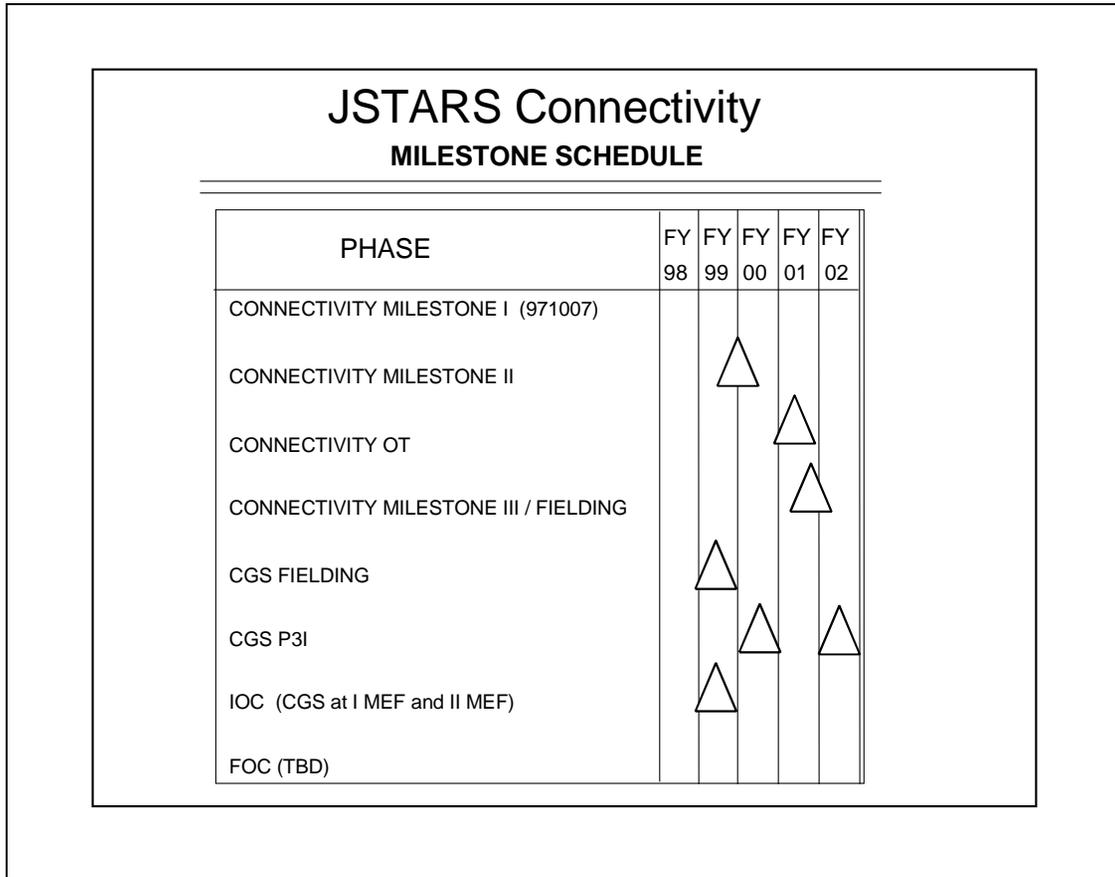
DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2272

JSTARS Schedule:



R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 30 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2272

A. (U) Project Cost Breakdown	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
a. Program Management Support	0	0	295
b. Engineering Support	0	126	412
c. TENCAP Concept Development/Feasibility Demonstration	1474	1859	2589
d. TENCAP Training/Exercise Support to FMF	100	100	126
e. System Design/Integration/Development	102	356	6747
f. Management Support Services	518	461	645
g. Software Development	508	1446	2025
h. Primary Hardware Development			0
Total	2702	4348	12839

B. Budget Acquisition History and Planning Information

Performing Organizations

<u>Contractor or Government Performing Activity</u>	<u>Contract Method/Type or Funding Vehicle</u>	<u>Award or Obligation Date</u>	<u>Performing Activity EAC</u>	<u>Project Office EAC</u>	<u>Total Prior to FY 1998</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>Budget to Complete</u>	<u>Total Program</u>
---	--	---------------------------------	--------------------------------	---------------------------	-------------------------------	----------------	----------------	----------------	---------------------------	----------------------

Product Development Organizations

TENCAP:										
Booz-Allen & Hamilton	RCP	Jan 97			2392	2035	2819	2814	CONT	CONT
JSTARS:										
TBD	MIPR	Mar 00	2266	2266	0	0	0	2266	0	2266
JSTARS:										
TBD	MIPR	Mar 01	394	394	0	0	0	0	0	394
JSTARS:										
TBD	MIPR	Mar 99	876	876	0	0	876	0	0	876
COBRA:										
TBD	RCP	Feb 00			0	0	0	2950	CONT	CONT

R-1 Line Item 169

Budget Item Justification

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE
February 1999

BUDGET ACTIVITY	PE NUMBER AND TITLE					PROJECT				
7 - Operational System Development	0206313M Marine Corps Communications Systems					C2272				
MRJ Inc. RCP Mar 00 3065 3065	0	0	0	3065	0	3065				
Support and Management Organizations										
TENCAP:										
Booz, Allen & Hamilton	Various	Jan 97			435	618	453	576	CONT	CONT
COBRA:										
CSS	WR	Mar 00			0	0	0	450	CONT	CONT
BRTJRC	RCP	Mar 00			0	0	0	148	CONT	CONT
TPC:										
TBD	RCP	Mar 00			0	0	0	238	CONT	CONT
Test and Evaluation Organizations										
SIDS:										
NAWC, PT Mugu	WR	Dec 96	249	249	0	49	200	0	0	249
TPC:										
TBD	WR	Mar 00						332	CONT	CONT
					Total					
					Prior to					
					<u>FY 1998</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>Budget to</u>	<u>Total</u>
Subtotal Product Development					2392	2035	3695	11095	CONT	CONT
Subtotal Support and Management					435	618	453	1412	CONT	CONT
Subtotal Test and Evaluation						49	200	332	CONT	CONT
Total Project					2827	2702	4348	12839	CONT	CONT
C. (U) Funding Profile: Not Applicable.										

R-1 Line Item 169

Budget Item Justification

(Exhibit R-3, Page 32 of 89)

UNCLASSIFIED

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

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2273

COST (In Millions)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
C2273 Air Operations C2 Systems	4355	6289	16415	25747	23083	8612	6768	4094	Continuing	Continuing
Quantity of RDT&E Articles										

A. (U) Mission Description and Budget Item Justification: Air Operations C2 coordinates and plans Navy and Marine air combat operations and interfaces with joint and combined forces air operations. It also interfaces with fire support C2. The systems in this project are used to detect aircraft and missiles, process the detected information, deliver the processed information to the Advanced Tactical Air Command Central (ATACC), and conduct the air battle.

1. The Tactical Air Operations Module (TAOM) improves the current system; the TAOM is the center for directing aircraft and anti-air systems in real time as part of the joint air battle.
2. The Air Defense Communications Platform (ADCP) provides an interface between the AN/TPS-59 (V)3 radar and for tactical ballistic missile defense as a JTIDS network user, the ADCP provides a direct interface between the AN/TPS-59 (v)3 and the joint services.
3. Aviation radars (AV RDR) are used to detect the location and identity of aircraft and missiles in the battle area.
4. Theater Battle Management Core Systems (TBMCS) provides the commander the automated tools necessary to generate, disseminate and execute the Air Tasking Order (ATO), as mandated by the Chairman, Joint Chiefs of Staff in July 1993. It is an evolutionary acquisition, allowing for the rapid development/fielding of hardware and software to meet today's rapidly advancing technology. It is fielded to all four Marine Tactical Air Command Squadrons (MTACS) and the supporting establishment with Marine Aviation Weapons and Tactics School (MAWTS) and the Battlestaff Training Facility (BSTF) sharing a system. Beginning FY00, CTAPS is migrating to the Theater Battle Management Core Systems (TBMCS) program within the USAF, and will change names from CTAPS to TBMCS.
5. The Common Aviation Command and Control System (CAC2S) will provide a common baseline of equipment, computer hardware, and software required to perform the mission of the Marine Air Command and Control System (MACCS). CAC2S will provide a complete and coordinated modernization effort for the equipment of the Marine Air Command and Control System (MACCS) to support its employment in an Operational Maneuver From The Sea (OMFTS) environment. The CAC2S will eliminate the current dissimilar aviation Command & Control systems, and will add the capability for aviation combat direction and air defense functions. CAC2S will be comprised of standardized tactical facilities, hardware, software and will significantly reduce the physical size and logistical footprint of existing MACCS equipment suite. Utilizing common hardware, the CAC2S will be an open architecture system that will migrate to the DII COE. Furthermore, CAC2S will execute real time functions of controlling aircraft and missiles, and employing weapons systems against time critical targets. CAC2S will provide a capability that allows operators to integrate Marine aviation into joint and combined air/ground operations. CAC2S will provide the tools that perform aviation C2 planning and execution functions in a positive control environment. CAC2S will assimilate the missions and fiscal resources of the Tactical Air Operations Center (TAOM), Tactical Air Command Center and the Direct Air Support Center (DASC) and the Air Defense Communications Platform (ADCP).

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 33 of 89)

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)DATE
February 1999

BUDGET ACTIVITY

7 - Operational System Development

PE NUMBER AND TITLE

**0206313M Marine Corps Communications
Systems**

PROJECT

C2273**PROGRAM ACCOMPLISHMENTS AND PLANS:****(U) FY 1998 Accomplishments:**

- (U) \$ 193 ADCP: Executed a comprehensive plan to prepare and test the ADCP for JTIDS joint certification.
 - (U) \$ 180 TAOM: Completed development of DII COE TADIL J Common Segment in preparation for MS III award during 1st qtr FY98.
 - (U) \$ 292 TAOM: Continued closed system (AYK-14) to open system migration.
 - (U) \$ 384 TAOM: Conduct Theater Ballistic Missile Defense (TBMD) implementation into the TAOM.
 - (U) \$ 350 TAOM: Program support, which consists of contractor support to provide documentation, hardware/software engineering, and logistics analysis to the program office; support of developmental testing, IPR, and contract management.
 - (U) \$ 2529 AV RDR: Analyzed and developed ECP's to increase AN/TPS-59 radar detection and targeting capability within the Antenna Array Transmitters and Receivers.
 - (U) \$ 427 AV RDR: Program in Process Review (IPR), and contract management.
 - (U) \$ 0 AV RDR: Analyzed and developed ECP-s to increase AN/TPS-59 radar detection and targeting capability within the Antenna Arry Transmitters and Receivers. This effort forward finance with \$229K FY97 funds from this PE and Project.
- (U)Total \$ 4,355

(U) FY 1999 Planned Program:

- (U) \$ 209 ADCP: Continue software enhancements concentrating on testing for JTIDS joint certification and a complete VMF development/meshnet upgrades.
 - (U) \$ 766 TAOM: Continue closed system (AYK-14) to open system migration.
 - (U) \$ 460 TAOM: Continue TMD implementation into the TAOC.
 - (U) \$ 128 TAOM: Program support, which consists of contractor support to provide documentation, hardware/software engineering, and logistics analysis to the program office; support of operational testing, IPR, and contract management.
 - (U) \$ 63 AV RDR: Continue MCTSSA software support.
 - (U) \$ 410 AV RDR: Program contractor support
 - (U) \$ 247 AV RDR: ECP development in support of MCCES radar trainers.
 - (U) \$ 97 CTAPS: Initiate USMC'S management of Theater Battle Management Core System (TBMCS) 1.0 development
 - (U) \$ 500 CAC2S: Program Management Support.
 - (U) \$ 2431 CAC2S: Initiate the migration of existing equipment to a technology, demonstration laboratory (TDL).
 - (U) \$ 911 CAC2S: Conduct exercises with TDL equipment to determine optimum equipment mix and organization.
 - (U) \$ 67 SBIR : Portion of of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638.
- (U)Total \$ 6,289

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 34 of 89)

UNCLASSIFIED

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

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2273

(U) FY 2000 Planned Program:

- (U) \$ 200 ADCP: Complete VMF development/meshnet upgrades.
- (U) \$ 81 ADCP: Continue software modifications.
- (U) \$ 7462 AV RDR: Initiate Safety ECP's developing a replacement IFF Interrogator, maintenance lift, False Alarm Adaptation (FAA) software, and begin development of special TBM modes software for increased range and enhanced operation.
- (U) \$ 300 AV RDR: Program in Process Review (IPR), and contact management.
- (U) \$ 593 AV RDR: Perform studies and analysis to determine the best approach for upgrading the 59 radar Electronic Protection capability during a POM-02 initiative in compliance with phase II of the ORD.
- (U) \$ 319 TBMCS: Continue USMC's TBMCS development.
- (U) \$ 25 TBMCS: Continue MCTSSA TBMCS software support.
- (U) \$ 284 TBMCS: Program support to provide documentation, and support of TBMCS development and testing.
- (U) \$ 2659 CAC2S: Initiate Phase II system engineering, software design and development efforts.
- (U) \$ 2120 CAC2S: Initiate Processing and Display Suite (PDS) efforts.
- (U) \$ 985 CAC2S: Conduct initial sensor interface/integration and interoperability testing.
- (U) \$ 690 CAC2S: Initiate communication package effort.
- (U) \$ 690 CAC2S: Initiate integration of Engineering Deveopment Model (EDM) hardware with existing assets and development of shelter configurations.
- (U) \$ 600 CAC2S: Program Management Support
- (U)Total \$ 16,415

B. (U) Project Change Summary

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
(U) Previous President's Budget	5135	6366	6277
(U) Adjustments to Previous President's Budget	-780	-77	+10138
(U) Current Budget Submit	4355	6,289	16415

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

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2273

(U) Change Summary Explanation:

(U) Funding: FY 1998 changes due to minor affordability adjustments.

