



## Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-554



## Multifunctional Information Distribution System (MIDS)

As of FY 2015 President's Budget

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

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## Common Acronyms and Abbreviations

Acq O&M - Acquisition-Related Operations and Maintenance  
APB - Acquisition Program Baseline  
APPN - Appropriation  
APUC - Average Procurement Unit Cost  
BA - Budget Authority/Budget Activity  
BY - Base Year  
DAMIR - Defense Acquisition Management Information Retrieval  
Dev Est - Development Estimate  
DoD - Department of Defense  
DSN - Defense Switched Network  
Econ - Economic  
Eng - Engineering  
Est - Estimating  
FMS - Foreign Military Sales  
FY - Fiscal Year  
IOC - Initial Operational Capability  
\$K - Thousands of Dollars  
LRIP - Low Rate Initial Production  
\$M - Millions of Dollars  
MILCON - Military Construction  
N/A - Not Applicable  
O&S - Operating and Support  
Oth - Other  
PAUC - Program Acquisition Unit Cost  
PB - President's Budget  
PE - Program Element  
Proc - Procurement  
Prod Est - Production Estimate  
QR - Quantity Related  
Qty - Quantity  
RDT&E - Research, Development, Test, and Evaluation  
SAR - Selected Acquisition Report  
Sch - Schedule  
Spt - Support  
TBD - To Be Determined  
TY - Then Year  
UCR - Unit Cost Reporting

## Program Information

### Program Name

Multifunctional Information Distribution System (MIDS)

### DoD Component

Navy

### Joint Participants

Air Force; Army

Navy is the lead Component as of July 24, 2012.

## Responsible Office

### Responsible Office

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**Date Assigned** September 27, 2012

## References

### SAR Baseline (Production Estimate)

Navy Acquisition Executive (NAE) Approved Acquisition Program Baseline (APB) dated March 22, 2006

### Approved APB

Assistant Secretary of the Navy (Research, Development & Acquisition) (ASN(RDA)) Approved Acquisition Program Baseline (APB) dated November 12, 2013

## Mission and Description

The Multifunctional Information Distribution System (MIDS) Program is a multinational (United States (U.S.), France, Germany, Italy, Spain) cooperative development program with Joint Service participation (Navy, Marine Corps, Army, Air Force). DoD established the program to design, develop and deliver low volume, lightweight tactical information system terminals for U.S. and Allied fighter aircraft, bombers, helicopters, ships, and ground sites. The MIDS Program consists of the MIDS Low Volume Terminal (MIDS-LVT) and the MIDS Joint Tactical Radio System (MIDS JTRS) terminal.

MIDS-LVT provides interoperability with international users significantly increasing force effectiveness and minimizing hostile actions and friend-on-friend engagements. The MIDS-LVT terminal design is smaller, lighter, highly reliable, interoperable with Joint Tactical Information Distribution System (JTIDS) Class 2 terminal, compatible with all the participants' designated platforms, affordable, and re-configurable to individual user needs and budgets. Three principal configurations of the MIDS-LVT terminal are in production and use an open system, modular architecture. MIDS-LVT Variant (1) includes voice, Tactical Air Navigation (TACAN) and variable power transmission with maximum power of 200 watts and provides a Link 16 capability to U.S. Navy and U.S. Air Force (USAF) platforms. MIDS-LVT Variant (2) is a ground variant and is a functional replacement for the JTIDS Class 2M terminal. MIDS-LVT Variant (3), also referred to as MIDS Fighter Data Link, is a reduced function terminal for the USAF (no voice, no TACAN, and a maximum power of 40 watts).

The MIDS JTRS terminal meets JTRS compliance. The technical objective of MIDS JTRS is to transform the current MIDS-LVT into a four-channel, Software Communications Architecture compliant Joint Tactical Radio set, while maintaining current Link 16 and TACAN functionality. The MIDS JTRS design is plug-and-play interchangeable with U.S. Navy and U.S. Air Force platforms that use MIDS-LVT, and accommodates future technologies and capabilities. The MIDS JTRS design also adds improvements such as Link 16 enhanced throughput, Link 16 frequency re-mapping, and programmable crypto. In addition to the Link 16 and TACAN functionality, MIDS JTRS provides three additional 2 megahertz to 2 gigahertz programmable channels to accommodate incremental delivery of the advanced JTRS waveforms through MIDS JTRS Platform Capability Packages. Total program requirements include terminal development; software hosting (Operating Environment/JTRS Waveforms); implementation of National Security Agency guidelines; production transition; and F/A-18E/F, E-2D, and EA-18G coordination. Additional MIDS JTRS terminals will be provided to support follow-on platform integration and waveform porting efforts. These may include MIDS on Ship, United States Air Force RC-135, EC-130H, and other manned and unmanned Navy platforms.

## Executive Summary

The MIDS Program Office (MPO) consists of two products, the MIDS Low Volume Terminal (MIDS-LVT) and the MIDS Joint Tactical Radio System (MIDS JTRS). The MIDS Program Manager (PM) has implemented an acquisition strategy that maintains continuous competition between the two United States (U.S.) production contractors, BAE Systems/Rockwell Collins Data Link Solutions L.L.C. (DLS) and ViaSat, Inc., and directed procurements to EuroMIDS.

MIDS was designated as Program Management, Air (PMA)/Program Management, Warfare (PMW)-101 by the Assistant Secretary of the Navy (ASN) (Research, Development & Acquisition (RDA)) on January 10, 2013.

The MIDS Program Office was assigned the From the Air (FTA) Advanced Tactical Data Links (ATDL) lead by Program Executive Office for Tactical Aircraft Programs on January 15, 2013 to coordinate efforts among PMA-231, PMA-265, PMA-298, and PMA/PMW-101.

The MIDS-LVT EuroMIDS Program Management Review was held in Paris, France, February 26-28, 2013. Block Upgrade 2 (BU2), a 39-month Engineering Change Proposal to bring National Security Agency mandated Crypto Modernization and National Telecommunications and Information Agency and Federal Aviation Agency mandated Frequency Remapping capability to the DLS, ViaSat, and EuroMIDS production lines, was briefed in depth. Discussions were also held concerning the EuroMIDS MIDS-LVT end-of-production in 2014.

A MIDS-LVT Block Cycle 2 Delivery Order (DO) to incorporate MIDS on Ship requirements into the MIDS JTRS terminal was awarded March 4, 2013 to DLS and ViaSat.

Steering Committee (SC) #50 was held in Rome, Italy, April 9-12, 2013 with the focus of obtaining award date agreement for MIDS-LVT BU2 from all five MIDS nations (France, Germany, Italy, Spain, and U.S.).

National Security Agency (NSA) provided release approval for MIDS JTRS terminals to Australia, Canada, United Kingdom, and New Zealand on May 17, 2013. MPO received an NSA approval memorandum on May 21, 2013 for the sale of five MIDS JTRS terminals to the United Kingdom's Rivet Joint program via an FMS case. This marks the first approval of a foreign sale of a MIDS JTRS terminal as an FMS case. NSA also provided approval for the sale of 20 MIDS JTRS terminals to Australia on June 13, 2013.

SC Decision Point 50.04 was agreed to on June 30, 2013 by all five MIDS nations to fully fund the MIDS-LVT BU2 development.

MIDS JTRS Four Net Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4) Cooperative Development DOs were awarded to ViaSat on July 8, 2013 and to DLS on July 11, 2013. CMN-4 is the capability of a Link 16 Terminal to receive multiple messages, each in different Link 16 nets, within the same Link 16 time slot (Concurrent Multi-Netting) with Concurrent Contention Receive which is the capability of a Link 16 Terminal to receive multiple messages in the same Link 16 net within the same Link 16 time slots.

The MIDS JTRS Capabilities Development Document update that included CMN-4 development was signed by the Chief of Naval Operations on July 16, 2013.

A MIDS-LVT Lot 14 DO for 196 MIDS-LVT(1) terminals was awarded to DLS and ViaSat on August 5, 2013.

MIDS JTRS Full Production and Fielding Lot 2 DOs were awarded September 10, 2013. The competitively awarded DOs to DLS and ViaSat were for 112 terminals and 31 Shop Replaceable Units / Line Replaceable Units

(SRUs/LRUs). Additionally, 20 FMS terminals for Australia were ordered from DLS.

SC #51 was held in Boston, Massachusetts, September 17-19, 2013 with the focus of BU2 execution, the U.S. strategy for MIDS JTRS, and the path for future Link-16 implementation and interoperability.

The FTA ATDL Strategy Interim Program Review (IPR) #1 Acquisition Decision Memorandum (ADM) was signed by ASN(RD&A) on September 23, 2013. The ADM approved the FTA ATDL Strategy and Exit and Entrance Criteria for each of the FTA ATDL IPRs. Additionally, the ADM approved the PMA/PMW-101 Acquisition Document agreement and the post Preliminary Design Review (PDR) Assessment for CMN-4 and authorized the continued development of CMN-4.

Tactical Targeting Network Technology Technical Development DOs were awarded September 25, 2013 to DLS and ViaSat. This contract outlines a cooperative effort between the MIDS Industry Partners over a 12-month period of performance that will culminate in a system level PDR.

MIDS-LVT BU 2 development DOs were awarded to DLS, EuroMIDS and ViaSat for hardware and to BAE and EuroMIDS for software on November 4, 2013.

Procurement, and O&S breaches were realized due to increased procurement quantities of MIDS terminals by F/A-18. A Program Deviation Report was submitted by the MIDS PM and approved by ASN(RD&A) on May 21, 2013. A revised APB was approved by ASN(RD&A) on November 12, 2013.

A Critical Design Review for MIDS JTRS CMN-4 was held November 20-21, 2013. All actions assigned have been completed and the review has been closed.

MIDS JTRS CMN-4 Production Representative Terminal DOs were awarded to DLS and ViaSat on December 18, 2013.

A MIDS-LVT Lot 4 production DO was awarded to EuroMIDS for 96 terminals in support of EuroMIDS nation requirements on December 19, 2013. Options for an additional 41 Lot 4 terminals were awarded throughout 2013.

As of December 31, 2013, 8,131 MIDS-LVT terminals have been contracted with DLS, ViaSat and EuroMIDS, of which 7,712 have been delivered. These terminals are for the United States Navy (USN), United States Air Force (USAF), United States Army, United States Marine Corps, MIDS Participant Nations, and FMS. These totals do not include additional MIDS-LVT terminals procured by Direct Commercial Sales (e.g., non-MPO contracts).

As of December 31, 2013, 483 MIDS JTRS terminals and 208 spare SRU/LRUs have been contracted with DLS and ViaSat, of which 268 MIDS JTRS terminals have been delivered. These terminals are for the USN, USAF, Australia, and the MPO.

