CLASSIFICATION:

EXHIBIT R-2, RDT&E Budget Item Justification					DATE: **February 2005**			
APPROPRIATION/BUDGET ACTIVITY **RESEARCH DEVELOPMENT TEST & EVALUATION, NAVY /**			R-1 ITEM NOMENCLATURE PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS					
COST ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Cost	**$ 66.6**	**$ 79.5**	**$ 250.8**	**$ 258.2**	**$ 111.6**	**$ 65.5**	**$ 2.7**	**$ 1.8**
3073 Airborne Maritime/Fixed JTRS (AMF JTRS)	**$ 64.9**	**$ 55.4**	**$ 170.6**	**$ 159.1**	**$ 79.3**	**$ 54.5**	**$ 2.7**	**$ 1.8**
3020 Multifunctional Information Distribution System (MIDS JTRS)	**$ -**	**$ 22.1**	**$ 80.2**	**$ 99.1**	**$ 32.3**	**$ 11.0**	**$ -**	**$ -**
9378 Digital Modular Radio (DMR)	**$ -**	**$ 1.9**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
9375 Super Conductor Micro-Electronics	**$ 1.7**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

In November 2003, the Navy & Air Force Service Acquisition Executives directed the merger of Clusters 3 (Navy) and 4 (Air Force) to establish a combined JTRS Cluster, renamed AMF JTRS, Airborne Maritime Fixed. On January 21, 2004, USD (AT&L) signed an Acquisition Decision Memorandum (ADM) acknowledging the combination of the two clusters, as well as authorizing the release of the Pre-System Development and Demonstration (SDD) Request for Proposal (RFP) for the AMF JTRS program. Funding represents Navy's portion of AMF JTRS.

The Airborne Maritime/Fixed JTRS (AMF JTRS) will be designed to support communications readiness and mission success by providing military commanders with the ability to command, control and communicate with their forces via secure voice, video, and data media forms during all aspects of military operations. The AMF JTRS will be a hardware configurable and software definable radio (SDR) system that provides increased interoperability, flexibility and adaptability to support the varied mission requirements of the warfighter. The AMF JTRS system will provide radio sets that are software definable, multi-band, multi-mode capable, secure, network-centric, and able to provide simultaneous voice, data, and video communications over multiple frequency bands between 2 MegaHertz (MHz) and 2 GigaHertz (GHz), as well as scalable to meet the needs of multiple platforms. As a requirement, the AMF JTRS will operate with legacy equipment and waveforms currently used by civilian and military airborne, surface, subsurface, and fixed station platforms as well as incorporate new waveforms and CEAs as they are developed. As a result of this fielding,legacy radios and cryptographic devices will eventually be phased out through the JTRS implementation effort, which is a planned migration to transition to the JTRS capability. The Air Force Electronic Systems Center (AF/ESC) and the Program Executive Office, Command, Control, Communications, Computers, Intelligence, and Space (PEO C4I & Space) will fulfill the AMF JTRS requirements in a phased approach. Each phase will build on the technological achievements of its predecessor, while at the same time providing expanded capabilities (in both hardware and software). AMF JTRS will incorporate the following key concepts into its design: commonality across JTRS clusters, transformational communications, networking, automation and control, information gateways, and quality of service. The AMF JTRS procurement specifically involves the development of Joint Tactical Radio (JTR) Set and the integration of the Software Communication Architecture (SCA) Complliant waveforms and Cryptographic Equipment Applications (CEA) provided by the JTRS Joint Program Office (JPO). The procurement also funds development of the necessary equipment for these capabilities to be integrated into the Maritime and Fixed Station platforms through the Service Integration Kits (SIK). The JTR Set is planned to consist of a JTR (receiver/exciter/modem), Cryptographic Sub-System (CS/S), and ancillaries, both common and service unique. Ancillaries consist of items, such as: power amplifiers to meet the 2 MHz to 2 GHz frequency range, baseband (voice, video and data) Input/Output (I/O), filters, Radio Frequency (RF) networking services, and basic Human Machine Interface (HMI) and control. The AMF JTRS SIKs are planned to consist of RF legacy interface capability, service site-specific power amplifiers (e.g. High Frequency (HF) broadband amplifiers for Navy ships and 10 KW for U.S. Air Force fixed stations), couplers/multicouplers, antennae, baseband networking services, dynamic control, automatic RF switching, co-site mitigation devices, interference mitigation devices, and other Service-specific installation requirements. The combination of the JTR Set and the various SIKs will allow for a modular/scalable solution to meet the Joint Services' various AMF JTRS implementation requirements.

Joint Task Force Wide Area Relay Network Program Enhancement (JTF WARNET) - This program is an NRL initiative that has grown from an Advanced Concept Technology Demonstration (ACTD). This program supports JTRS CONOPS & Tactics, Techniques and Procedures (TTP) development, incorporates Intra-Battle Group Wireless Network (IBGWN) capabilities, supports ADNS Integration and supports Joint Translator Forwarder (JTF.)

The MIDS-LVT is a jam-resistant, secure, digital (voice and data) information distribution system, enabling rapid integrated communications, navigation and identification for tactical and command and control operations. The technical objective of the MIDS JTRS program is to transform the current MIDS-LVT into a four-channel, Software Communications Architecture (SCA) compliant JTRS, while maintaining current Link-16 and tactical air navigation system (TACAN) functionality. MIDS gathers data from multiple sources and displays a digital view of the battlefield. The MIDS JTRS is designed to be plug-and-play interchangeable for U.S. Navy and U.S. Air Force platforms that use MIDS-LVT, while accommodating future technologies and capabilities. Improvements such as Link-16 enhanced throughput, Link-16 frequency re-mapping, and programmable crypto will also be realized in the MIDS JTRS design. In addition to the Link-16 and TACAN functionality, MIDS JTRS includes three 2 MHz to 2 GHz programmable channels that allow the warfighter to use multiple waveforms currently in development with the JTRS JPO. Total program requirements include: Terminal development, F/A-18 Level 0 integration, software hosting (Operating Environment/JTRS JPO Waveforms), Common Link Integration Processing (CLIP) Increment 1 embedding and production transition. In FY04, MIDS JTRS will be executed under project unit 3073. Beginning in FY05, MIDS JTRS funding transferred to a new project unit number, 3020.