Fy 1999 Due to Revised Economic Assumption.

FY 00 adjustment is due to prioritization of programs within the Marine Corps and due to Congressional adjustments to AN/TPS-59 in the amount of \$5.5M for aviation radars (AV RDR) which provide a direct interface between the AN/TPS-59(V)3 and the Joint Services and to detect the location and identity of aircraft and missiles in the battle area.

(U) Schedule: Not Applicable

(U) Technical: Not applicable

C. (U) <u>Other Program Funding Summary</u>	<u>FY 1998</u>	<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	Total
(APPN, BLI #, NOMEN)									<u>Compl</u>	<u>Cost</u>
(U) PMC, BLI#464000, TAOM	10,671	6,706	0	0	0	0	0	0	0	17,377
(U) PMC, BLI#464000,TBMCS	400	1,462	4152	3197	3421	2510	6743	3583	CONT	CONT
(U) PMC, BLI#463700, ADCP	0	2,096	0	0	0	0	0	0	0	2,096
(U) PMC, BLI#463600, TPS-59 ECPS	5,476	8,322	1,314	1,368	3,847	20,815	17,954	10,739	0	69,835
(U) PMC, BLI#463600, AN/TPS-59	0	0	1,066	0	0	0	0	0	0	1,066
(U) PMC BLI #464000 Air Ops Systems CAC2S	0	0	0	0	0	19,753	43,895	45,980	CONT	CONT
(U) O&M, TAOM	0	0	0	0	0	0	0	0	0	0
(U) O&M, ADCP	375	361	0	0	0	0	0	0	0	736
(U) O&M, AN/TPS-59	0	0	0	0	0	0	0	0	0	0
(U) O&M, CTAPS	0	200	266	347	0	0	0	0	0	813

(U) Related RDT&E

PE 0603216C (Ballistic Missile Defense Organization, Theater Missile Defense)

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

DATE **February 1999**

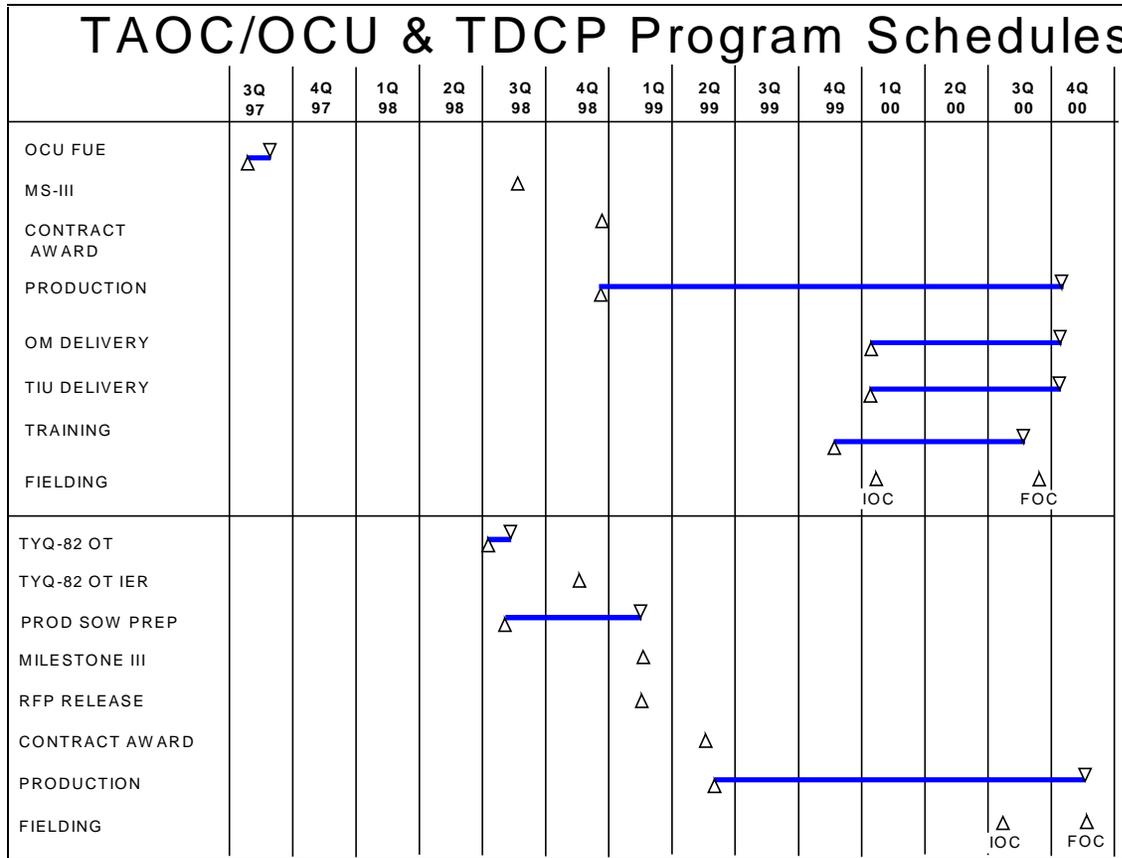
BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2273

D. (U) TAOM Milestone Schedule Profile

TAOM Schedule:



R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 37 of 89)

UNCLASSIFIED

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2273

ADCP Schedule

	FY 97	FY 98	FY99
Software Development		ADCP/FDOC S/W & HW Integration	
		TJ UPDATES	
Milestones	△ MS III		
Testing			TJ Cert 1/99
Hardware/ Production		Production	
Production Schedule		△ △	△ △ △
			IOC FOC

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 38 of 89)

UNCLASSIFIED

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

DATE

February 1999

BUDGET ACTIVITY

7 - Operational System Development

PE NUMBER AND TITLE

**0206313M Marine Corps Communications
Systems**

PROJECT

C2273

TPS-59 RADAR SCHEDULE:

(V)3 Fielding Schedule: 3rd Qtr 98 thru 3rd Qtr 99
IOC: Sep 98
FOC: Aug 99

CEC Integration: 1st Qtr 99 thru 4th Qtr 00
Develop: 1st Qtr 99 thru 3rd Qtr 00
IV&V: 3rd Qtr 99 thru 4th Qtr 00

Antenna Upgrades: 1st Qtr 99 thru 3rd Qtr 04
Procure (Various): 1st Qtr 99 thru 4th Qtr 03
IOC: 2nd Qtr 01
FOC: 3rd Qtr 04

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 39 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2273

A. (U) Project Cost Breakdown

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
Software Development	1,113	1,357	5859
Configuration Management	0	0	344
Development Support Equipment Acquisition	0	0	1645
Systems Engineering	2389	1,087	4862
Developmental Test and Evaluation	0	968	271
Prototype Hardware Development	0	2,500	951
Program Management Support	853	377	2483
Total	4355	6289	16415

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>Budget to Complete</u>	<u>Total Program</u>
---	--	--------------------------------	-------------------------------	--------------------------	------------------------------	----------------	----------------	----------------	-------------------------------	--------------------------

Product Development Organizations

CAC2S:

Center Charleston, SC	MIPR	Oct 98	6502	6502	0	0	2931	2285	1286	6502
TBD	TBD	TBD	15728	15728	0	0	111	4359	11258	15728

TAOM:

Litton Data Systems Augora Hills, CA	SS/CPAF/ RCP	Mar 97			0	1,016	1093		CONT	CONT
--	-----------------	--------	--	--	---	-------	------	--	------	------

AV RADAR:

Lockheed Martin, Syracuse NY	C/CPFF	Oct 96			0	2956	367	5389	CONT	CONT
TBD	TBD	Jan 00			0	0	0	1580	CONT	CONT
TBD	RCP	Nov 98			0	0	276	0	CONT	CONT

R-1 Line Item 169

Budget Item Justification

(Exhibit R-3, Page 41 of 89)

UNCLASSIFIED

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 1999	
BUDGET ACTIVITY 7 - Operational System Development			PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems				PROJECT C2273	
TBMCS:								
3 rd MAW	WR	Oct98	0	0	10	0	CONT	CONT
MARCORSYSCOM	WR	Oct 98	0	0	67	0	CONT	CONT
ESC	MIPR	Dec 99	0	0	0	319	CONT	CONT
Hanscom AFB, MA								
Support and Management Organizations								
CAC2S:								
MARCORSYSCOM	WR	Oct 98	0	0	100	100	100	300
Logicon	IDIQ	Oct 98	0	0	500	600	832	1932
MITRE, Bedford, MA	MIPR	Oct 98	0	0	200	200	200	600
MCTSSA, Camp Pendleton, CA	WR	Oct 98	0	0	0	200	200	400
ADCP:								
NSWC Crane IN	WR	Oct 96	0	193	100	150	CONT	CONT
MCTSSA, Camp Pendleton, CA	WR	Oct 98	0	0	85	100	180	365
MARCORSYSCOM	WR	Oct 98	0	0	24	31	CONT	CONT
TAOM:								
Logicon Stafford VA	FFP	Oct 99	0	178	236	0	CONT	CONT
MCSC, Quantico, VA	WR	Oct 97	0	12	25	0	CONT	CONT
AV RADAR:								
MCSC, Quantico, VA	WR	Oct 99	0	0	25	38	CONT	CONT
MCSC, Quantico, VA	RCP	Oct 99	0	0	52	208	CONT	CONT
Logicon, Stafford, VA	CPFF	Oct 99	0	0	0	547	CONT	CONT

R-1 Line Item 169

Budget Item Justification

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE **February 1999**

BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2273
--	--	-------------------------

TBMCS:									
MCTSSA, WR	Oct 99		0	0	0	106	CONT	CONT	
Camp Pendelton, CA									
3D Maw. WR	Oct 99		0	0	20	47	CONT	CONT	
El Toro, CA									
Logicon, Stafford, VA	CPFF	Oct 99	0	0	0	156	CONT	CONT	
SBIR TAX			0	0	67	0	0	67	

Test and Evaluation Organizations

	Total Prior to FY 1998	FY 1998	FY 1999	FY 2000	Budget to Complete	Total Program
Subtotal Product Development		3972	4855	13932	CONT	CONT
Subtotal Support and Management		383	1434	2483	CONT	CONT
Subtotal Test and Evaluation						
Total Project		4355	6289	16415	CONT	CONT