Five operational F/A-18 squadrons are equipped with MIDS JTRS: VFA-27, VFA-31, VFA-86 VFA-151, and VFA-213,) and two training squadrons (VFA-106 and 122) (65 aircraft outfitted). Reliability data is based on hours through November 30, 2013. Since June 2012, Mean Time Between Failure is 1,335 hours based on 18 confirmed failures and 24,037 operational hours.

There are no significant software-related issues with this program at this time.

## Threshold Breaches

### APB Breaches

<b>Schedule</b>		<input type="checkbox"/>
<b>Performance</b>		<input type="checkbox"/>
<b>Cost</b>	RDT&E	<input type="checkbox"/>
	Procurement	<input type="checkbox"/>
	MILCON	<input type="checkbox"/>
	Acq O&M	<input type="checkbox"/>
<b>O&amp;S Cost</b>		<input type="checkbox"/>
<b>Unit Cost</b>	PAUC	<input type="checkbox"/>
	APUC	<input type="checkbox"/>

### Nunn-McCurdy Breaches

#### Current UCR Baseline

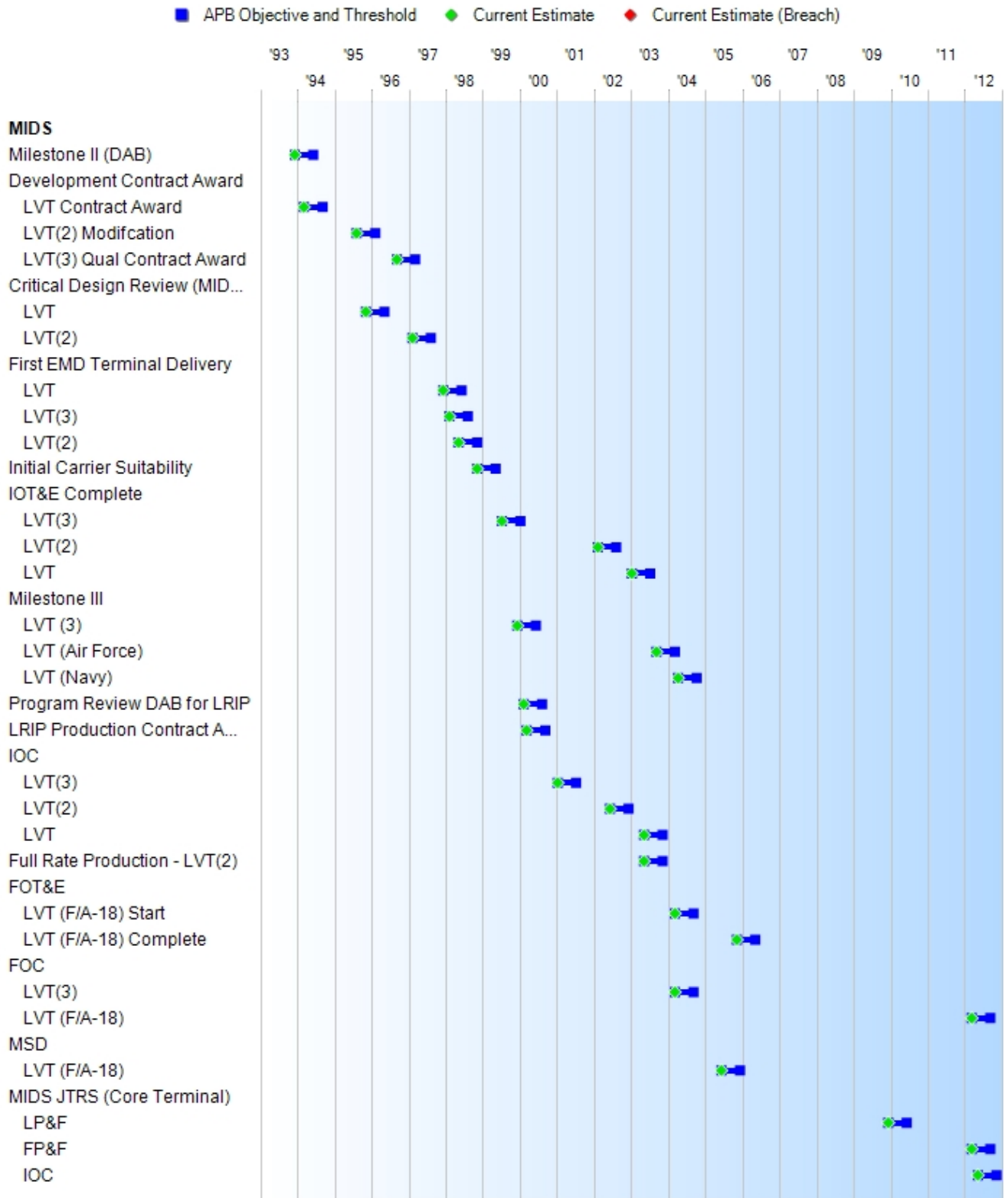
PAUC	None
APUC	None

#### Original UCR Baseline

PAUC	None
APUC	None



# Schedule



<b>Milestones</b>	<b>SAR Baseline Prod Est</b>	<b>Current APB Production Objective/Threshold</b>		<b>Current Estimate</b>
Milestone II (DAB)	DEC 1993	DEC 1993	JUN 1994	DEC 1993
Development Contract Award				
LVT Contract Award	MAR 1994	MAR 1994	SEP 1994	MAR 1994
LVT(2) Modifcation	AUG 1995	AUG 1995	FEB 1996	AUG 1995
LVT(3) Qual Contract Award	SEP 1996	SEP 1996	MAR 1997	SEP 1996
Critical Design Review (MIDS Terminal)	N/A			
LVT	NOV 1995	NOV 1995	MAY 1996	NOV 1995
LVT(2)	FEB 1997	FEB 1997	AUG 1997	FEB 1997
First EMD Terminal Delivery				
LVT	DEC 1997	DEC 1997	JUN 1998	DEC 1997
LVT(3)	FEB 1998	FEB 1998	AUG 1998	FEB 1998
LVT(2)	MAY 1998	MAY 1998	NOV 1998	MAY 1998
Initial Carrier Suitability	NOV 1998	NOV 1998	MAY 1999	NOV 1998
IOT&E Complete				
LVT(3)	JUL 1999	JUL 1999	JAN 2000	JUL 1999
LVT(2)	FEB 2002	FEB 2002	AUG 2002	FEB 2002
LVT	JAN 2003	JAN 2003	JUL 2003	JAN 2003
Milestone III				
LVT (3)	DEC 1999	DEC 1999	JUN 2000	DEC 1999
LVT (Air Force)	SEP 2003	SEP 2003	MAR 2004	SEP 2003
LVT (Navy)	APR 2004	APR 2004	OCT 2004	APR 2004
Program Review DAB for LRIP	FEB 2000	FEB 2000	AUG 2000	FEB 2000
LRIP Production Contract Award	MAR 2000	MAR 2000	SEP 2000	MAR 2000
IOC				
LVT(3)	JAN 2001	JAN 2001	JUL 2001	JAN 2001
LVT(2)	JUN 2002	JUN 2002	DEC 2002	JUN 2002
LVT	MAY 2003	MAY 2003	NOV 2003	MAY 2003
Full Rate Production - LVT(2)	MAY 2003	MAY 2003	NOV 2003	MAY 2003
FOT&E				
LVT (F/A-18) Start	MAR 2004	MAR 2004	SEP 2004	MAR 2004
LVT (F/A-18) Complete	NOV 2005	NOV 2005	MAY 2006	NOV 2005
FOC				
LVT(3)	MAR 2004	MAR 2004	SEP 2004	MAR 2004
LVT (F/A-18)	MAR 2012	MAR 2012	SEP 2012	MAR 2012
MSD				
LVT (F/A-18)	JUN 2005	JUN 2005	DEC 2005	JUN 2005
MIDS JTRS (Core Terminal)				
LP&F	N/A	DEC 2009	JUN 2010	DEC 2009
FP&F	N/A	MAR 2012	SEP 2012	MAR 2012
IOC	N/A	MAY 2012	NOV 2012	MAY 2012

**Change Explanations**

None

**Memo**

An Office of Secretary of Defense decision was made in December 2009 that MIDS Joint Tactical Radio System (Core Terminal) did not require a Milestone (MS) C decision since the MIDS Program had a MS C decision in September 2003.

**Acronyms and Abbreviations**

DAB - Defense Acquisition Board  
EMD - Engineering and Manufacturing Development  
FOC - Full Operational Capability  
FOT&E - Follow-On Test and Evaluation  
FP&F - Full Production and Fielding  
IOT&E - Initial Operational Test and Evaluation  
JTRS - Joint Tactical Radio System  
LP&F - Limited Production and Fielding  
LVT - Low Volume Terminal  
MSD - Material Support Date  
Qual - Qualification

## Performance

Characteristics	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
Interoperability	All top level IERs in SMORD	All top level IERs in SMORD	All critical top level IERs in SMORD	100% Demonstrated	All top level IERs in SMORD
Waveform Compatibility	STANAG 4175 & JTIDS SSS	STANAG 4175 & JTIDS SSS	STANAG 4175 & JTIDS SSS	JITC Certified	STANAG 4175 & JTIDS SSS
Message Standard	STANAG 5516 (& 5616 for Data Fwds) & MIL-STD-6016B	STANAG 5516 (& 5616 for Data Fwds) & MIL-STD-6016B	STANAG 5516 (& 5616 for Data Fwds) & MIL-STD-6016B	JITC Certified	STANAG 5516 (& 5616 for Data Fwds) & MIL-STD-6016B
Maximum Power Transmission (w)					
LVT	Multiple selectable levels	Multiple selectable levels	>=200 with IF for 1000	200 with IF	Multiple selectable levels
LVT(2)	Multiple selectable levels	Multiple selectable levels	>=200 or 25 selectable	200/25	Multiple selectable levels
LVT(3)	Multiple selectable levels	Multiple selectable levels	>=50	50	Multiple selectable levels
IER (Kbps)	1000	>=1000	28.8 -115.2	1100 kbps	>=1000
Paired Time Slot Relay Capability	Integral and automated	Integral and automated	Integral and automated	Integral and automated	Integral and automated
Repromulgation Relay (nm) MIDS-LVT(2)	4 hop	4 hops	3 hops	4 hops	4 hops
Paired Time Slot Relay Range (nm) (USN Only)	1200	>=1200	>=500	520	>=1200
Communication Range					
LVT (USN: C2 to C2)	300	>=300	>=300	350	>=300
LVT (USN: Non-C2 to C2)	240	>=240	>=220	240	>=240
LVT (USN: Non-C2 to Non-C2)	200	>=200	>=180	220	>=200
LVT (USN: Surface Platforms)	LOS up to 300	LOS >=300	LOS >=300	300	LOS >=300
LVT (F-16: Non-C2 to C2)	300	>=300	>=200	200	>=300