The Digital Modular Radio (DMR) provides improvements for fleet radio requirements in the HF, VHF, and UHF frequency band. The DMR replaces and will be interoperable and backwards compatible with legacy systems. The DMR is a digital, modular, software programmable, multi-channel, multi-function and multi-band (2MHz-2 GHz) radio system.

Super Conductor Micro-Electronics project - Funding will assist in the development of an All Digital Transceiver (ADT), which will improve a range of defense missions including tactical radio, satellite communications, signal intelligence, electronic warfare, and radar systems. This funding will also help to continue the Superconductor Micro-Electronics (SME) currently being developed in the Challenge Program-funded ONR SBIR phase III project, the All Digital Receiver (ADR), towards the development of an All Digital Transceiver.

JUSTIFICATION FOR BUDGET ACTIVITY:
This program is funded under ENGINEERING AND MANUFACTURING DEVELOPMENT because it encompasses engineering and manufacturing development of new end-items prior to production approval decision.

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE: February 2005			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**			PROJECT NUMBER AND NAME 3073 Airborne Maritime/Fixed Joint Tactical Radio System (AMF JTRS)					
COST ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Project Cost	**$ 64.925**	**$ 55.389**	**$ 170.590**	**$ 159.070**	**$ 79.250**	**$ 54.500**	**$ 2.679**	**$ 1.790**
3073 Airborne Maritime/Fixed JTRS (AMF JTRS)	**$ 43.042**	**$ 55.389**	**$ 162.790**	**$ 159.070**	**$ 79.250**	**$ 54.500**	**$ 2.679**	**$ 1.790**
3073 Joint Task Force Wide Area Relay Network (JTF WARNET)	**$ -**	**$ -**	**$ 7.800**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
3073 Multifunctional Information Distribution System (MIDS JTRS)	**$ 13.101**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
3073 Digital Modular Radio (DMR)	**$ 8.782**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

In November 2003, the Navy & Air Force Service Acquisition Executives directed the merger of Clusters 3 (Navy) and 4 (Air Force) to establish a combined JTRS Cluster, renamed AMF JTRS, Airborne Maritime Fixed. On January 21, 2004, USD (AT&L) signed an Acquisition Decision Memorandum (ADM) acknowledging the combination of the two clusters, as well as authorizing the release of the Pre-System Development and Demonstration (SDD) Request for Proposal (RFP) for the AMF JTRS program. Funding represents Navy's portion of AMF JTRS.

The Airborne Maritime/Fixed JTRS (AMF JTRS) will be designed to support communications readiness and mission success by providing military commanders with the ability to command, control and communicate with their forces via secure voice, video, and data media forms during all aspects of military operations. The AMF JTRS will be a hardware configurable and software definable radio (SDR) system that provides increased interoperability, flexibility and adaptability to support the varied mission requirements of the warfighter. The AMF JTRS system will provide radio sets that are software definable, multi-band, multi-mode capable, secure, network-centric, and able to provide simultaneous voice, data, and video communications over multiple frequency bands between 2 MegaHertz (MHz) and 2 GigaHertz (GHz), as well as scalable to meet the needs of multiple platforms. As a requirement, the AMF JTRS will operate with legacy equipment and waveforms currently used by civilian and military airborne, surface, subsurface, and fixed station platforms as well as incorporate new waveforms and CEAs as they are developed. As a result of this fielding,legacy radios and cryptographic devices will eventually be phased out through the JTRS implementation effort, which is a planned migration to transition to the JTRS capability. The Air Force Electronic Systems Center (AF/ESC) and the Program Executive Office, Command, Control, Communications, Computers, Intelligence, and Space (PEO C4I & Space) will fulfill the AMF JTRS requirements in a phased approach. Each phase will build on the technological achievements of its predecessor, while at the same time providing expanded capabilities (in both hardware and software). AMF JTRS will incorporate the following key concepts into its design: commonality across JTRS clusters, transformational communications, networking, automation and control, information gateways, and quality of service. The AMF JTRS procurement specifically involves the development of Joint Tactical Radio (JTR) Set and the integration of the Software Communication Architecture (SCA) Compliant waveforms and Cryptographic Equipment Applications (CEA) provided by the JTRS Joint Program Office (JPO). The procurement also funds development of the necessary equipment for these capabilities to be integrated into the Maritime and Fixed Station platforms through the Service Integration Kits (SIK). The JTR Set is planned to consist of a JTR (receiver/exciter/modem), Cryptographic Sub-System (CS/S), and ancillaries, both common and service unique. Ancillaries consist of items, such as: power amplifiers to meet the 2 MHz to 2 GHz frequency range, baseband (voice, video and data) Input/Output (I/O), filters, Radio Frequency (RF) networking services, and basic Human Machine Interface (HMI) and control. The AMF JTRS SIKs are planned to consist of RF legacy interface capability, service site-specific power amplifiers (e.g. High Frequency (HF) broadband amplifiers for Navy ships and 10 KW for U.S. Air Force fixed stations), couplers/multicouplers, antennae, baseband networking services, dynamic control, automatic RF switching, co-site mitigation devices, interference mitigation devices, and other Service-specific installation requirements. The combination of the JTR Set and the various SIKs will allow for a modular/scalable solution to meet the Joint Services' various AMF JTRS implementation requirements.

Joint Task Force Wide Area Relay Network Program Enhancement (JTF WARNET) - This program is an NRL initiative that has grown from an Advanced Concept Technology Demonstration(ACTD). This program supports JTRS, CONOPS & Tactics, Techniques and Procedures (TTP) development, incorporates Intra-Battle Group Wireless Network (IBGWN) capabilities, supports ADNS Integration and supports Joint Translator Forwarder (JTF.)

The MIDS-LVT is a jam-resistant, secure, digital (voice and data) information distribution system, enabling rapid integrated communications, navigation and identification for tactical and command and control operations. The technical objective of the MIDS JTRS program is to transform the current MIDS-LVT into a four-channel, Software Communications Architecture (SCA) compliant JTRS, while maintaining current Link-16 and tactical air navigation system (TACAN) functionality. MIDS gathers data from multiple sources and displays a digital view of the battlefield. The MIDS JTRS is designed to be plug-and-play interchangeable for U.S. Navy and U.S. Air Force platforms that use MIDS-LVT, while accommodating future technologies and capabilities. Improvements such as Link-16 enhanced throughput, Link-16 frequency re-mapping, and programmable crypto will also be realized in the MIDS JTRS design. In addition to the Link-16 and TACAN functionality, MIDS JTRS includes three 2 MHz to 2 GHz programmable channels that allow the warfighter to use multiple waveforms currently in development with the JTRS JPO. Total program requirements include: Terminal development, F/A-18 Level 0 integration, software hosting (Operating Environment/JTRS JPO Waveforms), Common Link Integration Processing (CLIP) Increment 1 embedding and production transition. In FY04, MIDS JTRS will be executed under project unit 3073. Beginning in FY05, MIDS JTRS funding transferred to a new project unit number, 3020.