C. (U) Funding Profile: Not Applicable.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 1999		
BUDGET ACTIVITY 7 - Operational System Development					PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems				PROJECT C2274	
<i>COST (In Millions)</i>	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
C2274 C2 Warfare Systems	3384	3939	8387	3504	4374	5046	3213	3403	Continuing	Continuing
Quantity of RDT&E Articles										
<p>A. (U) <u>Mission Description and Budget Item Justification:</u> Command and Control (C2) Warfare Project includes the following tactical electronic intercept, direction finding, and electronic attack systems:</p> <ol style="list-style-type: none"> 1. The Tactical Electronic Reconnaissance Processing and Evaluation System (TERPES) is used to process, sort, analyze, display and correlate ES and EA data collected by EA-6B aircraft and maintain the Tactical Electronic Orders of Battle. 2. The Mobile Electronic Warfare Support System (MEWSS) will be used to collect and process electronic intelligence and provide electronic attack capability from a mobile ground platform. 3. Team Portable collection System (TPCS) upgrade is a semi-automated, manpackable/team transportable signals intelligence system that provides communications intercept, radio direction finding analysis and reporting to the Marine Air Ground Task Force (MAGTF) Commander. 4. The Radio Reconnaissance Equipment Program (RREP) provides the FMF Radio Battalions, Radio Reconnaissance Platoons (RRP) with mission unique Signals Intelligence/Ground Electronic Warfare SIGINT/EW) Equipment suites. Continuing with an evolutionary acquisition approach, the second suite RREP-SS-2 will provide the RRP's with the capability to conduct SIGINT/EW operations in support of Marine Air Ground Task Force (MAGTF) Commanders during advance force special operations, and other special purpose missions where the use of conventional Radio Battalion assets are not feasible. RREP-SS-2 is a ruggedized, modular, man packable system specifically designed utilizing emerging NDI/COTS/GOTS technology for RRP operations, particularly those conducted under the most austere conditions. The RREP-SS-2 module configuration has an "open systems" architecture that will permit future upgrades by simply installing cutting edge NDI/COTS/GOTS technology into the standard modules. The third suite, RREP-SS-3, to be fielded in FY04, will have the added capability to intercept those emerging target sets as identified by the NSA, be operated from remoted positions, and incorporate polymer battery technologies. 										
R-1 Line Item 169						Budget Item Justification				

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)DATE
February 1999BUDGET ACTIVITY
7 - Operational System DevelopmentPE NUMBER AND TITLE
**0206313M Marine Corps Communications
Systems**PROJECT
C2274**PROGRAM ACCOMPLISHMENTS AND PLANS:****(U) FY 1998 Accomplishments:**

- (U) \$ 572 MEWSS: Successfully conducted IOT&E.
 - (U) \$ 258 MEWSS: Continued USMC unique subsystem development for direction finding and communications emitters.
 - (U) \$ 214 MEWSS: Upgrade task and reporting capability.
 - (U) \$ 290 TPCS Upgrade: Initiated TPCS Upgrade software development to control and exploit special signal receivers and analysis tools.
 - (U) \$ 164 TPCS Upgrade: Systems Engineering and Technical Assistance (SETA).
 - (U) \$ 1000 TERPES: Continuing upgrades to TERPES mission planning software to maintain compatibility with the EA-6B aircraft software changes.
 - (U) \$ 460 TERPES: Continuing development of Tactical Automation Sanitation capability or similar Multi-Level Security (MLS) device or procedure.
 - (U) \$ 426 TERPES: Beginning software development of Link 16 TADIL J to be incorporated into fusion processor.
- (U)Total \$ 3,384

(U) FY 1999 Planned Program:

- (U) \$ 335 MEWSS: Development of performance enhancing ECP for Electronic Attack integration.
 - (U) \$ 100 MEWSS: Development of performance enhancing ECP for SATCOM radio integration.
 - (U) \$ 295 TPCS Upgrade: Transition TPCS Upgrade 2.0 Software to Defense Information Infrastructure (DII) Common Operating Environment (COE).
 - (U) \$ 217 TPCS Upgrade: Fund Phase II IOT&E of TPCS Upgrade.
 - (U) \$ 285 TPCS Upgrade: Software revisions to TPCS Upgrade 2.0 software.
 - (U) \$ 290 TPCS Upgrade: Hardware revisions to TPCS Upgrade. Achieve MSIII.
 - (U) \$ 178 TPCS Upgrade: Systems Engineering and Technical Assistance (SETA).
 - (U) \$ 900 TERPES: Continue development of TERPES mission planning software to maintain compatibility with the EA-6B aircraft software changes.
 - (U) \$ 142 TERPES: Continue development of Tactical Automation Sanitation capability or similar Multi-Level Security (MLS) device or procedure.
 - (U) \$ 400 TERPES: Begin software development of Link 16 TADIL J (IBS) to be incorporated into fusion processor.
 - (U) \$ 133 TERPES: Begin development of advanced communication suite upgrade for Joint interoperability software changes.
 - (U) \$ 480 TERPES: Begin DII/COE compliance.
 - (U) \$ 117 TERPES: Begin Sensitive Secret Compartmented Information (SCI) accreditation.
- (U) \$ 67 SBIR: 67K portion of extramural program reserved for Small Business Innovation Research assessment in accordance with USX 638
- (U)Total \$ 3,939

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 45 of 89)

UNCLASSIFIED

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 1999																
BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2274																
<p>(U) FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • (U) \$ 510 MEWSS: Conduct Phase II IOT&E for Electronic Attack module. • (U) \$ 4000 MEWSS: Developmental and Operational Testing. • (U) \$ 822 TPCS Upgrade: In keeping with the evolutionary acquisition strategy, these funds will be used to develop software to enhance the baseline including enhancements to improve the systems interoperability with other systems. • (U) \$ 195 TPCS Upgrade: Systems Engineering and Technical Assistance (SETA). • (U) \$ 500 TERPES: Continue development of TERPES mission planning software to maintain compatibility with the EA-6B aircraft software changes. • (U) \$ 200 TERPES: Continue development of Tactical Automation Sanitation capability or similar Multi-Level Security (MLS) device or procedure. • (U) \$ 100 TERPES: Begin software and hardware integration for Joint Tactical Terminal (JTT). • (U) \$ 582 TERPES: Continue DII/COE compliance to reach level 6. • (U) \$ 397 TERPES: Continue development of advanced communications suite for Joint interoperability software changes. • (U) \$ 500 TERPES: Enhance TERPES Fusion Correlator. • (U) \$ 581 RREP: Integrate GOTS/COTS electronic attack (EA) capability (SS-2). <p>(U)Total \$ 8,387</p>																		
<p>B. (U) Project Change Summary</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="text-align: center;"><u>FY 1998</u></th> <th style="text-align: center;"><u>FY 1999</u></th> <th style="text-align: center;"><u>FY 2000</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td style="text-align: center;">3275</td> <td style="text-align: center;">4007</td> <td style="text-align: center;">3865</td> </tr> <tr> <td>(U) Adjustments to Previous President's Budget</td> <td style="text-align: center;">+109</td> <td style="text-align: center;">-68</td> <td style="text-align: center;">+4522</td> </tr> <tr> <td>(U) Current Budget Submit</td> <td style="text-align: center;">3384</td> <td style="text-align: center;">3939</td> <td style="text-align: center;">8387</td> </tr> </tbody> </table> <p>(U) Change Summary Explanation:</p> <ul style="list-style-type: none"> (U) Funding: FY 98 adjustments are due to minor internal reprogramming. FY 00 adjustments due to prioritization of program's within the Marine Corps. (U) Schedule: N/A (U) Technical: N/A 				<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	(U) Previous President's Budget	3275	4007	3865	(U) Adjustments to Previous President's Budget	+109	-68	+4522	(U) Current Budget Submit	3384	3939	8387
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>															
(U) Previous President's Budget	3275	4007	3865															
(U) Adjustments to Previous President's Budget	+109	-68	+4522															
(U) Current Budget Submit	3384	3939	8387															
R-1 Line Item 169		Budget Item Justification																

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

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2274

C. (U) Other Program Funding Summary (APPN, BLI #, NOMEN)	<u>FY 1998</u>	<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>	<u>To</u> <u>Compl</u>	<u>Total</u> <u>Cost</u>
(U) PMC BLI 474900 Modification Kits INTEL TERPES	4231	0	3695	0	2741	0	2715	0	0	13611
(U) PMC BLI 463600 Modification Kits MEWSS	14300	21291	4965	28010	33800	10346	4363	3220	Cont	Cont
(U) PMC BLI 474900 Modification Kits INTEL TPCS	0	3119	11358	2873	0	0	2500	2105	0	21955
(U) PMC BLI 474700 Intelligence Support EQUIPMENT RREP	0	0	2916	0	0	4041	0	0	0	6957
(U) O&M			2861			3969				6830
TERPES	2146	2325	2397	2472	2540	2629	0	0	Cont	Cont
TPCS	867	1203	1453	1246	1243	1270	1615	0	1415	10312

(U) Related RDT&E

(U) (U) PE 0305885G (Tactical Cryptologic Program)

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2274

D. (U) Schedule Profile

**TERPES
UPGRADE**

EVENT	FY 95	FY 96	FY 97	FY 98	FY 99
ORD Signed	▲ Apr				
Doc Update	▲▲ May-Jun				
MS II LAR	▲ May				
MS I-II	▲ Mar				
CV Delivery	▲ Apr				
VMAQ-CV Det	▲	▲ Aug - Feb			
DT&E			▲	▲ Nov-May	
Interop Test			▲ May		
OT&E			▲ May		
OT Report				▲ Sep	
MS III LAR				▲▲ Sep-Oct	
MS III				▲ Dec	
IOC				△ Sep	
FOC					△ Mar

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 48 of 89)

UNCLASSIFIED

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2274

MEWSS Schedule

**MEWSS-PIP
MILESTONE SCHEDULE**

PHASE	FY 98	FY 99	FY 00	FY 01	FY 02
MILESTONE 0					
		←	TIME NOW		
MILESTONE I/II					
PHASE I OT	X				
PHASE II OT			X		
MILESTONE III				X	
PRODUCTION CONTRACT AWARD				X	
PRODUCTION				X	-----
IOC				X	
FOC					

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 49 of 89)

UNCLASSIFIED

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2274

TPCS Schedule

**TPCS UPGRADE
MILESTONE SCHEDULE**

PHASE	FY	FY	FY	FY	FY
	98	99	00	01	02
MILESTONE 0					
MILESTONE I/II					
OT		X			
MILESTONE III		X			
PRODUCTION CONTRACT AWARD			X		
PRODUCTION			X		
IOC				X	
FOC					X

← TIME NOW

Last Updated: 980515

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 50 of 89)

UNCLASSIFIED

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2274

RREP Schedule

**R R E P
M I L E S T O N E S C H E D U L E**

P H A S E	FY	FY	FY	FY	FY
	98	99	00	01	02
M S II (SS-2)	1 Q				
M S III (SS-2)		4 Q			
ELECTRONIC ATTACK (EA) MODULE			3 Q		
M S 0/I (SS-3)			4 Q		
REMOTE EA CAPABILITY				2 Q	
IOC/FOC (SS-2)				3 Q	
M S II (SS-3)				3 Q	
M S III (SS-3)					4 Q

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 51 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2274

A. (U) Project Cost Breakdown

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
a. System Design/Integration/Development	1384	1331	2925
b. Development Testing/Operational Testing	397	434	4370
c. Management Support Services	1037	1029	215
d. Software Development	236	580	877
e. Primary Hardware Development	330	565	0
Total	3384	3939	8387

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	FY 1998	FY 1999	FY 2000	Budget to Complete	Total Program
--	---	--------------------------	-------------------------	--------------------	------------------------	---------	---------	---------	--------------------	---------------

Product Development Organizations

MEWSS:

Lockheed Martin CPFF Jul97 1044 1044 0 1044 0 0 0 1044

Fed Sys, Owego Lockheed Martin CPFF Nov98 0 0 435 510 CONT CONT

Fed Sys, Owego

TPCS Upgrade:

DAC/BTG CPFF Jan98 0 290 1069 802 CONT CONT

TERPES:

NAWCWPNS, WR Jan 99 0 1000 500 500 CONT CONT

Pt Mugu, CA RCP Jan 99 0 297 1728 1777 CONT CONT

RREP: CPFF Oct00 0 0 0 581 CONT CONT

SPAWAR

Support and Management Organizations

TPCS Upgrade:

R-1 Line Item 169

Budget Item Justification

(Exhibit R-3, Page 52 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE **February 1999**

BUDGET ACTIVITY 7 - Operational System Development					PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems					PROJECT C2274
--	--	--	--	--	--	--	--	--	--	-------------------------

CSC	CPFF	Oct 97	548	548	0	164	187	197	0	548
TERPES:										
NAWCWPNS, Pt Mugu, CA	WR	Oct 96			0	32	20	20	CONT	CONT
Test and Evaluation Organizations										
MEWSS:										
Lockheed Martin Fed Sys, Owego	CPFF	OCT 00	4000	4000	0	0	0	4000	0	4000
TPCS Upgrade:										
TERPES:										
NAWCWPNS Pt Mugu, CA	RCP	Oct 96	557	557	0	557	0	0	0	557
					Total Prior to FY 1998	FY 1998	FY 1999	FY 2000	Budget to Complete	Total Program
Subtotal Product Development						2631	3732	4170	CONT	CONT
Subtotal Support and Management						196	207	217	CONT	CONT
Subtotal Test and Evaluation						557	0	4000	CONT	CONT
Total Project						3384	3939	8387	CONT	CONT

C. (U) Funding Profile: Not Applicable.

R-1 Line Item 169

Budget Item Justification

(Exhibit R-3, Page 53 of 89)

UNCLASSIFIED

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2276

COST (In Millions)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
C2276 Communications Switching and Control System	1850	1888	1841	229	0	0	0	0	0	5808
Quantity of RDT&E Articles										

A. (U) Mission Description and Budget Item Justification: This program consists of four interrelated projects: Unit Level Circuit Switch Product Improvement Program (ULCS PIP), Digital Technical Control (DTC), Tactical Data Network (TDN), and Defense Message System (DMS). Together, these systems form an integrated, digital communications backbone for a deployed Marine Air Ground Task Force (MAGTF) which has the capability to manage, control, switch, and multiplex networks providing voice, data, message, imagery, facsimile, and video services to subscribers.