(Ch-1)

LVT (F-16: Non-C2 to Non-C2)	150	>=150	>=100	150	>=150
LVT(2)	Up to 300 with LOS at 200 w	Up to 300 with LOS at 200 w	Up to 300 with LOS at 200 w	300	Up to 300 with LOS at 200 w
LVT(3) (Non-C2 to C2)	300	>=300	>=200	300	>=300
LVT(3) (Non-C2 to Non-C2)	150	>=150	>=100	170	>=150
Voice Channels: LVT (USN)	Capable of 2	Capable of 2	1	2	Capable of 2
Coded Message Error Probability (%)					
LVT	1	<=1	<=2	Passed	<=1
LVT(3)	< 1 detected	<= 1 detected	<=2	Passed	<= 1 detected
LVT(2)	1	<=1	<=2	Passed	<=1
Jam Resistance					
LVT (USN) (db)	MJCS-194 - 89	MJCS-194- 89	MJCS-194- 89	Compliant	MJCS-194- 89
LVT (F-16) (%)	< 1 detected error	<=1 detected error	<= 1 detected error	Passed	<=1 detected error
LVT(2) (%)	< 1 detected error	<= 1 detected error	<= 5	Passed	<= 1 detected error
LVT(3) (%)	< 1 detected error	<= 1 detected error	<= 1 detected error	Passed	<= 1 detected error
Ao					
LVT	.90	>=.90	>=.90	.91	>=.90
LVT(2) (Terminal)	.94	>=.94	>=.90	.94	>=.94
LVT(3)	.97	>=.97	>=.95	.965	>=.97
MTBF (hr)(lab)					
USN	1000	>=1000	>=1000	1850	>=1000
USA	1800	>=1800	>=1000	1850	>=1800
USAF	1500	>=1500	>=1000	1850	>=1500
MFHBOMF/MTBOMF (hr)					
System	25	>=25	>=25	32	>=25
LVT (Aircraft) (Terminal)	300	>=300	>=220	240	>=300
LVT (Ships) (Terminal)	350	>=350	>=257	275	>=350
LVT(2) (Terminal)	393	>=393	>=393	425	>=393
MTTR (O-level) (min)					
LVT(2) (Terminal)	30	<=30	<=30	25	<=30
MCMTOMF					

LVT (USN Aircraft)	60	<=60	<=90	75	<=60
LVT (USN Ships)	60	<=60	<=90	80	<=60
LVT (USAF)	MRT < 20	MRT < 20	MRT < 30	25	MRT < 20
LVT(3)	MRT < 20	MRT < 20	MRT < 30	28	MRT < 20
Volume (Cubic Feet)					
LVT	< .6	<= .6	<= .6	.58	<= .6
LVT(2)	< 1.4	<=1.4	<=1.4	1.32	<=1.4
LVT(3)	< .6	<= .6	<= .6	.56	<= .6
Weight (lbs)					
LVT	< 65	<=65	<=65	63.8	<=65
LVT(2)	< 88	<=88	<=88	87.9	<=88
LVT(3)	< 65	<=65	<=65	63.8	<=65
MIDS-LVT Enhancement ECPs					
Message Standards	N/A	STANAG 5516 (& 5616 for Data Fwds) & MIL-STD-6016C	STANAG 5516 (& 5516 for Data Fwds) & MIL-STD-6016B	To Be Determined (TBD) until Block Upgrade 2 (BU2) Enhanced Throughput (ET) is implemented	STANAG 5516 (& 5616 for Data Fwds) & MIL-STD-6016C
Communications Range	N/A	see note 12c through 17c	see note 12c through 17c	TBD until MIDS-LVT BU2 ET is implemented	see note 12c through 17c
Information Exchange Rate (Kbps)					
LET 0	N/A	>=358	>=107	TBD until MIDS-LVT BU2 ET is implemented	>=358
LET 1	N/A	>=546	>=358	TBD until MIDS-LVT BU2 ET is implemented	>=546
LET 2	N/A	>=833	>=546	TBD until MIDS-LVT BU2 ET is implemented	>=833
LET 3	N/A	>=968	>=833	TBD until MIDS-LVT BU2 ET is implemented	>=968
LET 4	N/A	>=1100	>=968	TBD until MIDS-LVT	>=1100

				BU2 ET is implemented	
Coded Message Error Probability (%)					
LET 0	N/A	<=1%	<=2%	TBD until MIDS-LVT BU2 ET is implemented	<=1%
LET 1	N/A	<=1%	<=2%	TBD until MIDS-LVT BU2 ET is implemented	<=1%
LET 2	N/A	<=1%	<=2%	TBD until MIDS-LVT BU2 ET is implemented	<=1%
LET 3	N/A	<=1%	<=2%	TBD until MIDS-LVT BU2 ET is implemented	<=1%
LET 4	N/A	<=1%	<=2%	TBD until MIDS-LVT BU2 ET is implemented	<=1%
Jam Resistance	N/A	MJCS-194-89	MJCS-194-89	TBD until MIDS-LVT BU2 ET is implemented	MJCS-194-89
MIDS JTRS Performance Parameters					
Link-16 Waveform compatibility	N/A	STANAG 4175 and MIDS LVT SSS	STANAG 4175 and MIDS LVT SSS	Passed JITC waveform conformance test.	Passed JITC waveform conformance test.
Link-16 Message Standard	N/A	MIL-STD-6016C and STANAG 5516	MIL-STD-6016C and STANAG 5516	Passed JITC waveform conformance test.	Passed JITC waveform conformance test.
Link-16 IER					
Normal Operations with JTRS	N/A	>=1100 Kbps	>=28-115.2 Kbps	128	128
LET 0	N/A	>=358	>=107	107	107
LET 1	N/A	>=546	>=358	358	358
LET 2	N/A	>=833	>=546	546	546
LET 3	N/A	>=968	>=833	837	837
LET 4	N/A	>=1100	>=968	968	968
Interoperability: All top level IERs will be	N/A	All top-level Information	All top-level Information	All top-level IERs	All top-level IERs

satisfied to the standards specified in the threshold (T) and objective (O) values.		exchange Requirements (IERs) are met.	Exchange Requirements (IERs) are met.	transferred.	transferred.
Link-16 Coded Message Error Probability (CMEP)					
LET 0	N/A	<=1%	<=2%	<=2%	<=1%
LET 1	N/A	<=1%	<=2%	<=2%	<=1%
LET 2	N/A	<=1%	<=2%	<=2%	<=1%
LET 3	N/A	<=1%	<=2%	<=2%	<=1%
LET 4	N/A	<=1%	<=2%	<=2%	<=1%
Weight/Volume	N/A	<=65 lbs, <=.6 cu.ft.	<=65 lbs, <=.6 cu.ft.	Measured 54.7 lbs; measured .573 cu. ft.	<=65 lbs, <=.6 cu.ft.
Link-16 Jam Resistance					
JTRS (USN) (db)	N/A	MJCS-194-89	MJCS-194-89	Exceeds threshold by 1-3 db in 95% of all cases.	Exceeds threshold by 1-3 db in 95% of all cases.
All Others	N/A	<=1% Detected message error rate	<=1% Detected message error rate	.98%	.98%
Link-16 J-Voice Channels	N/A	2	2	2	2
Link-16 Communications Range Data	N/A	≥300 nm (C2-C2 w/HPA); ≥240 nm (C2-non-C2); ≥200 nm (non-C2-non-C2)	≥300 nm (C2-C2 w/HPA); ≥220 nm (C2-non-C2); ≥180 nm (non-C2-non-C2)	>=250 nm	>=250 nm.
Link-16 Communications Range J-Voice	N/A	>=220nm (C2-C2 w/HPA); >=140nm (C2-non-C2); >=90nm (non-C2-nonC2/non C2-C2)	>=220nm (C2-C2 w/HPA); >=140nm (C2-non-C2); >=90nm (non-C2-nonC2/non C2-C2)	>=220nm (C2-C2 w/HPA) - Not Tested; >=140nm (C2-non-C2 - Not tested; >=90nm (non-C2-nonC2/non C2-C2) - 150.	>=220nm (C2-C2 w/HPA) - Terminal not installed in C2 platform yet; >=140nm (C2-non-C2 - Terminal not installed in C2 platform



					yet; >=90nm (non-C2-nonC2/non C2-C2) - 150.
Link-16 Relay	N/A	>=1200nm	>=500nm	Not tested yet.	>=500 nm
Multi-Channels/Networks	N/A	4 Channels simultaneously with TACAN/multi-net (single network) Link-16 fixed operation on Channel 1	4 Channels simultaneously with TACAN/multi-net (single network) Link-16 fixed operation on Channel 1	4 Channels passed.	4 Channels passed.
Scan Frequencies	N/A	Scan a minimum of 10 frequencies or presets	Scan a minimum of 10 frequencies or presets	FOT&E: No MIDS JTRS waveforms require presets.	FOT&E: No MIDS JTRS waveforms require presets.
Terminal Start-up/Restart (Link-16 only)	N/A	<=2.0 min	<=3.5 minutes	3.2 min	3.2 min
IBIT Performance (Link-16 only)	N/A	<=30seconds	<=70 seconds	29 seconds	29 seconds
Link-16 Net Entry/Synchronization	N/A	<=30 seconds	Not to exceed 4 min from time that coarse sync is initiated	30 sec - 2.5 min	30 sec - 2.5 min
Crypto-Rekeying	N/A	Over the Air Rekeying (OTAR) through electronic media, or common reprogramming hardware / software	At O-level	Not implemented in Core Terminal.	Not implemented in Core Terminal.
Link-16 Transmission of Unit Position and Status Reports	N/A	<=100 ft accuracy	<=300 ft accuracy	78 ft	78 ft
TACAN Performance Start-up/Restart	N/A	<=14 seconds	<=30 seconds	15 seconds	15 seconds
MFHBOMF (System/Single)	N/A	>=36 hrs (Other	>=25 hrs (F/A-18E/F,	36.5 hrs.	36.5 hrs