The Digital Modular Radio (DMR) provides improvements for fleet radio requirements in the HF, VHF, and UHF frequency band. The DMR replaces and will be interoperable and backwards compatible with legacy systems. The DMR is a digital, modular, software programmable, multi-channel, multi-function and multi-band (2MHz-2 GHz) radio system.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N /BA-5	PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS	3073 Airborne Maritime/Fixed Joint Tactical Radio System (AMF JTRS)

(U) B. Accomplishments/Planned Program

	FY 04	FY 05	FY 06	FY 07
AMF JTRS	43.042	55.389	162.790	159.070
RDT&E Articles Quantity				

FY04: RFP Development, and award contract to begin Pre-System Development & Demonstration (pre-SDD) phase for the AMF JTR system. The new system will be comprised of a JTR Set, which includes the Joint Tactical Radio (JTR) and both common and service-unique ancillaries. The AMF JTRS system also includes the Service Integration Kit (SIK), planned to consist of RF legacy interface capability, service site-specific power amplifiers (e.g. High Frequency (HF) broadband amplifiers for Navy ships and 10 KW for U.S. Air Force fixed stations), couplers/multicouplers, antennae, baseband networking services, dynamic control, automatic RF switching, co-site mitigation devices, interference mitigation devices, and other Service-specific installation requirements. Additionally, the SIK is required for radio room automation of Navy Maritime/Fixed station platforms. Development engineering and management support for associated JTR system components (i.e. JTR, ancillaries, and SIK). Engineering and Management support for JTRS implementation efforts.

FY05: Continue Pre-System Development & Demonstration phase. Begin RFP development for the System Development & Demonstration (SDD) phase for the AMF JTR system, inclusive of the JTR, ancillaries, and SIK. Development engineering and management support for associated JTR system components. Engineering and Management support for JTRS implementation efforts.

FY06: Complete Pre-System Development & Demonstration phase. Contract award for System Development and Demonstration Phase of development for the AMF JTRS system (incl JTR, ancillaries, and SIK) covering 2 MHz - 2GHz that meets JTRS ORD Joint Service Requirements. Development engineering and management support for associated JTR system components. Engineering and Management support for JTRS implementation efforts.

FY07: Continue AMF JTRS System Development and Demonstration Phase for the AMF JTR system (incl JTR, ancillaries, and SIK). Vendor will be required to develop and deliver Engineering Development Models (EDM's) built off common building blocks and scaled to meet the requirements of airborne, maritime and fixed station platforms. Development engineering and management support for associated JTR system components. Engineering and Management support for JTRS implementation efforts.

	FY 04	FY 05	FY 06	FY 07
JTF WARNET	0.000	0.000	7.800	0.000
RDT&E Articles Quantity				

FY06: Joint Task Force Wide Area Relay Network Program Enhancement (JTF WARNET) - This program is an NRL initiative that has grown from an Advanced Concept Technology Demonstration (ACTD). This program supports JTRS, CONOPS & Tactics, Techniques and Procedures (TTP) development, incorporates Intra-Battle Group Wireless Network (IBGWN) capabilities, supports ADNS Integration and supports Joint Translator Forwarder (JTF.)

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N /BA-5	PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEM	3073 Airborne Maritime/Fixed Joint Tactical Radio System (AMF JTRS)

(U) B. Accomplishments/Planned Program

	FY 04	FY 05	FY 06	FY 07
DMR	8.782	0.000	0.000	0.000
RDT&E Articles Quantity				

FY04: Commenced modification of the HF PA DMR ($1.3M). Commenced modification of the 6.4 upgrade of the DMR ($6.116M). Test and evaluation (IOT&E) of DMR ($1.366K).

	FY 04	FY 05	FY 06	FY 07
MIDS JTRS	13.101	(MIDS JTRS funding transfers to project 3020 beginning FY05.)		
RDT&E Articles Quantity				

FY04: Phase 2A extension was awarded in November 2003 to continue functional and allocated baseline specification development.

Note: MIDS JTRS is included in project unit 3073 in FY04, then moves to project unit 3020 starting in FY05.

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEM	3073 Airborne Maritime/Fixed Joint Tactical Radio System (AMF JTRS)

(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2004	FY 2005	FY 2006	FY 2007
FY05 President's Budget	86.871	56.216	177.845	162.896
FY06 President's Budget	64.925	55.389	170.590	159.070
Total Adjustments	-21.946	-0.827	-7.255	-3.826
Summary of Adjustments				
Congressional Adjustments				
Congressional Recissions		-0.614		
Reprogrammings	-19.742			
Programmatic Adjustments		-0.213	-8.52	-5.697
Economic Assumptions		0.000	1.568	1.963
Pricing Adjustments			-0.303	-0.092
SBIR/STTR Transfers	-2.204			
Subtotal	-21.946	-0.827	-7.255	-3.826

(U) Schedule:

Pre-System Development & Demonstration contracts awarded to Boeing and Lockheed-Martin on 8 September 2004.

(U) Technical:

Not applicable

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTE	3073 Airborne Maritime/Fixed Joint Tactical Radio System (AMF JTRS)

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
3010 – Ship Tactical Communications - JTRS	0.000	0.000	0.000	0.000	61.856	103.543	160.156	165.491	Continuing	Continuing
3010 - Ship Tactical Communications - DMR	6.576	1.541	2.547	1.857	0.000	0.000	0	0	0	12.521

(U) E. ACQUISITION STRATEGY:

	FY 2004	FY 2005	FY2006	FY2007
Program Milestones:				
AMF JTRS	2Q RFP Release 4Q Pre-SDD Contract Award		2Q SDD Contract Award 1Q FY06 MS B	
Digital Modular Radio (DMR)		4Q LRIP V		
T&E Milestones:				
AMF JTRS:				4Q DT/OT

(U) F. MAJOR PERFORMERS:

AMF JTRS: Pre-System Development & Demonstration contracts awarded to Boeing and Lockheed-Martin on 8 September 2004.