(U) The ULCS PIP will upgrade the ULCS circuit switches (AN/TTC-42 Central Office Telephone radio and switchboard SB-3865). The ULCS PIP is a competitive repurchase of special purpose circuit card assemblies (CCAs) produced from a government-owned technical data package. The additional CCAs will provide improved access to fixed plant analog and trunk connections. Additional enhancements provide STU-III secure telephone interfaces in the AN/TTC-42 and SB-3865. The ULCS PIP requires low risk/medium technology engineering and development prior to build-to-print production.

(U) The TDN augments existing MAGTF communications infrastructure to provide the commander an integrated data network forming the communication backbone for MAGTF tactical data systems and Defense Message System. The TDN consists of a network of Gateways and Servers interconnected with one another and their subscribers via a combination of common user long-haul transmission systems, local area networks, single channel radios, and the switched telephone system. The network provides its subscribers with basic data transfer and switching services; access to strategic, supporting establishment, joint, and other service component tactical data networks; network management capabilities; and value-added services such as message handling, directory services, file sharing, facsimile handling, and terminal emulation support. Required functionality was separated into three blocks of capabilities due to the leading edge technology required in the Operational Requirement Document (ORD). This evolutionary acquisition strategy and funding provide for development of additional capabilities which compose the Block II upgrade of the system.

(U) The DTC facilitates the installation, operation, restoration, and management of individual circuits and digital links consisting of many multiplexed circuits. It provides the primary interface between subscriber systems/networks within a local area and long-haul multichannel transmissions systems to transport voice, message, data, and imagery traffic. It can add, drop and insert digital circuits into multiplexed groups; provide a source of stable timing to connected equipment; condition circuits; and perform analog/digital, 2-wire/4-wire, and signaling conversions. It contains the monitoring, testing, and patching equipment required by technical controllers to troubleshoot and restore faulty circuits and links. This funding provides for the development of interfaces to new technology transmission systems.

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 54 of 89)

UNCLASSIFIED

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

DATE

February 1999

BUDGET ACTIVITY

7 - Operational System Development

PE NUMBER AND TITLE

0206313M Marine Corps Communications Systems

PROJECT

C2276

(U) DMS is an OSD-mandated program to integrate Automatic Digital Network (AUTODIN) and E-Mail into a single, secure, DoD message communications system. DMS will expand writer-to-reader connectivity, support, and message security services. Organizations and individuals will be able to create, edit, send, receive, read, and process organizational and individual messages, secured with end-to-end protection, direct from desktop terminals/personal computers in their workspaces. DMS will do everything our current Banyan E-Mail and AUTODIN systems do with the following additional capabilities: connectivity to all users in DoD.

PROGRAM ACCOMPLISHMENTS AND PLANS:**(U) FY 1998 Accomplishments:**

- (U)\$ 379 DTC: Development and Engineering system technology upgrades. Achieve MS III decision.
- (U)\$ 318 DMS: Support software and hardware integration/testing. Incorporate evolutionary security products into the unclassified DMS architecture within a Marine Corps-unique network infrastructure.
- (U)\$ 1153 TDN: Begin developing TDN on Block II. Achieve MS III decision block I.
- (U)Total \$ 1,850

(U) FY 1999 Planned Program:

- (U)\$ 387 DTC: Engineering/testing system technology upgrades..
- (U)\$ 325 DMS: Support software and hardware integration/testing. Incorporate evolutionary security products into the unclassified DMS architecture within a Marine Corps-unique network infrastructure.
- (U)\$ 1144 TDN: Continue development TDN of Block II and software/hardware integration/testing.
- (U) \$ 32 SBIR: Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638.
- (U)Total \$ 1,888

(U) FY 2000 Planned Program:

- (U) \$ 549 DTC: Developmental/Interoperability testing of ATM upgrade, obtain approval for ATM upgrade
- (U) \$ 198 DMS: Support software and hardware integration/testing. Incorporate evolutionary security products into the unclassified DMS architecture within a Marine Corps-unique network infrastructure.
- (U) \$ 1094 TDN: Continue TDN BLK II development and S/W and H/W Intergration testing. Achieve milestone III Decision for Block II
- (U)Total \$ 1,841

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 55 of 89)

UNCLASSIFIED

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

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2276

B. (U) <u>Project Change Summary</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
(U)Previous President's Budget	1959	2106	1746
(U)Adjustments to Previous President's Budget	-109	-218	+95
(U)Current Budget Submit	1850	1888	1841

(U) Change Summary Explanation:

(U) Funding: FY 98/99 changes are due to minor affordability adjustments, revised economic assumption, CASS reductions. FY 00 adjustment is due to prioritization of programs within the Marine Corps, minor affordability adjustments, and non pay inflation adjustment.

(U) Schedule: N/A

(U) Technical: N/A

C. (U) <u>Other Program Funding Summary</u>	<u>FY1998</u>	<u>FY1999</u>	<u>FY2000</u>	<u>FY2001</u>	<u>FY2002</u>	<u>FY2003</u>	<u>FY 2004</u>	<u>FY 2005</u>	<u>To Complete</u>	<u>Total Cost</u>
(U)PMC BLI 463400 Communications Switching and Control Systems										
DTC	11293	18330	33704	0	0	0	0	0	0	68603
TDN	24707	49606	24063	11040	204	253	313	386	0	115246
ULCS	0	2943	0	0	0	0	0	0	0	29527
DMS	7120	4475	7358	3197	0	0	0	0	0	26394
(U) O&M										
DTC	0	0	208	0	219	0	0	0	0	427
TDN	47	0	141	141	0	0	0	0	0	329
DMS	211	367	216	220	299	242	0	0	0	1555

(U) **Related RDT&E : N/A**

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)	DATE February 1999
--	------------------------------

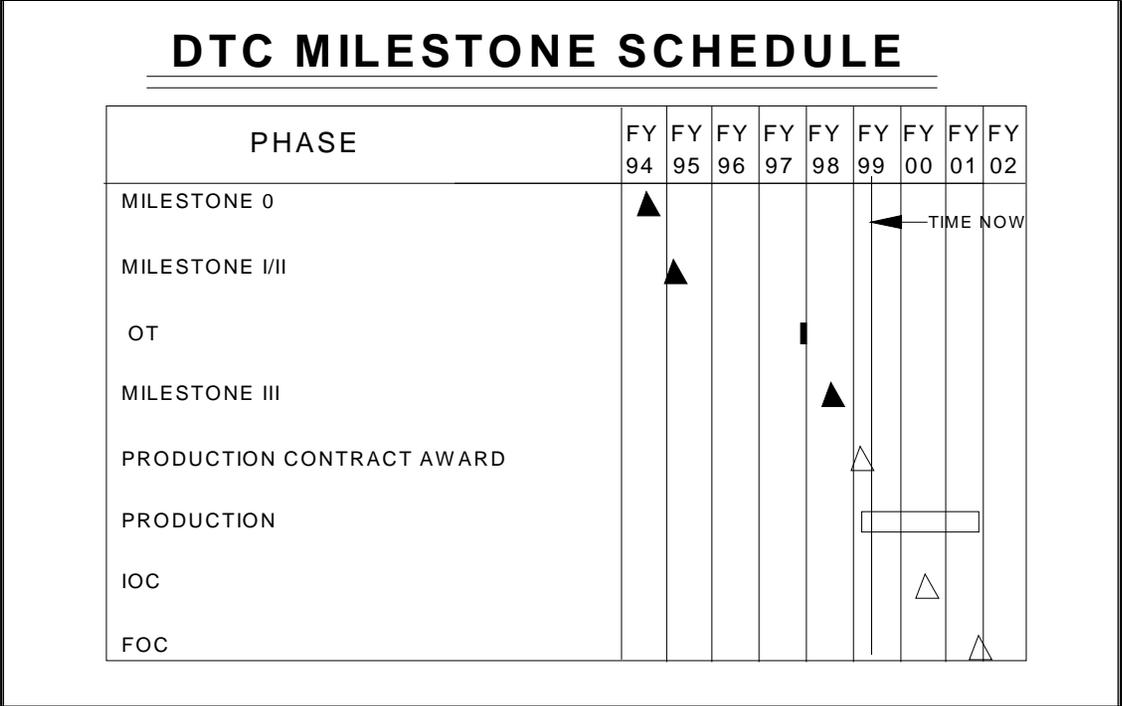
BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2276

(U) Schedule Profile:

DTC Schedule



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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2276

TDN Schedule

Tactical Data Network (TDN)

TDN MILESTONE SCHEDULE

PHASE	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01	FY 02
MILESTONE 0	▲								
MILESTONE I/II		▲							
BLOCK I OT				▲					
MILESTONE III					▲				
PRODUCTION CONTRACT AWARD					△				
BLOCK I FIELDDED						△			
BLOCK II FIELDDED							△		
BLOCK III FIELDDED								△	
IOC							△		
FOC									△

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 58 of 89)

UNCLASSIFIED

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2276

DMS Schedule

PHASE	FY 94	FY 95	FY 96	FY 97	FY 98	FY 99	FY 00	FY 01
MAISRC I/II	△							
SBU IOC				△				
OT&E				△				
MAISRC IPR					△			
Secret IOC					△			
TS/SCI IOC						△		
MAISRC III							△	
SBU FOC								△
Secret FOC								△
TS/SCI FOC								△

← TIME NOW

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 59 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2276

A. (U) Project Cost Breakdown

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
Contractor Engineering Support	1238	317	320
Development Test Evaluation	335	325	412
Program Management Support	277	1246	1109
Total	1850	1888	1841

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	FY 1998	FY 1999	FY 2000	Budget to Complete	Total Program
--	---	--------------------------	-------------------------	--------------------	------------------------	---------	---------	---------	--------------------	---------------

Product Development Organizations

TDN:

CSC	C/CPFF	Oct 97	10160	10160	9215	945	0	0	0	10160
Dumfries, VA										

DTC:

ESC, USAF	C/FFP/MIP	Oct 97	1159	1159	866	293	0	0	0	1159
Hanscom AFB, MA										
MITRE	CPFF/MIPR	Oct 98	637	637	0	0	317	320	0	637

Support and Management Organizations

TDN:

MCTSSA, Camp Pendleton, CA	WR	Oct 97	785	785	249	210	300	26	0	785
MITRE	CPFF/MIPR	Oct 98	1852	1852	0	0	814	1038	0	1852
MCSC, Quantico, VA	WR	Oct 98	120	120	0	0	30	30	60	120
SBIR	UNKNOWN	TBD	32	32	0	0	32	0	0	32

DTC:

R-1 Line Item 169

Budget Item Justification

(Exhibit R-3, Page 60 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE **February 1999**

BUDGET ACTIVITY 7 - Operational System Development					PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems					PROJECT C2276
--	--	--	--	--	--	--	--	--	--	-------------------------

MCTSSA, Camp Pendleton, CA	WR	Oct 98	234	234	35	59	60	10	70	234
MCCDC Quantico, VA	WR	Oct 98	59	59	31	8	10	5	5	59
Test and Evaluation Organizations										
DTC:										
TBD	MIPR	Oct 99	427	427	0	0	0	214	213	427
DMS:										
MCTSSA, Camp Pendleton, CA	WR	Oct 98	1087	1087	0	335	325	198	229	1087

	Total Prior to FY 1998	FY 1998	FY 1999	FY 2000	Budget to Complete	Total Program
Subtotal Product Development	10374	1238	317	320	0	12249
Subtotal Support and Management	315	277	1246	1109	135	3082
Subtotal Test and Evaluation	0	335	325	412	442	1514
Total Project	10689	1850	1888	1841	577	16845

C. (U) Funding Profile: Not Applicable

R-1 Line Item 169

Budget Item Justification

(Exhibit R-3, Page 61 of 89)

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

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2277

COST (In Millions)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
C2277 Systems Engineering and Integration	1922	7155	6966	6762	6906	6624	6628	6466	Continuing	Continuing
Quantity of RDT&E Articles										

A. (U) Mission Description and Budget Item Justification:

This project provides funds for engineering, test, and evaluation activity which ensures that the systems being developed within the Program Element (PE) employ consistent standards for interoperability and, to the maximum extent feasible, use hardware and software which is uniform across programs.