Channel)		Platforms)	EA-18G, TACAIR)		
MTBF Lab (Ch. 1(Link-16))	N/A	>=1800 hrs	>= 1200 hrs	1285 hrs	1285 hrs
MTBF Lab (Ch. 2, 3 & 4)	N/A	>=1800 hrs	>=1550 hrs	1550 hrs	1550 hrs
MFHBOMF (Terminal/Single Channel)	N/A	>=300 hrs	>=220 hrs	724 (includes lab data)	220 hrs
MCMTOMF (Single Channel)	N/A	<= 60 min	<=120 min; <= 90 min (F/A-18 E/F, EA-18G, NAVAIR)	60 min	60 min (Single channel)
MRT	N/A	<= 20 min	<= 45 min	20 min	45 min
BIT PCD	N/A	PCD>= 98%	PCD>= 95%	97%	97%
BIT MFHBFA	N/A	MFHBFA: >= 451 hrs	MFHBFA: >= 113 hrs	80 hrs	120 hrs
Start-Up (Terminal/Single Channel)	N/A	<=2min (OE, crypto and waveform); <=2min (fine sync)	<=3.5min (OE, Crypto and waveform); <=4min (fine sync)	3.2 min	3.2 min
Start-Up (Waveform/Link-16 only)	N/A	<=2min (OE, crypto, and waveform); <=2min (fine sync)	<=3.5min (OE, crypto, and waveform); <=4min (fine sync)	.5 - 2.5 min	.5 - 2.5 min
Restart < 50 milliseconds (Core configuration only)	N/A	Operates through	Operates through	Operates through	Operates through
Restart <10 seconds (Terminal)	N/A	<=2min	<=3.5min	2.5 min	2.5 min
Restart <10 seconds (Link-16 waveform)	N/A	<=10sec	<=10sec	9 sec	9 sec
Restart >=10 seconds and <2min (Terminal)	N/A	<=2min	<=3.5min	3.2 min	3.2 min
Restart >=10 seconds and <2min (Link-16)	N/A	<=2min	<=4min	3.2 min	3.2 min
Restart >= 2 min (Terminal)	N/A	<=2min	<=3.5min	3.2 min	3.2 min
Restart >=2 min (Link-16 Waveform)	N/A	<=2min	<=4min	3.2 min	3.2 min
TACAN Start-up/Restart	N/A	<=14sec	<=30sec	15 sec	15 sec
IBIT Performance	N/A	<=30sec	<=70sec	30 sec	30 sec

Terminal Operating Frequency Range	N/A	Operate 2-2000 MHz	Operate 2-2000 MHz	Operation within 2-2000 MHz	Operate 2-2000 MHz
MIDS JTRS Capability	N/A	F3I for MIDS-LVT (1) and shall meet the performance measures in MIDS JTRS Core Terminal in Table 6 of the CPD in addition to TACAN and J-Voice.	F3I for MIDS-LVT (1) and shall meet the performance measures in MIDS JTRS Core Terminal in Table 6 of the CPD in addition to TACAN and J-Voice.	11 of 11 Performance measures have been achieved in a Developmental Test period.	11 of 11 Performance measures have been achieved in a Developmental Test period.
Functionality	N/A	MIDS JTRS Core Terminal will meet connectivity requirements of ALL Airborne (MIDS JTRS) Domain Waveforms.	The MIDS JTRS Core Terminal shall be capable of supporting secure and non-secure voice, video, and data communications by supporting narrowband and wideband JTRS developed waveforms in compliance with the Software Communications Architecture. Where a MIDS JTRS Core Terminal replaces the WF/radio function(s) of one or more	15 of 15 Performance measures have been achieved.	15 of 15 Performance measures have been achieved.

			<p>legacy radios and continued interoperability with legacy radios is required, software WFs will be ported and JTRS radio shall perform the same WF/radio function(s) and mission(s) supported by the legacy radios. JTRS Core Terminal will meet connectivity requirements of ported Waveforms.</p>		
Number of Channels	N/A	Threshold same as Objective (One TACAN/Link-16 plus three additional channels for JTRS Waveforms).	<p>One TACAN/Link-16 plus three additional channels for JTRS Waveforms. Navy Initial Implementation - TACAN/Link-16 plus 3 additional channels ((2MHz- 2 GHz transceivers) as capability for future JTRS WFs) for F/A-18E/F. USAF Initial</p>	1 of 1 Performance measures have been achieved.	1 of 1 Performance measures have been achieved.

			Implementati on - Link-16 for B-1.		
Net Ready	N/A	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration (Table 31), 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authenticatio	The MIDS JTRS Core Terminal will support Net-Centric military operations via a gateway. The system must be able to enter and be managed in the network, and exchange data in a secure manner to enhance mission effectiveness . The systems must have the ability to provide survivable, interoperable , secure and operationally effective information exchanges to enable a Net-centric military capability. The system must fully support execution of all operational activities identified in the applicable	5 of 5 Performance measures have been achieved. System certified by NSA in March 2010	5 of 5 Performance measures have been achieved. System certified by NSA in March 2010.

		n, confidentiality, and non-repudiation, and issuance of an IATO by the DAA, and 5) Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture reviews.	joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration (Table 31), 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an ATO by the DAA, and 5) Operationally effective information exchanges;		
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			and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture reviews.		
Operational Availability (Ao)	N/A	Each MIDS JTRS Core Terminal shall demonstrate an Ao of >0.99 for all channels.	Each MIDS JTRS Core Terminal shall demonstrate an Ao of >0.90 for Link-16 / TACAN Channel and >0.96 for the remaining channels.	96.8%.	96.8% (Ch-2)
Software Configurable	N/A	Each MIDS JTRS Core Terminal shall provide any designated operator with the ability to load and reconfigure its modes/ capabilities via software while in the operational	Each MIDS JTRS Core Terminal shall provide any designated operator with the ability to load and reconfigure its modes/ capabilities via software while in the operational	1 of 1 Performance measures have been achieved.	1 of 1 Performance measures have been achieved.

		environment	environment		
Growth	N/A	MIDS JTRS Core Terminal shall provide an internal growth capability through an open systems architecture approach, and shall be modular, scaleable and flexible as designed to suit specific operational requirements	MIDS JTRS Core Terminal shall provide an internal growth capability through an open systems architecture approach, and shall be modular, scaleable and flexible as designed to suit specific operational requirements	2 of 2 Performance measures achieved.	2 of 2 Performance measures achieved.
Navigation – Link-16 Position (PPLI)	N/A	≤100 feet	≤300 feet	Operation at ≤100 feet	≤100 feet
Tactical Air Navigation (TACAN)	N/A	Capabilities equivalent to LVT	Capabilities equivalent to LVT	Capabilities equivalent to LVT	Capabilities equivalent to LVT
Spectrum Certification	N/A	Meets DD-1494 Stage 4	Meets DD-1494 Stage 4	DD-1494 Stage 4 issued.	Meets DD-1494 Stage 4
Memory/Processor Reserve	N/A	Provide growth memory and processor reserve to allow for an increased capability or functionality of each set and with each generation of radios	Provide growth memory and processor reserve to allow for an increased capability or functionality of each set and with each generation of radios	Met with no issues.	Provide growth memory and processor reserve to allow for an increased capability or functionality of each set and with each generation of radios
Operational Communications					
Passive Synchronization	N/A	Fine Sync achieved passively	Fine Sync achieved passively	Achieved Fine Sync passively	Fine Sync achieved passively



Automatic Message Acknowledgement	N/A	IAW Mil-STD 6016C	IAW Mil-STD 6016C	Automatic Message Acknowledgement IAW Mil-STD 6016C	IAW Mil-STD 6016C
Crypto Control (CTP-11)	N/A	Proper O-level control of NSA approved crypto device	Proper O-level control of NSA approved crypto device	Proper O-level control of NSA approved crypto device	Proper O-level control of NSA approved crypto device
Multi-Net (CTP-10)/8d	N/A	2 simultaneous nets	2 simultaneous nets	Performance of two simultaneous nets	2 simultaneous nets
GIG Requirements	N/A	DISR mandated GIG requirements specified in TV-1 of ISP	DISR mandated GIG requirements specified in TV-1 of ISP	Met DISR mandated GIG requirements specified in TV-1 of ISP	DISR mandated GIG requirements specified in TV-1 of ISP
Key Information Profile (KIP)	N/A	DISA mandated GIG KIPs are identified in ISP in the KIP Declaration Table	DISA mandated GIG KIPs are identified in ISP in the KIP Declaration Table	The DISA mandated GIG KIPs are identified in the ISP in the KIP Declaration Table	DISA mandated GIG KIPs are identified in ISP in the KIP Declaration Table
Design per NCOW RM	N/A	NCOW RM Enterprise Services are met	NCOW RM Enterprise Services are met	The NCOW RM Enterprise Services are met	NCOW RM Enterprise Services are met
Information Exchange Requirements met	N/A	Operationally Effective exchanges of all messages IAW ISP	Operationally Effective exchanges of all messages IAW ISP	Showed Operationally Effective exchange of all messages IAW ISP	Operationally Effective exchanges of all messages IAW ISP
Enable CMN/CCR Reception	N/A	Receive on 4 net numbers (CMN); 4 receptions within a timeslot (CCR)	Receive on 4 net numbers (CMN); 4 receptions within a timeslot (CCR)	TBD	Receive 4 net numbers (CMN); 4 receptions within a timeslot (CCR)

(Ch-3)

**Requirements Source**

MIDS Operational Requirements Document (ORD) (MIDS-LVT) dated July 25, 2004 and MIDS JTRS Capability Production Document (CPD) dated July 16, 2013

**Change Explanations**

(Ch-1) Revised Current Estimate of '4 hop' to read '4 hops' for consistency

(Ch-2) Added % symbol to Current Estimate for consistency

(Ch-3) 'Enable Current Multi-Netting Concurrent Contention Receive (CMN/CCR) Reception' was added as a non-KPP in the MIDS CPD approved July 16, 2013.

**Memo**

1. For LET 0 there is a 5 db loss in jam resistance and 44% loss in range over PAC4 Single Pulse. The 1% error rate will be calculated based on the decrease in jamming resistance.
2. For LET 1 there is a 7 db loss in jam resistance and 56% loss in range over PAC4 Single Pulse. The 1% error rate will be calculated based on the decrease in jamming resistance.
3. For LET 2 there is a 9 db loss in jam resistance and 65% loss in range over PAC4 Single Pulse. The 1% error rate will be calculated based on the decrease in jamming resistance.
4. For LET 3 there is a 10 db loss in jam resistance and 67% loss in range over PAC4 Single Pulse. The 1% error rate will be calculated based on the decrease in jamming resistance.
5. For LET 4 there is an 11 db loss in jam resistance and 72% loss in range over PAC4 Single Pulse. The 1% error rate will be calculated based on the decrease in jamming resistance.
6. For Frequency Remap, there will be a db loss for the number of frequencies remapped based on the formula  $10 \log(51/51-NR)$  where NR = the number of frequencies remapped. There is a corresponding decrease in range of approximately 1% for each frequency that is remapped.