(U) G. METRICS:

Earned Value Management (EVM) will be used for metrics reporting and risk management.

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1) | DATE: **February 2005**

APPROPRIATION/BUDGET ACTIVITY: **RDT&E, N / BA-5** | PROGRAM ELEMENT: PE: 0604280N TITLE: JOINT TACTICAL RADIO SYST | PROJECT NUMBER AND NAME: 3073 Airborne Maritime/Fixed Joint Tactical Radio System (AMF JTRS)

Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
AMF JTRS Development - JTR System (Pre-SDD)	CPFF	Boeing Anaheim, CA	16.605	21.852						0.000	38.457	
AMF JTRS Development - JTR System (Pre-SDD)	CPFF	Lockheed Manassas, VA	16.605	18.290						0.000	34.895	
AMF JTRS Development - JTR SET (SDD)	CPAF/IF	TBD				106.034	Jan-06	109.192		Continuing	Continuing	
AMF JTRS Development - JTRS SIK (SDD)	CPAF/IF	TBD				40.593	Jan-06	31.743		Continuing	Continuing	
MIDS JTRS HW/SW Development	CPIF	DLS Cedar Rapids, IA	6.182									
MIDS JTRS HW/SW Development	CPIF	ViaSat Inc. Carlsbad, CA	5.881									
H/W: DMR HF Power Amplifier	FFP	GDDS	2.800								2.800	
Ship Integration											0.000	
Ship Suitability											0.000	
Systems Engineering - AMF JTRS	WX	SSC-SD	4.493	3.553		3.684		4.064		Continuing	Continuing	
Systems Engineering - AMF JTRS	WX	SSC-CH	5.140	3.004		3.093		3.313		Continuing	Continuing	
Systems Engineering - AMF JTRS	Various	Various	1.072	0.879		0.889		1.162		Continuing	Continuing	
Systems Engineering - JTF WARNET	Various	Various				7.800					7.800	
Systems Engineering - Navy JTRS Implementation	Various	Various		2.207		2.264		2.402		Continuing	Continuing	
Training Development											0.000	
Licenses											0.000	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Product Development			58.777	49.785		164.357		151.876		Continuing	Continuing	

Remarks:

Development Support											0.000	
Software Dev: DMR Build 6.4	FFP	GDDS	12.861								12.861	
Integrated Logistics Support - AMF JTRS	WX	SSC-CH	1.282	0.660		0.671		0.658		Continuing	Continuing	
Configuration Management										Continuing	Continuing	
Studies & Analyses	Various	Various		0.551		0.575		0.422		Continuing	Continuing	
Technical Data											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal Support			14.143	1.211		1.246		1.080		0.000	17.680	

Remarks:

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **February 2005**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**			PROGRAM ELEMENT PE: 0604280N TITLE: JOINT TACTICAL RADIO SYS			PROJECT NUMBER AND NAME 3073 Airborne Maritime/Fixed Joint Tactical Radio System (AMF JTRS)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation												
Operational Test & Evaluation											0.000	
Live Fire Test & Evaluation											0.000	
DMR Test & Evaluation (FOTE)	WX	SSC-SD	1.724								1.724	
DMR Test & Evaluation (FOTE)	WX	SSC-CH	1.732								1.732	
Test Assets											0.000	
Test Planning/Support - JTRS	Various	Various	0.579	1.457		2.270		3.233		Continuing	Continuing	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal T&E			4.035	1.457		2.270		3.233		Continuing	Continuing	
Remarks:												
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	
Program Management Support	various	various	7.201	2.936		2.717		2.881		Continuing	Continuing	
Travel											0.000	
Transportation											0.000	
SBIR Assessment											0.000	
Subtotal Management			7.201	2.936		2.717		2.881		Continuing	Continuing	
Remarks:												
Total Cost			84.156	55.389		170.590		159.070		Continuing	Continuing	
Remarks:												

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R4, Schedule Profile																	DATE: **February 2005**															
APPROPRIATION/BUDGET A	PROGRAM ELEMENT NUMBER AND NAME												PROJECT NUMBER AND NAME																			
RDT&E, N / BA-5	PE: 0604280N TITLE: DMR												3073 DMR																			
Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	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 (DMR) Milestones				▲ IOC																												
Prototype Phase																																
System Development																																
EDM Delivery																																
Software Delivery	▲ V6.3								△ V6.4																							
Test & Evaluation Milestones																																
Development Test		▲ JITC 5.3			△ JITC					△ JITC																						
Technical Evaluation																																
Operational Evaluation																																
Production Milestones																																
Full Rate Production Start-up																																
Low-Rate Initial Production (LRIP) Start-up						△ LRIP V																										
Low-Rate Initial Production (LRIP) Delivery																																

R-1 SHOPPING LIST - Item No. 100

* Not required for Budget Activities 1, 2, 3, and 6

Note 1: IOC on DDG 93 with Software Version 6.3

Note 2: DT & OT shifts due to software deliveries not having full functionality when delivered and requiring re-work.

CLASSIFICATION:

Exhibit R-4a, Schedule Detail	**DMR**				DATE: **February 2005**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT PE: 0604280N TITLE: DMR			PROJECT NUMBER AND NAME 3073 DMR				
Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
IOC	4Q							
Low Rate Initial Production Decision (LRIP V)		2Q						
Software Delivery V6.3	1Q							
Software Delivery V6.4			1Q					
JITC		1Q	2Q					