1. The Marine Air-Ground Task Force Command, Control, Communications, Computers, and Intelligence Systems Engineering and Integration, Coordination. (MAGTF C4I SE&IC) subproject is a non-acquisition effort which provides centralized planning and execution of MAGTF C4I Systems; it is also used to develop and test common hardware and software for use in MAGTF C4I Systems; MAGTF C4I SE&I also funds USMC participation in joint planning and technical standards development. MAGTF SE&IC changes name to MAGTF SEI&c in FY00.
2. Joint Warrior Interoperability Demos (JWID) is a JCS-mandated program to demonstrate new C4I interoperability concepts for the warrior. JWID offers the opportunity for demonstrations of evolving technologies in interoperability, information dissemination, fusing and digital communications.
3. The Joint Interoperability of Tactical Command and Control Systems (JINTACCS) is a Joint Chiefs-of-Staff (JCS)-mandated program for joint development, implementation, and testing of data links under the direction of the Joint Interoperability Engineering Organization (JIEO).
4. All Service Combat Identification Evaluation Team (ASCIET) conducts multi-service tactical air-to-air and surface-to-air evaluations, examines air-to-surface and surface-to-surface combat identification capabilities and provides an environment to exercise and examine developmental combat identification systems. USMC participation in ASCIET is mandated by an existing all service MOA (940914).
5. Common Computer Resources mission – Central and standardized management and acquisition of all common computer hardware and infrastructure adopting the Joint Defense Information Infrastructure (DII) Common Operating Environment (COE) with consolidated Integrated Logistics Support. Ensure the environment remains in synchronization with computer hardware technology hardware improvements. The mission supports the Commandant’s Planning Guidance and input to the Marine Corps Master Plan.

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 62 of 89)

UNCLASSIFIED

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 1999
BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2277
PROGRAM ACCOMPLISHMENTS AND PLANS:		
(U) FY 1998 Accomplishments:		
<ul style="list-style-type: none"> • (U) \$ 110 JWID: Participated in JWID, a JCS-mandated program, to demonstrate new C4I interoperability concepts. JWID-98 offers the opportunity for demonstrations of evolving technologies in interoperability, information dissemination, fusing and digital communications. • (U) \$ 0 JWID: This effort forward financed with \$257 FY97 funds from this project and PE. • (U) \$ 0 MAGTF SE&I: Continued DII COE migration to include enhanced open system, capabilities, distributed directory service, distributed file service with data replication, enhanced security, and modern desktop manger to include user configured icon and toolbars. This effort forward financed with \$322 FY97 funds from this project and PE. • (U) \$ 1783 MAGTF SEI&C: Continued to provide systems engineering to centralize management, ensure proper testing, and provide integrated support planning of hardware. • (U) \$ 0 MAGTF SEI&C: Continued to provide engineering and technical support in support of the configuration management of the MAGTF C4I system and its igration to the DII COE. Provide analyses, studies, and reviews in the development of an integrated migration strategy. Continue to provide systems engineering efforts to implement the emerging Joint Technical Architecture. Provide interoperability testing/certification of MAGTF C4I systems. This effort forward financed with \$1322 FY97 funds from this project. • (U) \$ 0 JINTACCS: Support the JINTACCS program with \$1450, by providing system engineering efforts to implement emerging standard and provide interoperability testing/certification of MAGTF C4I systems. • (U) \$ 29 JINTACCS OPNET Software for modeling of USMC systems <p>(U)Total \$ 1,922</p>		
(U) FY 1999 Planned Program:		
<ul style="list-style-type: none"> • (U) \$ 720 JWID: Participate in JWID, a JCS-mandated program, to demonstrate new C4I interoperability concepts. JWID-99 offers the opportunity for demonstrations of evolving technologies in interoperability, information dissemination, fusing and digital communications. • (U) \$ 2289 MAGTF SEI&C: Initiate Independent Verification and Validation (IV&V) to certify that all MAGTF C4I systems are Year 2000 complaint. • (U) \$ 1287 MAGTF SEI&C: Continue to provide engineering and technical support in the support of configuration management of the MAGTF C4I system and its migration to the DII COE. Provide analyses, studies, and reviews in the development and implementation of an integrated migration strategy. Continue to provide systems engineering efforts to implement the emerging Joint Architecture. Provide interoperability testing/certification of MAGTF C4I systems. • (U) \$ 1354 JINTACCS: Support the JINTACCS program by providing system engineering efforts to implement emerging standard and provide interoperability testing/certification of MAGTF C4I systems. • (U) \$ 51 ASCIET: Support and management to monitor and participate in the development of the Joint Program. • (U) \$ 1151 ASCIET: Direct support to conduct yearly combat identification evaluations. 		
R-1 Line Item 169		Budget Item Justification

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 1999																
BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2277																
<ul style="list-style-type: none"> • (U) \$ 303 SBIR: Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638 (U)Total \$ 7,155 <p>(U) FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • (U) \$ 1380 JWID: Provide management, engineering and technical support in preparation for JWID-00, a JCS-mandated program. USMC will support fielding of "GOLDEN NUGGET" from JWID-99 during JWID-00 exercise. JWID offers the opportunity to demonstrate and evaluate emerging technologies. • (U) \$ 1345 JINTACCS: Participate in JINTACCS, a JCS-mandated program aimed at ensuring interoperability of tactical systems. Provide analysis, engineering and technical support in developing joint standards. Provides interoperability testing/certification in support of C4I systems. Provide technical support in various joint programs and ACTD's. • (U) \$ 2497 MAGTF SEI&C: Provide engineering and technical support for configuration management of MAGTF C4I systems and its migration to the DII COE. Provide analysis, studies and reviews in the development and implementation of the COE migration strategy. Provide engineering support for remaining Y2K problems within MAGTF C4I systems. • (U) \$ 1685 CCR MCHS: Provide for research, evaluation, test and selection of computer hardware products for the Marine Corps Common Hardware Suite (MCHS). Develop MCHS system specifications and baselines; research and analyze computer technologies and hardware; conduct performance, compatibility and environment testing; support commercial product selection and application. • (U) \$ 59 ASCIET: USMC fair share of ASCIET exercise per established MOA. (U)Total \$ 6,966 <p>B. (U) Project Change Summary</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="text-align: center;"><u>FY 1998</u></th> <th style="text-align: center;"><u>FY 1999</u></th> <th style="text-align: center;"><u>FY 2000</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td style="text-align: center;">189</td> <td style="text-align: center;">6500</td> <td style="text-align: center;">5716</td> </tr> <tr> <td>(U) Adjustments to Previous President's Budget</td> <td style="text-align: center;">+1733</td> <td style="text-align: center;">+655</td> <td style="text-align: center;">+1250</td> </tr> <tr> <td>(U) Current Budget Submit</td> <td style="text-align: center;">1922</td> <td style="text-align: center;">7155</td> <td style="text-align: center;">6966</td> </tr> </tbody> </table> <p>(U) Change Summary Explanation:</p> <ul style="list-style-type: none"> (U) Funding: FY98 reprogramming for consolidation of support contract. FY99/00 changes due to realignment of programs within MarCorSysCom, and Non Pay Inflation adjustments. (U) Schedule: N/A (U) Technical: N/A 				<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	(U) Previous President's Budget	189	6500	5716	(U) Adjustments to Previous President's Budget	+1733	+655	+1250	(U) Current Budget Submit	1922	7155	6966
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>															
(U) Previous President's Budget	189	6500	5716															
(U) Adjustments to Previous President's Budget	+1733	+655	+1250															
(U) Current Budget Submit	1922	7155	6966															
R-1 Line Item 169		Budget Item Justification																

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 1999			
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems				PROJECT C2277			
C. (U) <u>Other Program Funding Summary</u> (APPN, BLI #, NOMEN)											
	<u>FY 1998</u>	<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>	<u>Complete</u>	<u>To</u>	<u>Total</u>
(U) CCR PMC (BLI#463000)	0	0	102814	88001	68380	63066	62153	68542	CONT	CONT	Cost
(U) <u>Related RDT&E</u> (U) PE 0604817A (U) PE 0206623M, Marine Corps Ground Combat/Supporting Arms Systems											
D. (U) <u>Schedule Profile:</u> Not Applicable											

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 65 of 89)

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2277

A. (U) Project Cost Breakdown

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
Software Development/Integration Testing	139	200	375
Civilian Salaries	416	426	435
Program Management Support	628	1933	1357
Systems Engineering PM Support	0	2144	2525
Development Support Equipment Acquisition	739	806	1065
Test/Certification	0	1646	1209
Total	1922	7155	6966

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contract Method/ Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total				Budget to Complete	Total Program
					Prior to FY 1998	FY 1998	FY 1999	FY 2000		

Product Development Organizations

JWID:

MCTSSA, Camp Pendleton, CA	WR	Oct97			0	110	200	300	CONT	CONT
HQMC Arlington, VA	WR	Oct 99			0	0	0	580	CONT	CONT

CCR:

TBD	TBD	Jan 00			0	0	0	133	CONT	CONT
TBD	TBD	Jan 00			0	0	0	152	CONT	CONT

JINTACCS

CECOM FT MONMOUTH, NJ	SS	Oct 98	29	29	0	29	0	0	0	29
--------------------------	----	--------	----	----	---	----	---	---	---	----

Support and Management Organizations

JWID:

R-1 Line Item 169

Budget Item Justification

(Exhibit R-3, Page 66 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE
February 1999

BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2277
---	---	--------------------------------

Logicon, Stafford, VA	C/FFP	Oct98								
TBD	TBD	TBD								
MAGTF SE&I:										
CECOM, Fort Monmouth N.J.	WR	Oct 98	700	700	0	0	175	175	350	700
CCR:										
Logicon, Stafford VA	C/FFP	Oct 99			0	0	0	1048	CONT	CONT
MCSC, Quantico, VA	WR	Oct 99			0	0	0	38	CONT	CONT
ASCIET:										
Eglin AFB	MIPR	Oct 98				0	1202	59	CONT	CONT
Test and Evaluation Organizations										
MAGTF SEIC:										
Logicon, Stafford, VA	CFFP	Oct 99	8509	8509		1783	3401	2322	1003	8509
JINTACCS:										
Logicon, Stafford, VA	C/CPFF	Oct 98			649	0	1319	1310	CONT	CONT
MCTSSA, Camp Pendleton, CA	WR	Oct 97			0	0	35	35	CONT	CONT
CCR:										
TBD	TBD	Jan 00			0	0	0	314	CONT	CONT
SBIR			303	303	0	0	303	0	0	303
Total										
Prior to										
<u>FY 1998</u> <u>FY 1998</u> <u>FY 1999</u> <u>FY 2000</u> <u>Budget to</u> <u>Total</u>										
Subtotal Product Development						139	200	1165	CONT	CONT
Subtotal Support and Management					649	0	1897	1820	CONT	CONT
Subtotal Test and Evaluation						1783	5058	3981	CONT	CONT
Total Project					649	1922	7155	6966	CONT	CONT

C. (U) Funding Profile: Not Applicable.

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 1999		
BUDGET ACTIVITY 7 - Operational System Development					PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems				PROJECT C2278	
COST <i>(In Millions)</i>	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
C2278 Air Defense Weapons Systems	744	2001	9759	9350	9688	11537	2741	3618	Continuing	Continuing
Quantity of RDT&E Articles										
<p>A. (U) <u>Mission Description and Budget Item Justification:</u></p> <p>This project encompasses two sub-element programs which are part of the Integrated Air Defense System for the Marine Corps.</p> <ol style="list-style-type: none"> 1. The Expeditionary Air Defense System (EADS) is the Marine Corps' low altitude ground based air defense system. Upgrades include mobility enhancements and expeditionary air defense improvements. Primarily, the Continuous Wave Acquisition Radar (CWAR) is the only sensor organic to the Marine Corps capable of providing low altitude target acquisition in a high clutter environment. 2. Combat ID (CID) will provide the ability to distinguish friends, foes, and neutrals on the battlefield through the use of situation awareness and target identification. 3. The Cooperative Engagement Capability (CEC) enables all ECE-equipped, Anti-Air Warfare (AAW) weapons systems in a battle force to operate as a single, distributed AAW weapon system. This is accomplished providing timely sharing of fire control quality sensor data, correlated identification data, and AAW weapon system management status via a Data Distribution System (DDS). The data is processed Independently the Cooperative Engagement Processor (CEP) on-board each Cooperating Unit (CU) to construct a detailed tract and status database in real time to provide required remote data to and from the local AAW weapon system elements (hardware and software modified for CEC). In this manner, each CU of a battle force can operate cooperatively with the other CUs, taking advantage of diverse locations and aspect angles, various AAW system capabilities, and degrees of availability by sharing sensor data, and coordinating engagements, fire control illuminators, and AAW missiles. <p>PROGRAM ACCOMPLISHMENTS AND PLANS:</p> <p>(U) FY 1998 Accomplishments:</p> <ul style="list-style-type: none"> • (U) \$ 744 EADS: Continued pursuing ECPs for correcting hardware and software deficiencies thereby maintaining CWAR system viability. (U) Total \$ 744 										
R-1 Line Item 169						Budget Item Justification				