**Acronyms and Abbreviations**

Ao - Operational Availability  
ATO - Authority to Operate  
BIT - Built in Test  
BU2 - Block Upgrade 2  
C2 - Command and Control  
CFAQT - Contractor First Article Qualification Testing  
CMEP - Coded Message Error Probability  
CMN/CCR - Concurrent Multi-Netting/Concurrent Contention Receive  
cu. ft. - cubic feet  
DAA - Designated Approving Authority  
db - decibel(s)  
DISR - Defense Information Standards Registry  
ECP - Engineering Change Proposal  
ET - Enhanced Throughput  
F3I - Form, Fit, Function and interface  
FDL - Fighter Data Link  
FOT&E - Follow-on Test and Evaluation  
GFAQT - Government First Article Qualification Testing  
GIG IT - Global Information Grid Information Technology  
HPA - High Power Amplifier  
hr - hour(s)  
IATO - Interim Authority to Operate  
IBIT - Initialization Built in Test  
IER - Information Exchange Requirements  
IF - Interface  
JITC - Joint Interoperability Test Command  
JTIDS - Joint Tactical Information Distribution System  
kbps - kilobits per second  
KIPs - Key Interface Profiles  
KPP - Key Performance Parameter  
lbs - Pounds  
LET - Link 16 Enhanced Throughput  
LOS - Line of sight  
LVT - Low Volume Terminal  
MCMTOMF - Mean Corrective Maintenance Time for Operational Mission Failures  
MFHBFA - Mean Flight Hours Between False Alarms  
MFHBOMF - Mean Flight Hours Between Operational Mission Failures  
MHz - Megahertz  
MIDS - Multifunctional Information Distribution System  
Mil-Std - Military Standard  
min - minute(s)  
MJCS - Memorandum Joint Chiefs of Staff  
MRT - Mean Repair Time  
MTBF - Mean Time Between Failure  
MTBOMF - Mean Time Between Operational Mission Failures  
MTTR - Mean Time to Repair  
NCOW RM - Net-Centric Operations and Warfare Reference Model  
nm, nmi - Nautical mile  
NSA - National Security Agency  
OE - Operational Environment

O-Level - Organization Level  
ORD - Operational Requirements Document  
OTAR - Over the Air Re-keying  
PAC4 - Packed-4  
PCD - Percent Correct Detect  
sec - second(s)  
SINCGARS - Single Channel Ground and Airborne Radio System  
SMORD - Single MIDS ORD  
SSS - System Segment Specification  
STANAG - Standardization Agreement  
TACAN - Tactical Air Navigation  
TV - Technical View  
w - watt(s)

## Track to Budget

**RDT&E**

Appn	BA	PE		
Navy	1319	05	0205604N	
	<b>Project</b>		<b>Name</b>	
	2126		Navy/Multifunctional Information Distribution System	(Shared) (Sunk)
Navy	1319	07	0205604N	
	<b>Project</b>		<b>Name</b>	
	3020		Navy Tactical Data Links/MIDS	(Shared)
Navy	1319	05	0604270N	
	<b>Project</b>		<b>Name</b>	
	E0556		Navy EA-6B Integration/EA-6B	(Shared) (Sunk)
	E2781		Navy EA-6B Integration/EA-6B	(Shared) (Sunk)
Navy	1319	05	0604280N	
	<b>Project</b>		<b>Name</b>	
	3020		Joint Tactical Radio System (JTRS)/MIDS JTRS	(Shared) (Sunk)
	3073		Joint Tactical Radio System (JTRS)/AMF JTRS	(Shared) (Sunk)
Army	2040	05	0603713A	
	<b>Project</b>		<b>Name</b>	
	D370		Army MIDS/Army MIDS	(Shared) (Sunk)
Army	2040	05	0604280A	
	<b>Project</b>		<b>Name</b>	
	162		Joint Tactical Radio / Network Enterprise Domain (NED)	(Shared) (Sunk)
Air Force	3600	05	0207130F	
	<b>Project</b>		<b>Name</b>	
	F15		Air Force MIDS/F-15C/D	(Shared) (Sunk)
Air Force	3600	05	0207133F	
	<b>Project</b>		<b>Name</b>	
	672671		Air Force MIDS/F-16	(Shared) (Sunk)
Air Force	3600	05	0207134F	
	<b>Project</b>		<b>Name</b>	
	674703		Air Force MIDS/F-15E	(Shared) (Sunk)
Air Force	3600	05	0604240F	
	<b>Project</b>		<b>Name</b>	
	11B002		Air Force MIDS	(Shared) (Sunk)
Air Force	3600	05	0604280F	
	<b>Project</b>		<b>Name</b>	

	655068		Joint Tactical Radio System (JTRS)	(Shared)	(Sunk)
Defense-Wide	0400	05	0603883C		
	<b>Project</b>		<b>Name</b>		
	0010		DOD	(Shared)	(Sunk)
Defense-Wide	0400	05	0604771D		
	<b>Project</b>		<b>Name</b>		
	P771		OSD, DA/JTRS	(Shared)	(Sunk)
	P773		OSD, DA/Multifunctional Information Distribution System	(Shared)	(Sunk)

**Procurement**

	Appn	BA	PE		
Navy	1506	01	0204136N		
	<b>Line Item</b>		<b>Name</b>		
	0145		F-18 Series	(Shared)	
Navy	1506	05	0204154N		
	<b>Line Item</b>		<b>Name</b>		
	0511		EW Development: EA-6B	(Shared)	
Navy	1506	05	0204136N		
	<b>Line Item</b>		<b>Name</b>		
	0525		F/A-18	(Shared)	(Sunk)
Navy	1611	02	0204112N		
	<b>Line Item</b>		<b>Name</b>		
	2001		Navy	(Shared)	(Sunk)
	2086		Multi-Purpose CVNs	(Shared)	(Sunk)
Navy	1611	02	0204222N		
	<b>Line Item</b>		<b>Name</b>		
	2122		DDG-51	(Shared)	(Sunk)
Navy	1611	02	0204230N		
	<b>Line Item</b>		<b>Name</b>		
	2127		Navy	(Shared)	(Sunk)
Navy	1611	03	0204411N		
	<b>Line Item</b>		<b>Name</b>		
	3035		Amphibious Assault Ships	(Shared)	(Sunk)
	3036		LPD-17	(Shared)	(Sunk)
Navy	1810	02	0205604N		
	<b>Line Item</b>		<b>Name</b>		
	2614		Advanced Tactical Data Link System	(Shared)	(Sunk)
Army	2035	02	0214400A		

	<b>Line Item</b>		<b>Name</b>		
	B22603		Radio Terminal Set, MIDS-LVT(2)		
Air Force	3010	05			
	<b>Line Item</b>		<b>Name</b>		
	B00200		ABL	(Shared)	
Air Force	3010	05	0207130F		
	<b>Line Item</b>		<b>Name</b>		
	F01500		F-15	(Shared)	(Sunk)
Air Force	3010	05			
	<b>Line Item</b>		<b>Name</b>		
	F01600		F-16	(Shared)	(Sunk)
Air Force	3010	05	0207423F		
	<b>Line Item</b>		<b>Name</b>		
	MN9860		Joint Tactical Radio System	(Shared)	
Air Force	3080	02			
	<b>Line Item</b>		<b>Name</b>		
	F01600		F-16	(Shared)	(Sunk)
Defense-Wide	0300	02			
	<b>Line Item</b>		<b>Name</b>		
	10		DOD	(Shared)	(Sunk)
Defense-Wide	0300	02	0208865C		
	<b>Line Item</b>		<b>Name</b>		
	2257		DA, Patriot	(Shared)	(Sunk)
Defense-Wide	0300	02	0208861C		
	<b>Line Item</b>		<b>Name</b>		
	2260		DA, THAAD	(Shared)	(Sunk)
Defense-Wide	0300	02			
	<b>Line Item</b>		<b>Name</b>		
	30		DOD	(Shared)	(Sunk)

## Cost and Funding

### Cost Summary

#### Total Acquisition Cost and Quantity

Appropriation	BY2003 \$M			BY2003 \$M	TY \$M		
	SAR Baseline Prod Est	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Prod Est	Current APB Production Objective	Current Estimate
RDT&E	869.4	1637.5	1801.3	1634.4	825.8	1750.6	1743.3
Procurement	955.4	1393.5	1532.9	1477.0	993.1	1585.6	1696.5
Flyaway	--	--	--	1278.5	--	--	1473.9
Recurring	--	--	--	1205.9	--	--	1402.5
Non Recurring	--	--	--	72.6	--	--	71.4
Support	--	--	--	198.5	--	--	222.6
Other Support	--	--	--	39.8	--	--	44.6
Initial Spares	--	--	--	158.7	--	--	178.0
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	1824.8	3031.0	N/A	3111.4	1818.9	3336.2	3439.8

Confidence Level for Current APB Cost 47% -

The MIDS cost model is built using Microsoft Excel 2010. Total Life Cycle Cost Estimate (LCCE) for MIDS is at the 47% confidence level on the generated Sigmoid (S)-Curve. The generated point estimate is based on the developed Cost Estimating Relationships (CERs) and inputted sunk costs rather than an estimate at a chosen confidence level. MIDS has incorporated the actual costs of our most recent development of MIDS Joint Tactical Radio System (MIDS JTRS) Phase 2B to build in more confidence and validate the confidence level.

RDT&E costs include the MIDS Low Volume Terminal (MIDS-LVT) and MIDS Joint Tactical Radio System (MIDS JTRS) terminal development, terminal acquisition, integration and test on the United States Navy platforms for all current MIDS Program Management Office enhancement efforts.

Procurement costs are for MIDS-LVT and MIDS JTRS terminals purchased by the platforms.

The costs of platform installation and platform kits, and United States Air Force and United States Army platform integration and testing of MIDS-LVT and MIDS JTRS are to be included in the respective budgets and baseline agreements of the various platforms implementing MIDS.



Quantity	SAR Baseline Prod Est	Current APB Production	Current Estimate
RDT&E	143	488	537
Procurement	2821	5745	5756
Total	2964	6233	6293

The unit of measure is terminals.

Procurement quantities include MIDS terminals for United States Navy, United States Air Force, and United States Army platforms. The current estimate includes MIDS Joint Tactical Radio System (MIDS JTRS) procurement quantities for the Phase 2B Core Terminals, Four Net Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4), and Tactical Targeting Network Technology (TTNT). The current estimate does not include procurement quantities for MIDS Low Volume Terminal (MIDS-LVT) Block Upgrade 2 (BU2).