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

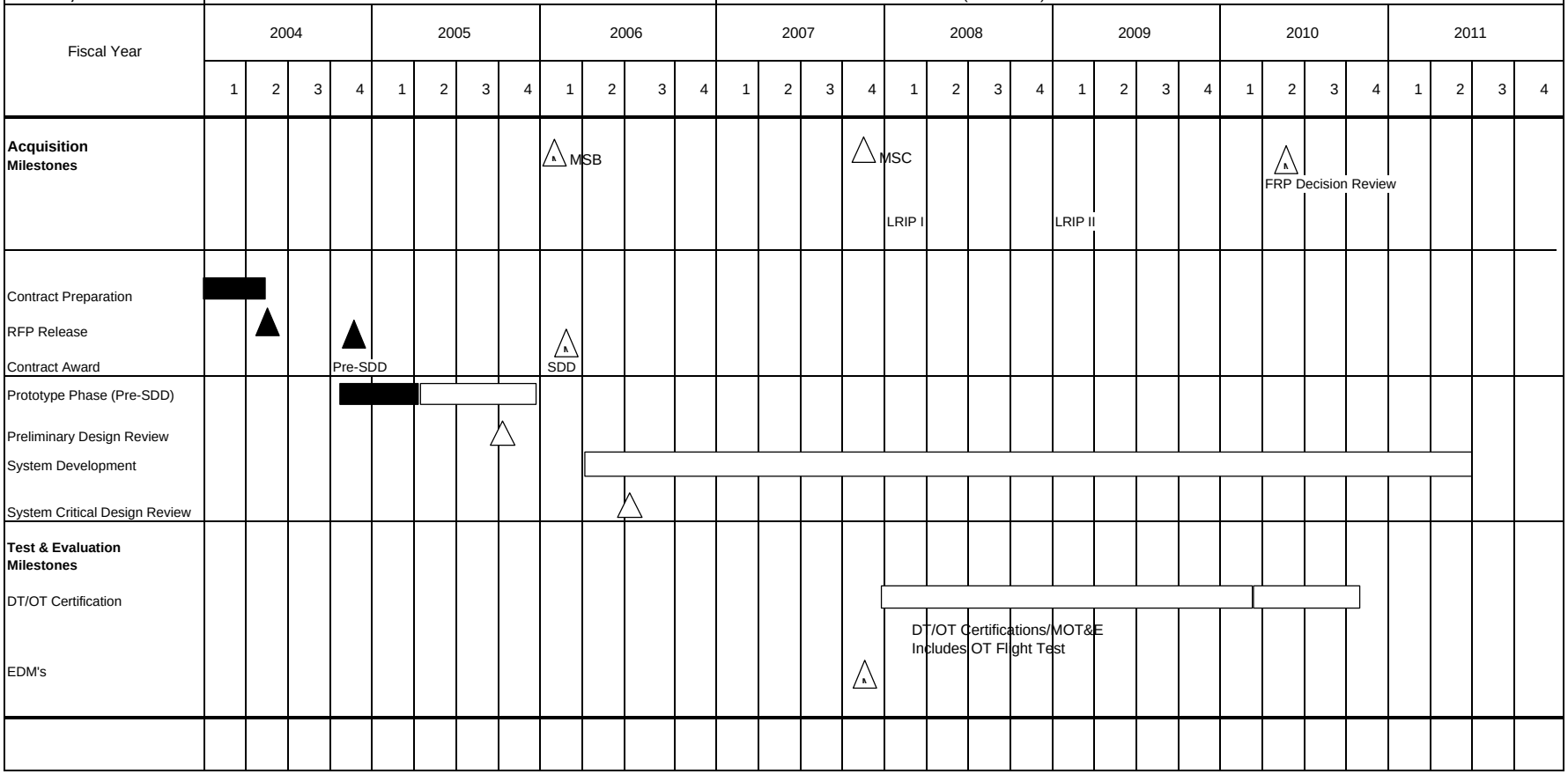
EXHIBIT R4, Schedule Profile

DATE: **February 2005**

APPROPRIATION/BUDGET / **RDT&E, N /**

PROGRAM ELEMENT NUMBER AND NAME: PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS

PROJECT NUMBER AND NAME: 3073 Airborne Maritime/Fixed JTRS (AMF JTRS)



R-1 SHOPPING LIST - Item No. 100

* Not required for Budget Activities 1, 2, 3, and 6

CLASSIFICATION:

Exhibit R-4a, Schedule Detail	**AMF JTRS**			DATE: **February 2005**					
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT PE: 0604280N TITLE: JOINT TACTICAL RADI			PROJECT NUMBER AND NAME 3073 Airborne Maritime/Fixed JTRS (AMF JTRS)					
Schedule Profile		FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Prototype Phase		4Q							
System Design Review (SDR)									
Milestone B (MS-B)				1Q					
Contract Preparation		1Q							
RFP Release		2Q							
Contract Award Pre-SDD		4Q							
Contract Award SDD				2Q					
Preliminary Design Review (PDR)			3Q-4Q						
System Development				1Q					
Critical Design Review (CDR)				3Q					
Quality Design and Build									
Test Readiness Review (TRR)									
DT/OT Certification					4Q				
Eng Dev Model (EDM)					4Q				
Software Delivery 1XXSW									
Preproduction Readiness Review (PRR)									
EDM Radar Delivery - Flt Related									
Milestone C (MS C)						4Q			
Low Rate Initial Production I (LRIP I)						1Q			
Low Rate Initial Production II (LRIP II)							1Q		
Contractor Testing									
Operational Testing (OT-IIA)									
Software Delivery 2XXSW									
Operational Testing (OT-II)									
Developmental Testing (DT-IIC)					4Q				
Functional Configuration Audit (FCA)									
Low-Rate Initial Production I Delivery									
Technical Evaluation (TECHEVAL)									
Physical Configuration Audit									
Operational Evaluation (OT-II) (OPEVAL)									
Low-Rate Initail Production II Delivery									
Contract Award Production									
IOC									
Full Rate Production (FRP) Decision								2Q	
Full Rate Production Start									
First Deployment									

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE: **February 2005**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT NUMBER AND NAME PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS			PROJECT NUMBER AND NAME 3020 MIDS JTRS				
COST ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Project Cost	**$ -**	**$ 22.120**	**$ 80.176**	**$ 99.101**	**$ 32.222**	**$ 10.995**	**$ -**	**$ -**
X3020 Multifunctional Information Distribution System	**$ -**	**$ 22.120**	**$ 80.176**	**$ 99.101**	**$ 32.222**	**$ 10.995**	**$ -**	**$ -**
RDT&E Articles Qty		**13**		**12**				

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The MIDS-LVT is a jam-resistant, secure, digital (voice and data) information distribution system, enabling rapid integrated communications, navigation and identification for tactical and command and control operations. The technical objective of the MIDS JTRS program is to transform the current MIDS-LVT into a four-channel, Software Communications Architecture (SCA) compliant JTRS, while maintaining current Link-16 and tactical air navigation system (TACAN) functionality. MIDS gathers data from multiple sources and displays a digital view of the battlefield. The MIDS JTRS is designed to be plug-and-play interchangeable for U.S. Navy and U.S. Air Force platforms that use MIDS-LVT, while accommodating future technologies and capabilities. Improvements such as Link-16 enhanced throughput, Link-16 frequency re-mapping, and programmable crypto will also be realized in the MIDS JTRS design. In addition to the Link-16 and TACAN functionality, MIDS JTRS includes three 2 MHz to 2 GHz programmable channels that allow the warfighter to use multiple waveforms currently in development with the JTRS JPO. Total program requirements include: Terminal development, F/A-18 Level 0 integration, software hosting (Operating Environment/JTRS JPO Waveforms), Common Link Integration Processing (CLIP) Increment 1 embedding and production transition.