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)DATE
February 1999

BUDGET ACTIVITY

7 - Operational System Development

PE NUMBER AND TITLE

**0206313M Marine Corps Communications
Systems**

PROJECT

C2278**(U) FY 1999 Planned Program:**

- (U) \$ 1,964 EADS: Identification Friend or Foe (IFF) continuous wave acquisition radar integration.
 - (U) \$ 37 Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638.
- (U)Total \$ 2,001

(U) FY 2000 Planned Program:

- (U) \$ 3,600 CEC: Initiate development of a land based CEC Engineering Design Model.
 - (U) \$ 1,000 CEC: Initiate design and development of a land based CEC antenna.
 - (U) \$ 197 CEC: Certify AN/TPS-59(V)3 adaptive layer software.
 - (U) \$ 500 CEC: Continue UPX-27(IFF) adaptive layer software development.
 - (U) \$ 500 CEC: Initiate design of combat system adaptive layer interface.
 - (U) \$ 700 CEC: Conduct Developmental Testing.
 - (U) \$ 200 CEC: Program support of provide program documentation for MS II.
 - (U) \$ 400 CEC: Program Management Support.
 - (U) \$ 400 CID: Test and evaluate systems currently available COTS for applicability.
 - (U) \$ 1,400 CID: Demonstration & Validation of systems.
 - (U) \$ 500 CID: Conduct Studies to investigate feasibility of using various fielded systems to fulfill some CID requirements.
 - (U) \$ 312 CID: Contractor Management.
 - (U) \$ 50 CID: TAD.
- (U)Total \$ 9,759

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 69 of 89)

UNCLASSIFIED

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE February 1999			
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems			PROJECT C2278			
B. (U) <u>Project Change Summary</u>				<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>				
(U) Previous President's Budget				793	2006	847				
(U) Adjustments to Previous President's Budget				-49	-5	+8912				
(U) Current Budget Submit				744	2001	9759				
 (U) Change Summary Explanation:										
(U) Funding: FY98 Due to minor affordability adjustments. FY99 Due to Revised Economic Assumption. FY00 adjustment is due to prioritization of programs within the Marine Corps, due to Congressional adjustments to: (Combat ID) in the amount of \$2.2 to test and evaluate available COTS to distinguish friends, foes and neutrals on the battlefield; and (CEC) in the amount of \$6.7 to develop a land based system to enable all ECE-equipped, Anti-Air Warfare weapon systems in a battle force to operate as a single.										
(U) Schedule: N/A										
(U) Technical: N/A										
 C. (U) <u>Other Program Funding Summary</u>										
	<u>FY 1998</u>	<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>	<u>To</u>	<u>Total</u>
(U) PMC LINE BLI 300600 EADS MOD	1490	976	0	0	0	0	0	0	<u>Complete</u>	<u>Cost</u>
(U) PMC LINE BLI 464000										
CID	0	0	0	0	0	0	16014	23168	CONT.	CONT.
CEC	0	0	0	0	14135	19624	21849	28698	CONT.	CONT.
 (U) Related RDT&E PE 0603216C (Ballistic Missile Defense Organization, Theater Missile Defense)										

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

DATE **February 1999**

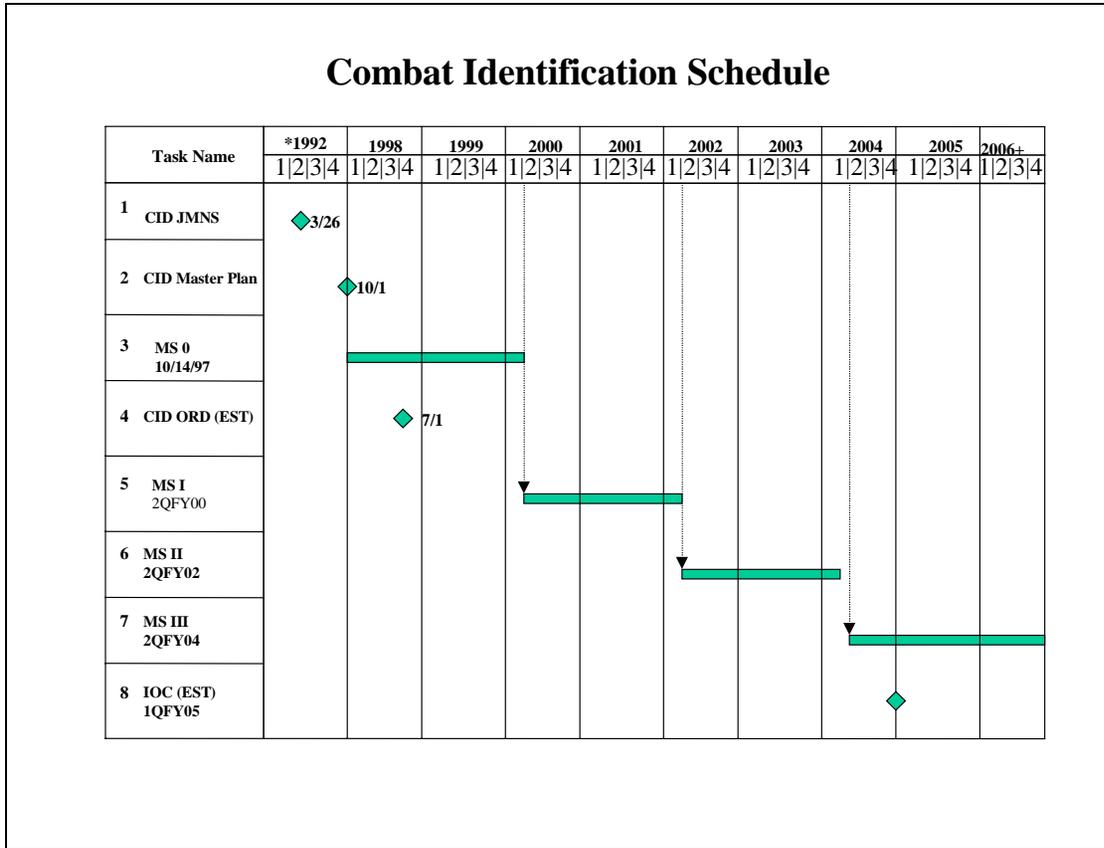
BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2278

D. (U) Schedule Profile

CID Schedule:



R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 71 of 89)

UNCLASSIFIED

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

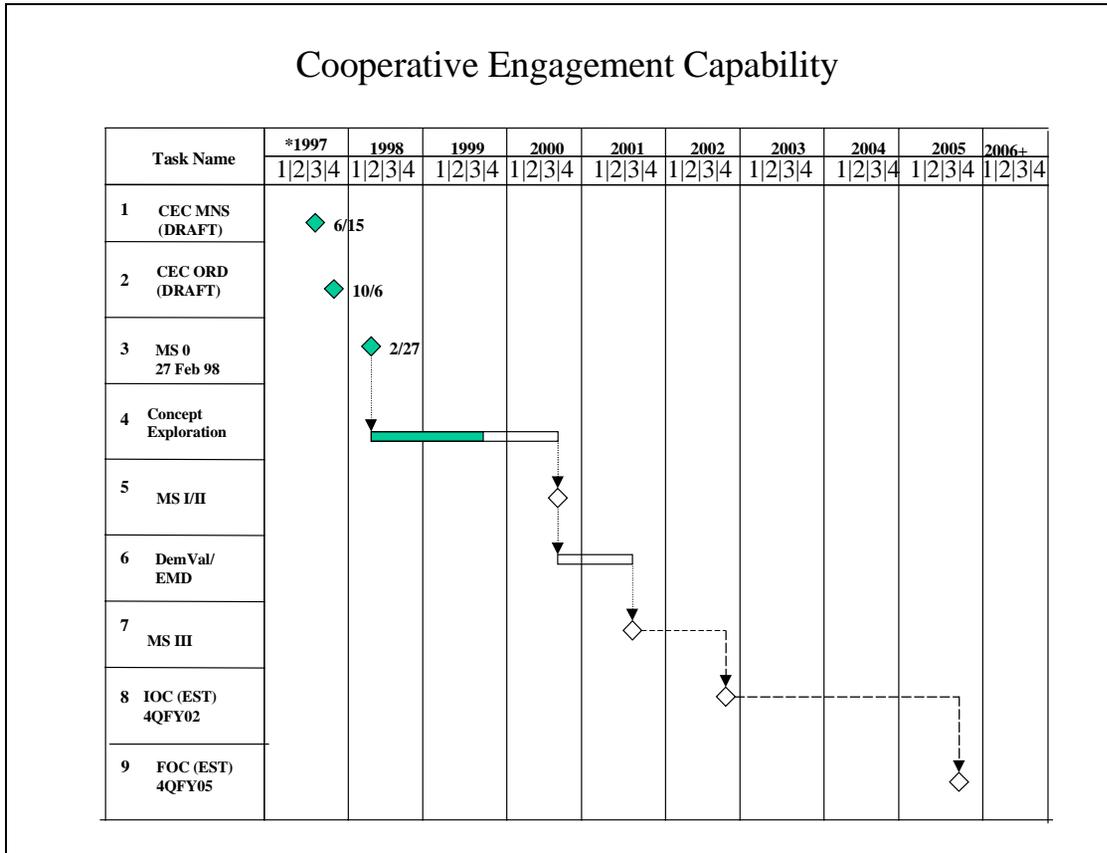
DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2278

CEC Schedule:



R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 72 of 89)

UNCLASSIFIED

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 1999			
BUDGET ACTIVITY 7 - Operational System Development					PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems				PROJECT C2278	
A. (U) Project Cost Breakdown					<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>			
a. Program Management/Travel					103	10	400			
b. System Design					0	0	750			
c. Program Management Support Services					60	0	200			
d. Primary Hardware Development					0	0	4600			
e. Software Development					0	0	800			
f. CEC Training Exercise Support to FMF					0	0	347			
g. Systems Engineering					581	1991	2662			
Total					744	2001	9759			
B. Budget Acquisition History and Planning Information										
Performing Organizations										
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	Budget to Complete	Total Program
Product Development Organizations										
EADS:										
MCSC, Quantico, VA	WR	OCT 97	84	84	0	84	0	0	0	84
MICOM, Redstone Arsenal, AL	MIPR	MAR 98	2536	2536	0	545	1991	0	0	2536
MCTSSA, Camp Pendleton, CA	WR	OCT 97	29	29	0	19	10	0	0	29
MICOM, Redstone Arsenal, AL	MIPR	OCT 97	15	15	0	15	0	0	0	15
CID:										
TBD	TBD	TBD	5418	5418	0	0	0	2662	2756	5418
CEC:										
					R-1 Line Item 169					
					Budget Item Justification					

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)										DATE February 1999	
BUDGET ACTIVITY					PE NUMBER AND TITLE					PROJECT	
7 - Operational System Development					0206313M Marine Corps Communications Systems					C2278	
TBD	CPFF	OCT 99			0	0	0	1000	CONT.	CONT.	
TBD	CPFF	OCT 99			0	0	0	4000	CONT.	CONT.	
TBD	CPFF	OCT 99			0	0	0	200	CONT.	CONT.	
TBD	CPFF	OCT 99			0	0	0	497	CONT.	CONT.	
Support and Management Organizations											
EADS:											
MCSC, Quantico, VA	RCP	JAN 98	60	60	0	60	0	0	0	60	
CECOM, Ft. Monmouth, NJ	MIPR	DEC 97	21	21	0	21	0	0	0	21	
CEC:											
MCTSSA	WR	OCT 99			0	0	0	250	CONT.	CONT.	
NSWC, Crane, IN	WR	OCT 99			0	0	0	850	CONT.	CONT.	
NSWC, Dahlgren, VA	WR	OCT 99			0	0	0	100	CONT.	CONT.	
TBD	FFP	OCT 99			0	0	0	200	CONT.	CONT.	
Test and Evaluation Organizations											
Government Furnished Property											
Contract											
Item Description	Method/Type or Funding Vehicle	Award or Obligation Date	Delivery Date		Total Prior to FY 1998	FY 1998	FY 1999	FY 2000	Budget to Complete	Total Program	
Product Development Property											
Support and Management Property											
Test and Evaluation Property											

R-1 Line Item 169

Budget Item Justification

(Exhibit R-3, Page 74 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)					DATE February 1999	
BUDGET ACTIVITY 7 - Operational System Development			PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems			PROJECT C2278
	<u>Total</u>				<u>Budget to</u>	<u>Total</u>
	<u>Prior to</u>				<u>Complete</u>	<u>Program</u>
Subtotal Product Development	<u>FY 1998</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	CONT.	CONT.
Subtotal Support and Management		663	2001	8359	CONT.	CONT.
Subtotal Test and Evaluation		81	0	1400	CONT.	CONT.
Total Project		0	0	0	0	0
		744	2001	9759	CONT.	CONT.