Procurement budgets include funding to upgrade terminals, e.g. make a Core terminal CMN-4 capable, CMN-4 to TTNT, and MIDS-LVT to BU2. However, these terminals are not included in future quantity counts as they have already been accounted for when they were initially procured.

## Cost and Funding

### Funding Summary

#### Appropriation and Quantity Summary FY2015 President's Budget / December 2013 SAR (TY\$ M)

Appropriation	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
RDT&E	1444.4	116.4	67.2	63.8	30.3	10.5	10.7	0.0	1743.3
Procurement	1273.5	33.7	29.4	63.9	98.2	125.6	72.2	0.0	1696.5
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2015 Total	2717.9	150.1	96.6	127.7	128.5	136.1	82.9	0.0	3439.8
PB 2014 Total	2697.7	143.2	111.0	132.7	157.9	93.7	0.0	0.0	3336.2
Delta	20.2	6.9	-14.4	-5.0	-29.4	42.4	82.9	0.0	103.6

Quantity	Undistributed	Prior	FY2014	FY2015	FY2016	FY2017	FY2018	FY2019	To Complete	Total
Development	537	0	0	0	0	0	0	0	0	537
Production	0	4629	121	82	165	267	321	171	0	5756
PB 2015 Total	537	4629	121	82	165	267	321	171	0	6293
PB 2014 Total	488	4602	90	112	218	447	276	0	0	6233
Delta	49	27	31	-30	-53	-180	45	171	0	60

## Cost and Funding

### Annual Funding By Appropriation

#### Annual Funding TY\$

#### 0400 | RDT&E | Research, Development, Test, and Evaluation, Defense-Wide

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
1990	--	--	--	--	--	--	9.0
1991	--	--	--	--	--	--	5.0
1992	--	--	--	--	--	--	16.5
1993	--	--	--	--	--	--	23.9
1994	--	--	--	--	--	--	23.3
1995	--	--	--	--	--	--	49.6
1996	--	--	--	--	--	--	42.7
1997	--	--	--	--	--	--	36.9
1998	--	--	--	--	--	--	45.2
1999	--	--	--	--	--	--	27.9
2000	--	--	--	--	--	--	39.0
2001	--	--	--	--	--	--	12.0
2002	--	--	--	--	--	--	13.1
2003	--	--	--	--	--	--	7.7
2004	--	--	--	--	--	--	7.0
2005	--	--	--	--	--	--	9.6
2006	--	--	--	--	--	--	1.0
2007	--	--	--	--	--	--	2.0
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	0.8
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	0.2
2012	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	0.3
<b>Subtotal</b>	<b>70</b>	--	--	--	--	--	<b>372.7</b>

## Annual Funding BY\$

## 0400 | RDT&amp;E | Research, Development, Test, and Evaluation, Defense-Wide

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2003 \$M	Non End Item Recurring Flyaway BY 2003 \$M	Non Recurring Flyaway BY 2003 \$M	Total Flyaway BY 2003 \$M	Total Support BY 2003 \$M	Total Program BY 2003 \$M
1990	--	--	--	--	--	--	11.1
1991	--	--	--	--	--	--	5.9
1992	--	--	--	--	--	--	19.1
1993	--	--	--	--	--	--	27.2
1994	--	--	--	--	--	--	26.0
1995	--	--	--	--	--	--	54.3
1996	--	--	--	--	--	--	45.9
1997	--	--	--	--	--	--	39.2
1998	--	--	--	--	--	--	47.6
1999	--	--	--	--	--	--	29.0
2000	--	--	--	--	--	--	40.0
2001	--	--	--	--	--	--	12.1
2002	--	--	--	--	--	--	13.1
2003	--	--	--	--	--	--	7.6
2004	--	--	--	--	--	--	6.7
2005	--	--	--	--	--	--	9.0
2006	--	--	--	--	--	--	0.9
2007	--	--	--	--	--	--	1.8
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	0.7
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	0.2
2012	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	0.2
<b>Subtotal</b>	<b>70</b>	--	--	--	--	--	<b>397.6</b>

## Annual Funding TY\$

## 1319 | RDT&amp;E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
1990	--	--	--	--	--	--	2.9
1991	--	--	--	--	--	--	4.7
1992	--	--	--	--	--	--	10.0
1993	--	--	--	--	--	--	12.4
1994	--	--	--	--	--	--	23.0
1995	--	--	--	--	--	--	18.4
1996	--	--	--	--	--	--	31.0
1997	--	--	--	--	--	--	28.2
1998	--	--	--	--	--	--	39.8
1999	--	--	--	--	--	--	45.4
2000	--	--	--	--	--	--	62.3
2001	--	--	--	--	--	--	37.7
2002	--	--	--	--	--	--	26.2
2003	--	--	--	--	--	--	16.8
2004	--	--	--	--	--	--	22.4
2005	--	--	--	--	--	--	27.6
2006	--	--	--	--	--	--	98.2
2007	--	--	--	--	--	--	162.5
2008	--	--	--	--	--	--	77.2
2009	--	--	--	--	--	--	26.6
2010	--	--	--	--	--	--	16.2
2011	--	--	--	--	--	--	24.2
2012	--	--	--	--	--	--	97.3
2013	--	--	--	--	--	--	47.2
2014	--	--	--	--	--	--	116.4
2015	--	--	--	--	--	--	67.2
2016	--	--	--	--	--	--	63.8
2017	--	--	--	--	--	--	30.3
2018	--	--	--	--	--	--	10.5

2019	--	--	--	--	--	--	10.7
<b>Subtotal</b>	<b>184</b>	--	--	--	--	--	<b>1257.1</b>

**Annual Funding BY\$****1319 | RDT&E | Research, Development, Test, and Evaluation, Navy**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non Recurring Flyaway BY 2003 \$M</b>	<b>Total Flyaway BY 2003 \$M</b>	<b>Total Support BY 2003 \$M</b>	<b>Total Program BY 2003 \$M</b>
1990	--	--	--	--	--	--	3.6
1991	--	--	--	--	--	--	5.6
1992	--	--	--	--	--	--	11.6
1993	--	--	--	--	--	--	14.1
1994	--	--	--	--	--	--	25.6
1995	--	--	--	--	--	--	20.1
1996	--	--	--	--	--	--	33.3
1997	--	--	--	--	--	--	30.0
1998	--	--	--	--	--	--	41.9
1999	--	--	--	--	--	--	47.3
2000	--	--	--	--	--	--	63.9
2001	--	--	--	--	--	--	38.2
2002	--	--	--	--	--	--	26.3
2003	--	--	--	--	--	--	16.6
2004	--	--	--	--	--	--	21.5
2005	--	--	--	--	--	--	25.8
2006	--	--	--	--	--	--	89.2
2007	--	--	--	--	--	--	144.0
2008	--	--	--	--	--	--	67.2
2009	--	--	--	--	--	--	22.9
2010	--	--	--	--	--	--	13.7
2011	--	--	--	--	--	--	20.0
2012	--	--	--	--	--	--	79.0
2013	--	--	--	--	--	--	37.7
2014	--	--	--	--	--	--	91.5
2015	--	--	--	--	--	--	51.9
2016	--	--	--	--	--	--	48.3
2017	--	--	--	--	--	--	22.5
2018	--	--	--	--	--	--	7.6

2019	--	--	--	--	--	--	7.6
<b>Subtotal</b>	<b>184</b>	--	--	--	--	--	<b>1128.5</b>



## Annual Funding TY\$

## 2040 | RDT&amp;E | Research, Development, Test, and Evaluation, Army

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
1997	--	--	--	--	--	--	0.5
1998	--	--	--	--	--	--	2.4
1999	--	--	--	--	--	--	5.2
2000	--	--	--	--	--	--	--
2001	--	--	--	--	--	--	0.1
2002	--	--	--	--	--	--	3.1
2003	--	--	--	--	--	--	0.6
2004	--	--	--	--	--	--	3.1
2005	--	--	--	--	--	--	4.4
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	1.5
2008	--	--	--	--	--	--	1.9
2009	--	--	--	--	--	--	3.3
2010	--	--	--	--	--	--	0.2
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	0.2
2013	--	--	--	--	--	--	0.4
<b>Subtotal</b>	<b>77</b>	--	--	--	--	--	<b>26.9</b>

## Annual Funding BY\$

## 2040 | RDT&amp;E | Research, Development, Test, and Evaluation, Army

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2003 \$M	Non End Item Recurring Flyaway BY 2003 \$M	Non Recurring Flyaway BY 2003 \$M	Total Flyaway BY 2003 \$M	Total Support BY 2003 \$M	Total Program BY 2003 \$M
1997	--	--	--	--	--	--	0.5
1998	--	--	--	--	--	--	2.5
1999	--	--	--	--	--	--	5.4
2000	--	--	--	--	--	--	--
2001	--	--	--	--	--	--	0.1
2002	--	--	--	--	--	--	3.1
2003	--	--	--	--	--	--	0.6
2004	--	--	--	--	--	--	3.0
2005	--	--	--	--	--	--	4.1
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	1.3
2008	--	--	--	--	--	--	1.6
2009	--	--	--	--	--	--	2.8
2010	--	--	--	--	--	--	0.2
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	0.2
2013	--	--	--	--	--	--	0.3
<b>Subtotal</b>	<b>77</b>	--	--	--	--	--	<b>25.7</b>

## Annual Funding TY\$

## 3600 | RDT&amp;E | Research, Development, Test, and Evaluation, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
1997	--	--	--	--	--	--	3.9
1998	--	--	--	--	--	--	8.0
1999	--	--	--	--	--	--	0.2
2000	--	--	--	--	--	--	6.3
2001	--	--	--	--	--	--	3.9
2002	--	--	--	--	--	--	2.9
2003	--	--	--	--	--	--	4.3
2004	--	--	--	--	--	--	14.3
2005	--	--	--	--	--	--	19.6
2006	--	--	--	--	--	--	4.5
2007	--	--	--	--	--	--	2.2
2008	--	--	--	--	--	--	1.4
2009	--	--	--	--	--	--	5.7
2010	--	--	--	--	--	--	1.5
2011	--	--	--	--	--	--	2.4
2012	--	--	--	--	--	--	2.2
2013	--	--	--	--	--	--	3.3
<b>Subtotal</b>	<b>206</b>	--	--	--	--	--	<b>86.6</b>