(U) B. Accomplishments/Planned Program

FY05: Complete Phase 2A specification development efforts for the Functional and Allocated baselines incorporating the latest National Security Architecture changes. Continue MIDS JTRS Phase 2B development effort. Conduct Preliminary Design Review in Aug 05.

FY06: Complete detailed design review and hold Critical Design Review in Mar 06. Complete SRU build and test efforts and begin terminal integration and test. Start F/A-18 Level 0 integration to include integration preparation, Operational Flight Program changes and Engineering Change Proposal preparation. Perform software hosting efforts associated with the Cluster 1 Operating Environment and JTRS JPO waveforms.

FY07: Conduct Test Readiness Review in Jan 07. Hold Milestone C decision meeting with ASN(RD&A) in Mar 07 to receive Low Rate Initial Production authorization. Complete contractor First Article Qualification Testing and conduct Government FAQT. Begin Production Verification Terminal deliveries in the 4th quarter. Continue F/A-18 Level 0 integration. Procure additional F/A-18 Test and Evaluation Test Assets for Developmental and Operational test. Begin F/A-18 integrated logistics support planning.

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS	3020 MIDS JTRS

(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2004	FY 2005	FY 2006	FY 2007
FY05 President's Budget	0.000	22.408	11.713	0.000
FY06 President's Budget	0.000	22.120	80.176	99.101
Total Adjustments	0.000	-0.288	68.463	99.101
Summary of Adjustments				
Congressional Adjustments				
Congressional Recissions		-0.256		
Reprogrammings				
Programmatic Adjustments		-0.032	68.395	99.097
Economic Assumptions			0.120	0.011
Pricing Adjustments			-0.052	-0.007
SBIR/STTR Transfers				
Subtotal	0.000	-0.288	68.463	99.101

(U) Schedule:

Phase 2B contract awarded December 2004.

(U) Technical:

No Changes

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification			DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		PROJECT NUMBER AND NAME
RDT&E, N / BA-5	PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS		3020 MIDS JTRS

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY2010	FY 2011	To Complete	Total Cost
Related RDT&E										
PE 0604771D8Z	4.500	9.600								
PE TBD (Air Force)		9.900								

(U) E. ACQUISITION STRATEGY:

MIDS JTRS development will be initiated as a major modification to the MIDS-LVT using an Engineering Change Proposal to the existing production contracts. The U.S. prime contractors from the MIDS-LVT program (Data Link Solutions and ViaSat, Inc.) will cooperatively design and develop the terminal. Each prime contractor will build and qualify Production Verification Terminals. The U.S. will implement a continuous competition strategy between DLS and ViaSat that will be maintained throughout the MIDS JTRS production phase. This strategy was successfully used on MIDS-LVT.

(U) F. MAJOR PERFORMERS:

Prime Contractors: Data Link Solutions and ViaSat Inc.

(U) G. METRICS:

Earned Value Management (EVM) is used for metrics reporting and risk management.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)												DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**		PROGRAM ELEMENT PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS					PROJECT NUMBER AND NAME 3020 MIDS JTRS					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
MIDS JTRS HW/SW Development	CPIF	Data Link Solutions Cedar Rapids, IA		3.807	Dec-04	32.541	Nov-05	23.526	Nov-06	Continuing	Continuing	
MIDS JTRS HW/SW Development	CPIF	ViaSat Inc. Carlsbad, CA		13.331	Dec-04	32.540	Nov-05	23.525	Nov-06	Continuing	Continuing	
MIDS JTRS Software Hosting	CPIF					8.100	Jul-06	7.000	Jul-07	Continuing	Continuing	
MIDS JTRS Production Transistion	CPIF							21.000	Oct-06	Continuing	Continuing	
CLIP Increment 1 MIDS JTRS Embedding	CPIF							4.400	Jun-07	Continuing	Continuing	
Systems Engineering	various			3.562	Jan-05	3.695	Jan-06	4.150	Jan-07	Continuing	Continuing	
Systems Engineering	WX	SSC-SD		1.345	Jan-05	1.400	Jan-06	1.500	Jan-07	Continuing	Continuing	
GFE										Continuing	Continuing	
Award Fees										Continuing	Continuing	
Subtotal Product Development			0.000	22.045		78.276		85.101		Continuing	Continuing	
Remarks: Note: MIDS JTRS is included in project unit X3073 in FY04, then moves to project unit X3020 starting in FY05.												
F/A-18 Level 0 Development Support						1.437	Nov-05	1.786	Nov-06	Continuing	Continuing	
F/A-18 Level 0 Integrated Logistics Support						0.300	Nov-05	3.600	Nov-06	Continuing	Continuing	
Configuration Management										Continuing	Continuing	
Technical Data										Continuing	Continuing	
Studies & Analyses										Continuing	Continuing	
GFE										Continuing	Continuing	
Award Fees										Continuing	Continuing	
Subtotal Support			0.000	0.000		1.737		5.386		Continuing	Continuing	
Remarks:												