R-1 Line Item 169

Budget Item Justification

UNCLASSIFIED

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

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2315

COST (In Millions)	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
C2315 Training Devices/Simulators	7203	9368	8850	4881	9021	12342	5093	491	Continuing	Continuing
Quantity of RDT&E Articles										

A. (U) Mission Description and Budget Item Justification:

(U) Training simulators supported by this program element include Joint Simulation System (JSIMS), Range Instrumentation Systems (RIS), and Combat Vehicle Appended Trainer (CVAT). These training systems provide tactical weapons and decision-making skill training from entity level through Marine Air-Ground Task Force (MGTF) staff level. Together these systems will be interoperable and will allow for mission planning, mission rehearsal and concept evaluation in a valid synthetic environment with objective, timely feedback. Through live, virtual and constructive simulation, the Marine Corps will have the means to train jointly, educate, develop doctrine and tactics; formulate and assess operational plans, assess warfighting situations and define operational requirements.

(U) PROGRAM ACCOMPLISHMENTS AND PLANS:

(U) FY 1998 Accomplishments:

- (U) \$ 5001 JSIMS: Provided technical expertise to the US Army, US Navy and US Air Force in the development of the Marine Corps unique simulation requirements. Completed development of software Build 0 products within Maritime Domain, and completed program system level specification and detailed software requirements.
- (U) \$ 1,323 JSIMS: Completed development of unit level Conceptual Models for software build 0 and build 1 and continue to develop Conceptual Models for software builds 2 and 3. Completed candidate list of USMC simulations to interface.
- (U) \$ 170 JSIMS: Completed USMC input to Joint Level Test and Evaluation Master Plan and provided technical expertise to the Test Planning Group to provide input for USMC unique system test requirements.
- (U) \$ 430 JSIMS: Completed development of platform level Conceptual models for software builds 0 and build 1. Continued development of platform level conceptual models for software builds 2 and 3.
- (U) \$ 279 RIS: Completed After Action Report (AAR) software capabilities.
- (U)Total \$ 7,203

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 76 of 89)

UNCLASSIFIED

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 1999
BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2315
<p>(U) FY 1999 Planned Program:</p> <ul style="list-style-type: none"> • (U) \$ 298 JSIMS: Provide Marine Corps funding to CECOM for the development of the USMC specific Test and Evaluation master plan and provide technical expertise to the JSIMS test planning group for the Build 1 demonstration. • (U) \$ 6881 JSIMS: Continue to provide technical expertise to the US Army, US Navy and US Air Force in the development of USMC specific requirements. Complete development of USMC requirements for software build 1. Procure Test hardware for Camp Lejeune in preparation for Collaborative Event. • (U) \$ 400 JSIMS: Provide USMC Funding to Naval Air Warfare Center to continue development of JSIMS Build 2 and Build 3 conceptual models for USMC. • (U) \$ 1000 JSIMS: Provide USMC Funding to US Army STRICOM to begin development of USMC Tactical Intelligence Systems. • (U) \$ 528 JSIMS: Support development of USMC notional hardware configurations and participate in the Enterprise development of USMC C4I interface requirements. • (U) \$ 261 SBIR: Portion of extramural program reserved for Small Business Innovation Research assessment in accordance with 15 USC 638. <p>(U)Total \$ 9,368</p> <p>(U) FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • (U) \$ 4622 JSIMS: Continue to provide technical expertise to the US Army, US Navy and US Air Force in the development of USMC specific requirements. Participate in Collaborative Event 1. Procure testing hardware for Quantico site to support developmental testing and Verification, Validation and Accreditation of USMC requirements. • (U) \$ 200 JSIMS: Continue technical expertise to test planning group for build 1 demonstration. Participate in Collaborative Event and provide Verification, Validation, and Accreditation of USMC requirements. • (U) \$ 528 JSIMS: Continue support in the development of USMC notional hardware configurations and participates in the Enterprise development of USMC C4I interface requirements. • (U) \$ 1,900 CVAT: Develop appended trainer M1A1 prototype. • (U) \$ 350 CVAT: Develop/Modify visual database. • (U) \$ 1,250 CVAT: Independent verification and validation/testing of prototype functionality and interfaces. <p>(U)Total \$ 8,850</p>		
R-1 Line Item 169		Budget Item Justification

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)							DATE February 1999				
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems			PROJECT C2315				
B. (U) <u>Project Change Summary</u>				<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>					
(U) Previous President's Budget				8,233	9,933	10,180					
(U) Adjustments to Previous President's Budget				-1,030	-565	-1,330					
(U) Current Budget Submit				7,203	9,368	8,850					
 (U) Change Summary Explanation:											
(U) Funding: FY 98 decrease of \$1,030K due to minor affordability adjustments for net reprogramming \$766K, SBIR \$261K and \$3K reprogrammed from JSIMS to CA. Decrease of \$565K in FY99 is due to below threshold reprogramming action. FY00 decrease is due to a delay in development and procurement of RIS and a scope reduction of affordable unique Marine Corps requirements in JSIMS.											
(U) Schedule: N/A											
(U) Technical: N/A											
C. (U) <u>Other Program Funding Summary</u>		<u>FY 1998</u>	<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	Total
(APPN, BLI #, NOMEN)											
(U) PMC, 653200, Training Devices/Simulators		6,501	3297	13848	32165	22339	18302	25466	25320	<u>Compl</u>	<u>Cost</u>
(U) Related RDT&E: PE 0603832D, Joint Simulation Management											

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

DATE **February 1999**

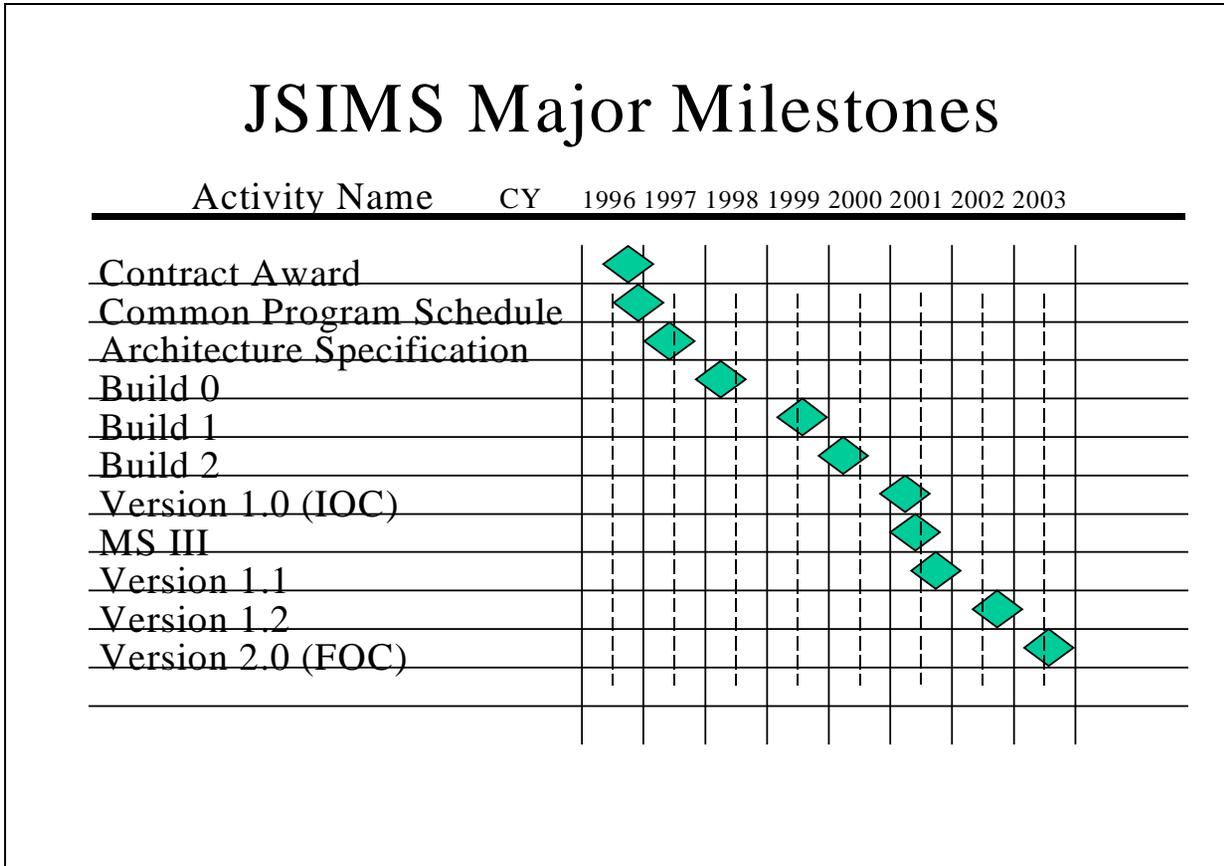
BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2315

D. (U) Schedule Profile

JSIMS Schedule



R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 79 of 89)

UNCLASSIFIED

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

DATE **February 1999**

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2315

CVAT Schedule:

CVAT MAJOR MILESTONES

	1998				1999				2000				2001				2002				2003			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Acquisition Strategy																								
Finalize Procurement Package				◆																				
Proposal Evaluation							◆																	
MS I Contract Award							◆																	
Developmental Testing											◆													
Operational Capability Demo											◆													
Milestone II/III Decision											◆													
MS III Contract Award											◆													
First Article Test															◆									
First Article Delivery															◆									
IOC															◆									
FOC																							◆	

R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 80 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE
February 1999

BUDGET ACTIVITY
7 - Operational System Development

PE NUMBER AND TITLE
0206313M Marine Corps Communications Systems

PROJECT
C2315

A. (U) Project Cost Breakdown

	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>
Subtotal Product Development	6915	8901	8531
Subtotal Support and Management	288	169	119
Subtotal Test and Evaluation	0	298	200
Total	7203	9368	8850

B. Budget Acquisition History and Planning Information

Performing Organizations

Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	FY 1998	FY 1999	FY 2000	Budget to Complete	Total Program
Product Development Organizations										
VISICOM, Labs										
Inc. San Diego, CA	RCP	NOV 97				3447	4373	2984	CONT	CONT
STRICOM Orlando, FL	RCP	NOV 98	1000	1000		0	1000	0	0	1000
TBD, MARCOR SYSCOM	RCP	DEC 99				0	0	3500	0	2700
NRaD, San Diego, CA	WR	DEC 97				1196	600	400	CONT	CONT
CECOM, Ft. Monmouth, NJ	MIPR	NOV 97				1375	528	528	CONT	CONT
Naval Air Warfare Center, Orlando, FL	RCP	DEC 97	680	680		279	401	0	0	1029
Naval Air Warfare Center Orlando FL	RCP	NOV 97	760	760		380	380	0	0	760

R-1 Line Item 169

Budget Item Justification

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)