## Annual Funding BY\$

## 3600 | RDT&amp;E | Research, Development, Test, and Evaluation, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2003 \$M	Non End Item Recurring Flyaway BY 2003 \$M	Non Recurring Flyaway BY 2003 \$M	Total Flyaway BY 2003 \$M	Total Support BY 2003 \$M	Total Program BY 2003 \$M
1997	--	--	--	--	--	--	4.1
1998	--	--	--	--	--	--	8.4
1999	--	--	--	--	--	--	0.2
2000	--	--	--	--	--	--	6.5
2001	--	--	--	--	--	--	4.0
2002	--	--	--	--	--	--	2.9
2003	--	--	--	--	--	--	4.3
2004	--	--	--	--	--	--	13.8
2005	--	--	--	--	--	--	18.4
2006	--	--	--	--	--	--	4.1
2007	--	--	--	--	--	--	2.0
2008	--	--	--	--	--	--	1.2
2009	--	--	--	--	--	--	4.9
2010	--	--	--	--	--	--	1.3
2011	--	--	--	--	--	--	2.0
2012	--	--	--	--	--	--	1.8
2013	--	--	--	--	--	--	2.7
<b>Subtotal</b>	<b>206</b>	--	--	--	--	--	<b>82.6</b>

**Annual Funding TY\$**  
**0300 | Procurement | Procurement, Defense-Wide**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway TY \$M</b>	<b>Non End Item Recurring Flyaway TY \$M</b>	<b>Non Recurring Flyaway TY \$M</b>	<b>Total Flyaway TY \$M</b>	<b>Total Support TY \$M</b>	<b>Total Program TY \$M</b>
1999	11	2.7	0.1	4.5	7.3	0.6	7.9
2000	--	--	--	--	--	--	--
2001	19	4.8	0.1	--	4.9	1.0	5.9
2002	--	--	--	--	--	0.3	0.3
2003	10	2.5	--	--	2.5	0.1	2.6
2004	--	--	--	--	--	--	--
2005	4	1.0	--	--	1.0	--	1.0
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	7	1.5	--	--	1.5	--	1.5
2011	5	1.1	--	--	1.1	--	1.1
<b>Subtotal</b>	<b>56</b>	<b>13.6</b>	<b>0.2</b>	<b>4.5</b>	<b>18.3</b>	<b>2.0</b>	<b>20.3</b>

**Annual Funding BY\$****0300 | Procurement | Procurement, Defense-Wide**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non Recurring Flyaway BY 2003 \$M</b>	<b>Total Flyaway BY 2003 \$M</b>	<b>Total Support BY 2003 \$M</b>	<b>Total Program BY 2003 \$M</b>
1999	11	2.8	0.1	4.7	7.6	0.6	8.2
2000	--	--	--	--	--	--	--
2001	19	4.8	0.1	--	4.9	1.0	5.9
2002	--	--	--	--	--	0.3	0.3
2003	10	2.4	--	--	2.4	0.1	2.5
2004	--	--	--	--	--	--	--
2005	4	0.9	--	--	0.9	--	0.9
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	7	1.3	--	--	1.3	--	1.3
2011	5	0.9	--	--	0.9	--	0.9
<b>Subtotal</b>	<b>56</b>	<b>13.1</b>	<b>0.2</b>	<b>4.7</b>	<b>18.0</b>	<b>2.0</b>	<b>20.0</b>

This appropriation provides for the procurement of the Army unique MIDS Low Volume Terminal (2) variant for the Patriot Air Defense System.

**Annual Funding TY\$**  
**1506 | Procurement | Aircraft Procurement, Navy**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway TY \$M</b>	<b>Non End Item Recurring Flyaway TY \$M</b>	<b>Non Recurring Flyaway TY \$M</b>	<b>Total Flyaway TY \$M</b>	<b>Total Support TY \$M</b>	<b>Total Program TY \$M</b>
1999	16	5.9	1.3	0.5	7.7	0.3	8.0
2000	58	15.1	1.8	35.5	52.4	8.3	60.7
2001	64	20.2	3.7	0.2	24.1	2.5	26.6
2002	103	23.9	0.5	--	24.4	10.6	35.0
2003	116	22.7	3.6	--	26.3	10.4	36.7
2004	138	27.8	3.2	--	31.0	8.4	39.4
2005	130	25.7	2.9	--	28.6	13.8	42.4
2006	169	31.0	2.9	0.1	34.0	1.8	35.8
2007	169	35.2	3.0	--	38.2	5.2	43.4
2008	202	40.4	2.9	--	43.3	9.4	52.7
2009	127	28.5	2.9	--	31.4	1.0	32.4
2010	174	29.9	0.2	--	30.1	3.9	34.0
2011	147	29.1	0.2	--	29.3	3.9	33.2
2012	128	24.6	0.2	--	24.8	14.5	39.3
2013	170	28.9	0.2	--	29.1	20.4	49.5
2014	94	23.6	0.2	--	23.8	1.9	25.7
2015	39	7.2	0.2	--	7.4	0.2	7.6
2016	141	50.6	0.2	--	50.8	3.6	54.4
2017	243	83.7	0.2	--	83.9	4.8	88.7
2018	320	108.4	0.2	--	108.6	7.5	116.1
2019	170	59.0	0.2	--	59.2	4.5	63.7
<b>Subtotal</b>	<b>2918</b>	<b>721.4</b>	<b>30.7</b>	<b>36.3</b>	<b>788.4</b>	<b>136.9</b>	<b>925.3</b>

**Annual Funding BY\$**  
**1506 | Procurement | Aircraft Procurement, Navy**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non Recurring Flyaway BY 2003 \$M</b>	<b>Total Flyaway BY 2003 \$M</b>	<b>Total Support BY 2003 \$M</b>	<b>Total Program BY 2003 \$M</b>
1999	16	6.1	1.3	0.5	7.9	0.3	8.2
2000	58	15.3	1.8	36.1	53.2	8.4	61.6
2001	64	20.2	3.8	0.2	24.2	2.5	26.7
2002	103	23.7	0.5	--	24.2	10.4	34.6
2003	116	22.0	3.5	--	25.5	10.1	35.6
2004	138	26.3	3.0	--	29.3	8.0	37.3
2005	130	23.6	2.7	--	26.3	12.7	39.0
2006	169	27.7	2.6	0.1	30.4	1.6	32.0
2007	169	30.8	2.6	--	33.4	4.5	37.9
2008	202	34.8	2.5	--	37.3	8.1	45.4
2009	127	24.2	2.5	--	26.7	0.8	27.5
2010	174	24.9	0.2	--	25.1	3.2	28.3
2011	147	23.7	0.2	--	23.9	3.1	27.0
2012	128	19.7	0.2	--	19.9	11.6	31.5
2013	170	22.8	0.2	--	23.0	16.0	39.0
2014	94	18.3	0.2	--	18.5	1.4	19.9
2015	39	5.5	0.1	--	5.6	0.2	5.8
2016	141	37.7	0.1	--	37.8	2.7	40.5
2017	243	61.2	0.1	--	61.3	3.5	64.8
2018	320	77.7	0.1	--	77.8	5.4	83.2
2019	170	41.4	0.1	--	41.5	3.2	44.7
<b>Subtotal</b>	<b>2918</b>	<b>587.6</b>	<b>28.3</b>	<b>36.9</b>	<b>652.8</b>	<b>117.7</b>	<b>770.5</b>

This appropriation identifies the MIDS Low Volume Terminal and MIDS Joint Tactical Radio System core terminals that are planned for the F/A-18C/D/E/F, E/A-18G, E-2D, P-3, P-8, KC-130, EP-3E, MH-60R/S and the EA-6B.



**Annual Funding TY\$**  
**1611 | Procurement | Shipbuilding and Conversion, Navy**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway TY \$M</b>	<b>Non End Item Recurring Flyaway TY \$M</b>	<b>Non Recurring Flyaway TY \$M</b>	<b>Total Flyaway TY \$M</b>	<b>Total Support TY \$M</b>	<b>Total Program TY \$M</b>
2001	1	0.4	--	--	0.4	--	0.4
2002	2	0.9	--	--	0.9	--	0.9
2003	5	2.1	--	--	2.1	--	2.1
2004	5	0.9	--	--	0.9	--	0.9
2005	3	0.7	--	--	0.7	--	0.7
2006	4	0.7	--	--	0.7	--	0.7
2007	--	--	--	--	--	--	--
2008	2	0.4	--	--	0.4	--	0.4
2009	2	0.4	--	--	0.4	--	0.4
2010	4	0.7	--	--	0.7	--	0.7
2011	8	1.4	--	--	1.4	--	1.4
2012	7	1.3	--	--	1.3	--	1.3
2013	4	0.7	--	--	0.7	--	0.7
<b>Subtotal</b>	<b>47</b>	<b>10.6</b>	<b>--</b>	<b>--</b>	<b>10.6</b>	<b>--</b>	<b>10.6</b>

**Annual Funding BY\$**  
**1611 | Procurement | Shipbuilding and Conversion, Navy**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non Recurring Flyaway BY 2003 \$M</b>	<b>Total Flyaway BY 2003 \$M</b>	<b>Total Support BY 2003 \$M</b>	<b>Total Program BY 2003 \$M</b>
2001	1	0.4	--	--	0.4	--	0.4
2002	2	0.9	--	--	0.9	--	0.9
2003	5	1.9	--	--	1.9	--	1.9
2004	5	0.8	--	--	0.8	--	0.8
2005	3	0.6	--	--	0.6	--	0.6
2006	4	0.6	--	--	0.6	--	0.6
2007	--	--	--	--	--	--	--
2008	2	0.3	--	--	0.3	--	0.3
2009	2	0.3	--	--	0.3	--	0.3
2010	4	0.5	--	--	0.5	--	0.5
2011	8	1.0	--	--	1.0	--	1.0
2012	7	0.9	--	--	0.9	--	0.9
2013	4	0.5	--	--	0.5	--	0.5
<b>Subtotal</b>	<b>47</b>	<b>8.7</b>	<b>--</b>	<b>--</b>	<b>8.7</b>	<b>--</b>	<b>8.7</b>

This appropriation identifies the MIDS on Ship variant for new construction surface ships.