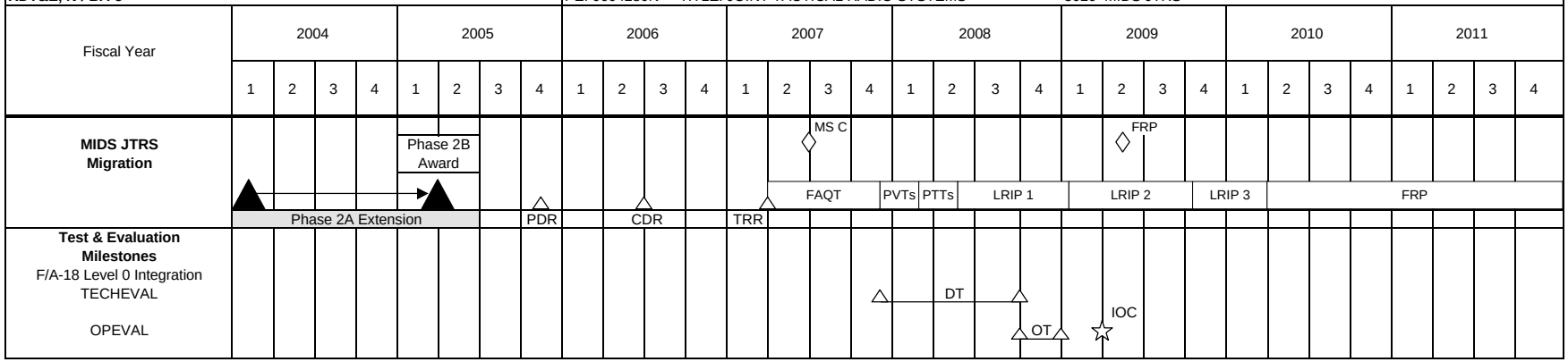
CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 1)								DATE: **February 2005**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**		PROGRAM ELEMENT PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS					PROJECT NUMBER AND NAME 3020 MIDS JTRS					
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
F/A-18 Level 0 Developmental Test & Evaluation						0.063	Nov-05	0.289	Nov-06	Continuing	Continuing	
F/A-18 Level 0 Operational Test & Evaluation										Continuing	Continuing	
F/A-18 Level 0 Test Assets	CPIF	Data Link Solutions Cedar Rapids, IA						4.063	Nov-06	Continuing	Continuing	
F/A-18 Level 0 Test Assets	CPIF	ViaSat Inc. Carlsbad, CA						4.062	Nov-06	Continuing	Continuing	
Testing Support										Continuing	Continuing	
Tooling										Continuing	Continuing	
GFE										Continuing	Continuing	
Award Fees										Continuing	Continuing	
Subtotal T&E			0.000	0.000		0.063		8.414		Continuing	Continuing	
Remarks:												
Contractor Engineering Support										Continuing	Continuing	
Government Engineering Support										Continuing	Continuing	
Program Management Support										Continuing	Continuing	
Travel				0.075		0.100		0.200		Continuing	Continuing	
Transportation										Continuing	Continuing	
SBIR Assessment										Continuing	Continuing	
Subtotal Management			0.000	0.075		0.100		0.200		Continuing	Continuing	
Remarks:												
Total Cost			0.000	22.120		80.176		99.101		Continuing	Continuing	

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R4, Schedule Profile			DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME		PROJECT NUMBER AND NAME
RDT&E, N / BA-5	PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS		3020 MIDS JTRS



R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

Exhibit R-4a, Schedule Detail						DATE: **February 2005**		
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS				PROJECT NUMBER AND NAME 3020 MIDS JTRS			
Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
MIDS JTRS Migration								
Phase 2A Extension: Specification Development	1Q	3Q						
Phase 2B: Design, Development, Fabrication and Qualification								
System Development		1Q		4Q				
Preliminary Design Review (PDR)		4Q						
Critical Design Review (CDR)			2Q					
Quality Design and Build			2Q	2Q				
Test Readiness Review (TRR)				2Q				
Contractor Testing (FAQT)				2Q, 4Q				
Government Testing				4Q				
Production Verification Terminal Delivery (PVT)				4Q	1Q			
Production Transition Terminal Delivery (PTT)					1Q, 2Q			
Test and Evaluation								
F/A-18 Level 0 Integration								
Technical Evaluation (TECHEVAL)				4Q	4Q			
Operational Evaluation (OPEVAL)					4Q	1Q		
Initial Operating Capability						2Q		
Full Rate Production Decision						2Q		

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE: **February 2005**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**			PROJECT NUMBER AND NAME 9375 Super Conductor Micro-Electronics					
COST ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Project Cost	**$ 1.688**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
9375 Super Conductor Micro-Electronics	**$ 1.688**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
RDT&E Articles Qty								

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

Super Conductor Micro-Electronics project - Funding will assist in the development of an All Digital Transceiver (ADT), which will improve a range of defense missions including tactical radio, satellite communications, signal intelligence, electronic warfare, and radar systems. This funding will also help to continue the Superconductor Micro-Electronics (SME) currently being developed in the Challenge Program-funded ONR SBIR phase III project, the All Digital Receiver (ADR), towards the development of an All Digital Transceiver.

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N /BA-5	PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS	9375 Super Conductor Micro-Electronics

(U) B. Accomplishments/Planned Program

	FY 04	FY 05	FY 06	FY 07
X9375 Super Conductor Micro-Electronics	1.688	0.000	0.000	0.000
RDT&E Articles Quantity				

FY04: Super Conductor Micro-Electronics project - Funding will assist in the development of an All Digital Transceiver (ADT), which will improve a range of defense missions including tactical radio, satellite communications, signal intelligence, electronic warfare, and radar systems. This funding will also help to continue the Superconductor Micro-Electronics (SME) currently being developed in the Challenge Program-funded ONR SBIR phase III project, the All Digital Receiver (ADR), towards the development of an All Digital Transceiver.

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS	9375 Super Conductor Micro-Electronics

(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
FY05 President's Budget	1.730	0.000	0.000	0.000	0.000	0.000	0.000	0.000
FY06 President's Budget	1.688	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total Adjustments	-0.042	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Summary of Adjustments	
SBIR/STTR Transfers	-0.040
Economic Assumptions	-0.002
	-0.042

(U) Schedule:

Army CECOM contract with HYPRES has been awarded as of 20 Aug 04. ONR contract award to HYPRES awarded 30 Aug 04.

(U) Technical:

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	PE: 0604280N TITLE: JOINT TACTICAL RADIO SYSTEMS	9375 Super Conductor Micro-Electronics

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost

No other funding exists for X9375 Super Conductor Micro-Electronics

(U) E. ACQUISITION STRATEGY:

FY 2004 FY2005

Program Milestones: N/A

T&E Milestones:

(U) F. MAJOR PERFORMERS:

AArmy CECOM contract with HYPRES has been awarded as of 20 Aug 04. ONR contract award to HYPRES awarded 30 Aug 04.