DATE
February 1999

BUDGET ACTIVITY				PE NUMBER AND TITLE				PROJECT	
7 - Operational System Development				0206313M Marine Corps Communications Systems				C2315	
MCIA	WR	NOV 97			238	119	119	CONT	CONT
Quantico, VA									
CCR	RCP	JAN 99	2500	2500	0	1500	1000	0	2500
Quantico, VA									
Support and Management Organizations									
Naval Air Warfare Center, Orlando, FL	WR	NOV 97	100	100	50	50	0	0	100
Naval Surface Warfare Center Indian Head, MD	RCP	NOV 97			238	119	119	CONT	CONT
Test and Evaluation Organizations									
MCOTEA	RCP	NOV 98			0	298	200	CONT	CONT
Quantico, VA									
Government Furnished Property									
	Contract								
Item	Method/Type or Funding	Award or Obligation	Delivery	Total					
<u>Description</u>	<u>Vehicle</u>	<u>Date</u>	<u>Date</u>	<u>Prior to FY 1998</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>Budget to Complete</u>	<u>Total Program</u>
Product Development Property									
Support and Management Property									
Test and Evaluation Property									
				Total					
				<u>Prior to FY 1998</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	<u>Budget to Complete</u>	<u>Total Program</u>
Subtotal Product Development					6915	8901	8531	CONT	CONT
Subtotal Support and Management					288	169	119	CONT	CONT
Subtotal Test and Evaluation					0	298	200	CONT	CONT
Total Project					7203	9368	8850	CONT	CONT
R-1 Line Item 169					Budget Item Justification				

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)								DATE February 1999		
BUDGET ACTIVITY 7 - Operational System Development					PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems			PROJECT C2510		
<i>COST (In Millions)</i>	FY 1998 Actual	FY 1999 Estimate	FY 2000 Estimate	FY 2001 Estimate	FY 2002 Estimate	FY 2003 Estimate	FY 2004 Estimate	FY 2005 Estimate	Cost to Complete	Total Cost
C2510 MAGTF CSSE & SE	0	0	1141	1083	689	541	260	260	Continuing	Continuing
Quantity of RDT&E Articles										
<p>A. (U) <u>Mission Description and Budget Item Justification:</u></p> <p>(U) The MAGTF Combat Service Support Element & Supporting Establishment (CSSE & SE) consists of mutually supporting Logistics Information Technology (IT) programs that support force deployment, planning, and execution; sustainment and distribution; and contribute to the CINC's Common Operating Picture (COP) to support rapid accurate decision making.</p> <ol style="list-style-type: none"> 1. The ATLASS capability represents a deployable capability that will be used in the tactical deployed areas of the Marine Corps, as well as in garrison. The ATLASS PIP program funds the improvement of the fielded ATLASS II+ system as well as the migration of base and station (non-deployable) USMC intermediate and consumer level supply and maintenance systems from a mainframe environment into a personal computer application using a networked client server architecture. The ATLASS PIP consolidated the total force intermediate and consumer level supply and maintenance information management functions into a single material management system. ATLASS PIP enhances ATLASS II+, retires existing mainframe legacy applications in use by the bases and stations, and expands the client-server based supply maintenance and material readiness Automated Information System (AIS) ATLASS II+ to them. ATLASS PIP retains the flexibility to exploit existing commercial and government off-the-shelf software. This system remains compliant with the MAGTF C4I concept, GCCS COE, and published DOD standards for open systems architecture. 2. TC-AIMS II is a Joint transportation and deployment Automated Information System (AIS) supporting the DOD mission areas of mobility and sustainment. It will replace two of our MAGTF LOG AIS applications over a parallel transition starting in FY00. TC-AIMS II will be used by Command Elements, Traffic Management Offices (TMO), and all operating forces deploying units to automate the processes of planning, organizing, coordinating, and controlling deployment, redeployment, and sustainment activities worldwide, in peace as well as during contingencies. It provides a modernized, scalable, integrated, and easily deployable AIS that supports reengineered deployment and business processes throughout DOD. TC-AIMS II is the key enabler towards Force Deployment Planning and Execution. It is the source system for In-Transit-Visibility (ITV) data, which provides CINC's and Components with critical visibility of items in the transportation pipeline. TC-AIMS II links all DOD Component unit movement and Installation Transportation Office/Traffic Management Office (ITO/TMO) functionality into a single transportation management system. It is a Joint ACAT 1A(M) program, with the USMC portion being handled as an ACAT III. 										
R-1 Line Item 169						Budget Item Justification				

UNCLASSIFIED

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 1999																
BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2510																
<p>(U) FY 1998 Accomplishments:</p> <ul style="list-style-type: none"> • (U) \$ 0 N/A <p>(U)Total \$ 0</p> <p>(U) FY 1999 Planned Program:</p> <ul style="list-style-type: none"> • (U) \$ 0 N/A <p>(U)Total \$ 0</p> <p>(U) FY 2000 Planned Program:</p> <ul style="list-style-type: none"> • (U) \$ 792 ATCLASS PIP: Commence design and development activity of ATCLASS PIPs • (U) \$ 205 ATCLASS PIP: Evaluate and Integrate existing software and hardware modules and technology • (U) \$ 50 ATCLASS PIP: Commence development of implementation and support plans • (U) \$ 50 TC-AIMS II: Exploration and development of Integration Plans with Air/Ship/Rail Load Planning and Joint Planning & Execution Tools, leveraging data warehousing and operational data stores initiatives. • (U) \$ 44 TC-AIMS II: Evaluate existing software modules, technology, and AIT enablers related to Sea Based Logistics and MPT-E requirements. <p>(U)Total \$ 1,141</p>																		
<p>B. (U) <u>Project Change Summary</u></p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 40%;"></th> <th style="width: 15%; text-align: center;"><u>FY 1998</u></th> <th style="width: 15%; text-align: center;"><u>FY 1999</u></th> <th style="width: 15%; text-align: center;"><u>FY 2000</u></th> </tr> </thead> <tbody> <tr> <td>(U) Previous President's Budget</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> </tr> <tr> <td>(U) Adjustments to Previous President's Budget</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">1141</td> </tr> <tr> <td>(U) Current Budget Submit</td> <td style="text-align: center;">0</td> <td style="text-align: center;">0</td> <td style="text-align: center;">1141</td> </tr> </tbody> </table> <p>(U) Change Summary Explanation:</p> <ul style="list-style-type: none"> (U) Funding: FY00 adjustment is due to prioritization of programs within the Marine Corps. (U) Schedule: N/A (U) Technical: N/A 				<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	(U) Previous President's Budget	0	0	0	(U) Adjustments to Previous President's Budget	0	0	1141	(U) Current Budget Submit	0	0	1141
	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>															
(U) Previous President's Budget	0	0	0															
(U) Adjustments to Previous President's Budget	0	0	1141															
(U) Current Budget Submit	0	0	1141															
R-1 Line Item 169		Budget Item Justification																

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)									DATE February 1999	
BUDGET ACTIVITY 7 - Operational System Development				PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems					PROJECT C2510	
C. (U) Other Program Funding Summary	<u>FY 1998</u>	<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	Total
(APPN, BLI #, NOMEN)									<u>Compl</u>	<u>Cost</u>
(U) PMC Line (BLI#463500) ATCLASS II+	3745	10552	3489	7228	0	0	0	0	CONT	CONT
(U) PMC Line (BLI#464100) ATCLASS II+	0	0	0	0	2568	1181	390	485	CONT	CONT
(U) PMC Line (BLI#464100) TC-AIMS II	0	0	4518	4609	4066	0	0	0	CONT	CONT
(U) Related RDT&E										
None										

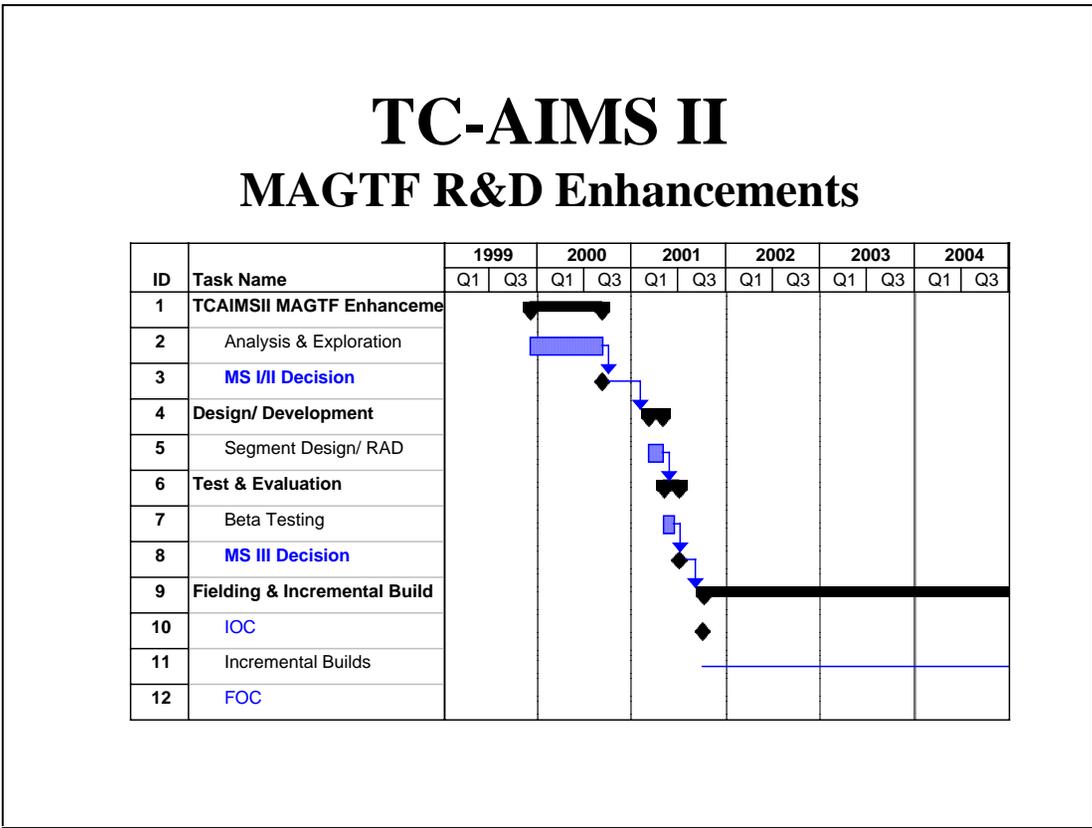
R-1 Line Item 169

Budget Item Justification

(Exhibit R-3, Page 85 of 89)

RDT&E BUDGET ITEM JUSTIFICATION SHEET (R-2 Exhibit)		DATE February 1999
BUDGET ACTIVITY 7 - Operational System Development	PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems	PROJECT C2510

TC-AIMS II Schedule:



R-1 Line Item 169

Budget Item Justification

(Exhibit R-2, Page 87 of 89)

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)							DATE February 1999			
BUDGET ACTIVITY 7 - Operational System Development					PE NUMBER AND TITLE 0206313M Marine Corps Communications Systems				PROJECT C2510	
A. (U) <u>Project Cost Breakdown</u>										
				<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>				
Product Development				0	0	779				
Support and Management				0	0	101				
Test and Evaluation				0	0	261				
Total				0	0	1141				
B. <u>Budget Acquisition History and Planning Information</u>										
Performing Organizations										
Contractor or Government Performing Activity	Contract Method/Type or Funding Vehicle	Award or Obligation Date	Performing Activity EAC	Project Office EAC	Total Prior to FY 1998	FY 1998	FY 1999	FY 2000	Budget to Complete	Total Program
Product Development Organizations										
ATLASS PIP:										
SSC Chesapeake	MIPR	Jan 00	1665	1665	0	0	0	685	970	1665
TC-AIMS II:										
US Army (PEOSTAMIS) (GTE, BBN)	FFP/O	Jan 00						94	CONT	CONT
Support and Management Organizations										
ATLASS PIP:										
Logicon	Spt/Svcs	Jan 00	151	151	0	0	0	101	50	151
TC-AIMS II:										
US Army, PEOSTAMIS (GTE, BBN)	FFP/O	Jan 00	50	50	0	0	0	0	50	50
Test and Evaluation Organizations										
ATLASS PIP:										
SSC Charleston	MIPR	Jan 00	383	383	0	0	0	261	122	383
R-1 Line Item 169							Budget Item Justification			

UNCLASSIFIED

RDT&E PROGRAM ELEMENT/PROJECT COST BREAKDOWN (R-3)						DATE February 1999		
BUDGET ACTIVITY			PE NUMBER AND TITLE			PROJECT		
7 - Operational System Development			0206313M Marine Corps Communications Systems			C2510		
TC-AIMS II:								
MarCorSysCom, Quantico, VA (Logicon, MITRE)	FFP/O	Jan 00				CONT	CONT	
			Total Prior to <u>FY 1998</u>	<u>FY 1998</u>	<u>FY 1999</u>	<u>FY 2000</u>	Budget to <u>Complete</u>	Total <u>Program</u>
Subtotal Product Development						779	CONT	CONT
Subtotal Support and Management						101	0	201
Subtotal Test and Evaluation						261	CONT	CONT
Total Project						1141	CONT	CONT
			R-1 Line Item 169		Budget Item Justification			