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification					DATE: **February 2005**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**			PROJECT NUMBER AND NAME 9378 Digital Modular Radio (DMR)					
COST ($ in Millions)	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Total Project Cost	**$ -**	**$ 1.945**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
9378 Digital Modular Radio (DMR)	**$ -**	**$ 1.945**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**

(U) A. MISSION DESCRIPTION AND BUDGET ITEM JUSTIFICATION:

The Digital Modular Radio (DMR) provides improvements for fleet radio requirements in the HF, VHF, and UHF frequency band. The DMR replaces and will be interoperable and backwards compatible with legacy systems. The DMR is a digital, modular, software programmable, multi-channel, multi-function and multi-band (2MHz-2 GHz) radio system.

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N /BA-5	PE: 0604280N TITLE: DIGITAL MODULAR RADIO (DMR)	9378 Digital Modular Radio (DMR)

(U) B. Accomplishments/Planned Program

	FY 04	FY 05	FY 06	FY 07
DMR	0.000	1.945	0.000	0.000
RDT&E Articles Quantity				

FY05: Continue development of software 6.4 to include UHF SASTCOM (MIL-STD-188-181B Optional Modes), KG-84C/Over-The-Air-Rekey (OTAR) KG-84A Crypto emulation, SINCGARS Electronic Remote Fill (ERF) Capability, HF Transmit/Receive Waveform Capability, Cypher Test/Plain Test Capability, Por to Port Switching Capability. Continue HFPA development. ($1.945)

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: **February 2005**
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	PE: 0604280N Title: DIGITAL MODULAR RADIO (DMR)	9378 Digital Modular Radio (DMR)

(U) C. PROGRAM CHANGE SUMMARY:

(U) Funding:	FY 2004	FY 2005	FY 2006	FY 2007
FY05 President's Budget	0.000	0.000	0.000	0.000
FY06 President's Budget	0.000	1.945	0.000	0.000
Total Adjustments	0.000	1.945	0.000	0.000
Summary of Adjustments				
Congressional Increase		2.000		
Congressional Rescissions		-0.055		
	0.000	1.945	0.000	0.000

(U) Schedule:

Contract Award for continued 6.4 development planned Q3, 2005.

(U) Technical:

Not applicable

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R-2a, RDT&E Project Justification		DATE: February 2005
APPROPRIATION/BUDGET ACTIVITY	PROGRAM ELEMENT NUMBER AND NAME	PROJECT NUMBER AND NAME
RDT&E, N / BA-5	PE: 0604280N DIGITAL MODULAR RADIO	9378 Digital Modular Radio (DMR)

(U) D. OTHER PROGRAM FUNDING SUMMARY:

Line Item No. & Name	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011	To Complete	Total Cost
3010 - Ship Tactical Communications - DMR	6.576	1.541	2.547	1.857	0.000	0.000	0.000	0.000	0	12.521

(U) E. ACQUISITION STRATEGY:

Program Milestones:

T&E Milestones:

(U) F. MAJOR PERFORMERS:

(U) G. METRICS:

Earned Value Management (EVM) will be used for metrics reporting and risk management.

CLASSIFICATION:

Exhibit R-3 Cost Analysis (page 2)								DATE: **February 2005**				
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**			PROGRAM ELEMENT PE: 0604280N Title: DIGITAL MODULAR RADIO			PROJECT NUMBER AND NAME 9378 Digital Modular Radio (DMR)						
Cost Categories	Contract Method & Type	Performing Activity & Location	Total PY s Cost	FY 05 Cost	FY 05 Award Date	FY 06 Cost	FY 06 Award Date	FY 07 Cost	FY 07 Award Date	Cost to Complete	Total Cost	Target Value of Contract
Developmental Test & Evaluation	Contract	GDDS		1.645	05/05						1.645	
Operational Test & Evaluation											0.000	
Live Fire Test & Evaluation											0.000	
DMR Test & Evaluation (FOTE)	WX	SSC-SD		0.150							0.150	
DMR Test & Evaluation (FOTE)	WX	SSC-CH		0.150							0.150	
Test Assets											0.000	
Test Planning/Support										Continuing	Continuing	
Tooling											0.000	
GFE											0.000	
Award Fees											0.000	
Subtotal T&E			0.000	1.945		0.000		0.000		Continuing	1.945	
Remarks:												
Contractor Engineering Support											0.000	
Government Engineering Support											0.000	
Program Management Support										Continuing	Continuing	
Travel											0.000	
Transportation											0.000	
SBIR Assessment											0.000	
Subtotal Management			0.000	0.000		0.000		0.000			0.000	
Remarks:												
Total Cost				1.945						Continuing	1.945	
Remarks:												

R-1 SHOPPING LIST - Item No. 100

CLASSIFICATION:

EXHIBIT R4, Schedule Profile | DATE: **February 2005**

APPROPRIATION/BUDGET A: **RDT&E, N / BA-5**

PROGRAM ELEMENT NUMBER AND NAME: PE: 0604280N TITLE: DMR

PROJECT NUMBER AND NAME: 9378 Digital Modular Radio (DMR)

Fiscal Year	2004				2005				2006				2007				2008				2009				2010				2011			
	1	2	3	4	1	2	3	4	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 (DMR) **Milestones (S/W Version 6.4)** FY05 RDT&E $2.0M Plus-Up																																
S/W Vers 6.4 Contract Award							△																									
ADNS/MCAP System/Protocol Development							S/W Development and Test																									
Operator Station Authentication Architecture Development							S/W Development and Test																									
Software Delivery												△ MCAP △ OSAA																				
Test & Evaluation Milestones																																
Development Test																																
Technical Evaluation																																
Operational Evaluation																																
Production Milestones																																
Full Rate Production Start-up																																
Low-Rate Initial Production (LRIP) Start-up																																
Low-Rate Initial Production (LRIP) Delivery																																

R-1 SHOPPING LIST - Item No. 100

* Not required for Budget Activities 1, 2, 3, and 6

Note 1:

Note 2:

CLASSIFICATION:

Exhibit R-4a, Schedule Detail	**DMR**				DATE: **February 2005**			
APPROPRIATION/BUDGET ACTIVITY **RDT&E, N / BA-5**	PROGRAM ELEMENT PE: 0604280N TITLE: DMR			PROJECT NUMBER AND NAME 9378 Digital Modular Radio (DMR)				
Schedule Profile	FY 2004	FY 2005	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
S/W Version 6.4 Mod Contract Award		3Q						
MC Software Development and Testing			4Q					
Operator Station Authentication Architecture		3Q	4Q					
ADNS/MCAP System/Protocol Development		3Q	4Q					

R-1 SHOPPING LIST - Item No. 100