**Annual Funding TY\$**  
**1810 | Procurement | Other Procurement, Navy**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway TY \$M</b>	<b>Non End Item Recurring Flyaway TY \$M</b>	<b>Non Recurring Flyaway TY \$M</b>	<b>Total Flyaway TY \$M</b>	<b>Total Support TY \$M</b>	<b>Total Program TY \$M</b>
1999	3	1.1	--	--	1.1	--	1.1
2000	--	--	--	--	--	--	--
2001	--	--	--	--	--	--	--
2002	2	0.5	--	--	0.5	--	0.5
2003	6	1.7	--	--	1.7	--	1.7
2004	8	1.8	--	--	1.8	--	1.8
2005	--	--	--	--	--	0.1	0.1
2006	8	1.9	--	0.1	2.0	--	2.0
2007	17	3.8	--	--	3.8	0.6	4.4
2008	26	6.6	--	--	6.6	--	6.6
2009	6	1.2	--	--	1.2	--	1.2
2010	12	2.5	--	--	2.5	--	2.5
2011	44	9.8	--	--	9.8	--	9.8
2012	2	0.4	--	--	0.4	--	0.4
2013	4	0.8	--	--	0.8	--	0.8
<b>Subtotal</b>	<b>138</b>	<b>32.1</b>	<b>--</b>	<b>0.1</b>	<b>32.2</b>	<b>0.7</b>	<b>32.9</b>

**Annual Funding BY\$**  
**1810 | Procurement | Other Procurement, Navy**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non Recurring Flyaway BY 2003 \$M</b>	<b>Total Flyaway BY 2003 \$M</b>	<b>Total Support BY 2003 \$M</b>	<b>Total Program BY 2003 \$M</b>
1999	3	1.1	--	--	1.1	--	1.1
2000	--	--	--	--	--	--	--
2001	--	--	--	--	--	--	--
2002	2	0.5	--	--	0.5	--	0.5
2003	6	1.7	--	--	1.7	--	1.7
2004	8	1.7	--	--	1.7	--	1.7
2005	--	--	--	--	--	0.1	0.1
2006	8	1.7	--	0.1	1.8	--	1.8
2007	17	3.3	--	--	3.3	0.6	3.9
2008	26	5.7	--	--	5.7	--	5.7
2009	6	1.0	--	--	1.0	--	1.0
2010	12	2.1	--	--	2.1	--	2.1
2011	44	8.1	--	--	8.1	--	8.1
2012	2	0.3	--	--	0.3	--	0.3
2013	4	0.6	--	--	0.6	--	0.6
<b>Subtotal</b>	<b>138</b>	<b>27.8</b>	<b>--</b>	<b>0.1</b>	<b>27.9</b>	<b>0.7</b>	<b>28.6</b>

This appropriation identifies the MIDS on Ship variant for Amphibious Assault Ships and shore stations.

**Annual Funding TY\$**  
**2035 | Procurement | Other Procurement, Army**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway TY \$M</b>	<b>Non End Item Recurring Flyaway TY \$M</b>	<b>Non Recurring Flyaway TY \$M</b>	<b>Total Flyaway TY \$M</b>	<b>Total Support TY \$M</b>	<b>Total Program TY \$M</b>
2001	1	0.3	--	--	0.3	--	0.3
2002	--	--	--	--	--	--	--
2003	4	1.0	--	--	1.0	0.4	1.4
2004	5	1.3	--	--	1.3	0.4	1.7
2005	62	15.7	--	--	15.7	1.2	16.9
2006	67	16.3	--	--	16.3	0.1	16.4
2007	40	9.4	--	--	9.4	1.1	10.5
2008	144	33.5	--	--	33.5	--	33.5
2009	29	6.4	--	--	6.4	2.2	8.6
2010	30	7.0	--	--	7.0	1.6	8.6
2011	22	4.8	--	--	4.8	1.0	5.8
2012	9	2.1	--	--	2.1	0.5	2.6
2013	5	7.8	--	--	7.8	--	7.8
2014	1	1.4	--	--	1.4	--	1.4
2015	22	17.1	--	--	17.1	--	17.1
2016	24	9.5	--	--	9.5	--	9.5
2017	24	9.5	--	--	9.5	--	9.5
2018	1	9.5	--	--	9.5	--	9.5
2019	1	8.5	--	--	8.5	--	8.5
<b>Subtotal</b>	<b>491</b>	<b>161.1</b>	<b>--</b>	<b>--</b>	<b>161.1</b>	<b>8.5</b>	<b>169.6</b>

**Annual Funding BY\$**  
**2035 | Procurement | Other Procurement, Army**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non Recurring Flyaway BY 2003 \$M</b>	<b>Total Flyaway BY 2003 \$M</b>	<b>Total Support BY 2003 \$M</b>	<b>Total Program BY 2003 \$M</b>
2001	1	0.3	--	--	0.3	--	0.3
2002	--	--	--	--	--	--	--
2003	4	1.0	--	--	1.0	0.4	1.4
2004	5	1.2	--	--	1.2	0.4	1.6
2005	62	14.5	--	--	14.5	1.1	15.6
2006	67	14.7	--	--	14.7	0.1	14.8
2007	40	8.3	--	--	8.3	0.9	9.2
2008	144	29.0	--	--	29.0	--	29.0
2009	29	5.5	--	--	5.5	1.8	7.3
2010	30	5.9	--	--	5.9	1.3	7.2
2011	22	4.0	--	--	4.0	0.8	4.8
2012	9	1.7	--	--	1.7	0.4	2.1
2013	5	6.2	--	--	6.2	--	6.2
2014	1	1.1	--	--	1.1	--	1.1
2015	22	13.0	--	--	13.0	--	13.0
2016	24	7.1	--	--	7.1	--	7.1
2017	24	7.0	--	--	7.0	--	7.0
2018	1	6.8	--	--	6.8	--	6.8
2019	1	6.0	--	--	6.0	--	6.0
<b>Subtotal</b>	<b>491</b>	<b>133.3</b>	<b>--</b>	<b>--</b>	<b>133.3</b>	<b>7.2</b>	<b>140.5</b>

This appropriation provides for the procurement of the Army unique MIDS Low Volume Terminal (2) variant.

**Annual Funding TY\$**  
**3010 | Procurement | Aircraft Procurement, Air Force**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway TY \$M</b>	<b>Non End Item Recurring Flyaway TY \$M</b>	<b>Non Recurring Flyaway TY \$M</b>	<b>Total Flyaway TY \$M</b>	<b>Total Support TY \$M</b>	<b>Total Program TY \$M</b>
2001	52	8.5	--	4.4	12.9	6.9	19.8
2002	150	32.5	--	--	32.5	10.2	42.7
2003	180	36.8	--	--	36.8	10.5	47.3
2004	137	24.3	--	--	24.3	13.8	38.1
2005	164	35.5	--	0.1	35.6	4.3	39.9
2006	129	25.1	--	--	25.1	1.7	26.8
2007	152	31.1	--	--	31.1	3.4	34.5
2008	52	14.7	--	--	14.7	4.4	19.1
2009	15	5.0	--	--	5.0	1.6	6.6
2010	51	13.0	--	--	13.0	2.4	15.4
2011	34	9.5	--	--	9.5	0.2	9.7
2012	83	25.8	--	--	25.8	0.4	26.2
2013	35	9.3	--	--	9.3	0.3	9.6
2014	26	6.3	--	--	6.3	0.3	6.6
2015	21	3.8	--	--	3.8	0.9	4.7
<b>Subtotal</b>	<b>1281</b>	<b>281.2</b>	<b>--</b>	<b>4.5</b>	<b>285.7</b>	<b>61.3</b>	<b>347.0</b>

**Annual Funding BY\$**  
**3010 | Procurement | Aircraft Procurement, Air Force**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non Recurring Flyaway BY 2003 \$M</b>	<b>Total Flyaway BY 2003 \$M</b>	<b>Total Support BY 2003 \$M</b>	<b>Total Program BY 2003 \$M</b>
2001	52	8.5	--	4.4	12.9	7.0	19.9
2002	150	32.2	--	--	32.2	10.1	42.3
2003	180	35.9	--	--	35.9	10.2	46.1
2004	137	23.1	--	--	23.1	13.1	36.2
2005	164	32.8	--	0.1	32.9	3.9	36.8
2006	129	22.6	--	--	22.6	1.5	24.1
2007	152	27.2	--	--	27.2	3.0	30.2
2008	52	12.7	--	--	12.7	3.8	16.5
2009	15	4.2	--	--	4.2	1.4	5.6
2010	51	10.8	--	--	10.8	2.0	12.8
2011	34	7.8	--	--	7.8	0.1	7.9
2012	83	20.7	--	--	20.7	0.4	21.1
2013	35	7.3	--	--	7.3	0.2	7.5
2014	26	4.9	--	--	4.9	0.2	5.1
2015	21	2.9	--	--	2.9	0.7	3.6
<b>Subtotal</b>	<b>1281</b>	<b>253.6</b>	<b>--</b>	<b>4.5</b>	<b>258.1</b>	<b>57.6</b>	<b>315.7</b>

This appropriation identifies the MIDS Low Volume Terminal and MIDS Joint Tactical Radio System core terminals that are planned for the F-16, B-2, AC-130, RC-135, EC130E/H, B-1, E-8C, the Airborne Laser and United States Air Force shore sites.



## Annual Funding TY\$

## 3080 | Procurement | Other Procurement, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway TY \$M	Non End Item Recurring Flyaway TY \$M	Non Recurring Flyaway TY \$M	Total Flyaway TY \$M	Total Support TY \$M	Total Program TY \$M
1996	6	3.0	--	--	3.0	--	3.0
1997	--	--	--	0.3	0.3	--	0.3
1998	77	18.5	--	15.2	33.7	1.0	34.7
1999	173	33.0	0.3	--	33.3	2.1	35.4
2000	294	49.8	0.7	0.5	51.0	3.8	54.8
2001	148	26.7	0.6	4.4	31.7	1.0	32.7
2002	97	18.6	--	5.6	24.2	--	24.2
2003	30	0.4	--	--	0.4	5.3	5.7
<b>Subtotal</b>	<b>825</b>	<b>150.0</b>	<b>1.6</b>	<b>26.0</b>	<b>177.6</b>	<b>13.2</b>	<b>190.8</b>

**Annual Funding BY\$****3080 | Procurement | Other Procurement, Air Force**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non End Item Recurring Flyaway BY 2003 \$M</b>	<b>Non Recurring Flyaway BY 2003 \$M</b>	<b>Total Flyaway BY 2003 \$M</b>	<b>Total Support BY 2003 \$M</b>	<b>Total Program BY 2003 \$M</b>
1996	6	3.2	--	--	3.2	--	3.2
1997	--	--	--	0.3	0.3	--	0.3
1998	77	19.2	--	15.8	35.0	1.0	36.0
1999	173	33.8	0.3	--	34.1	2.2	36.3
2000	294	50.3	0.7	0.5	51.5	3.9	55.4
2001	148	26.6	0.6	4.3	31.5	1.0	32.5
2002	97	18.2	--	5.5	23.7	--	23.7
2003	30	0.4	--	--	0.4	5.2	5.6
<b>Subtotal</b>	<b>825</b>	<b>151.7</b>	<b>1.6</b>	<b>26.4</b>	<b>179.7</b>	<b>13.3</b>	<b>193.0</b>

This appropriation identifies the MIDS Fighter Data Link (FDL) terminals for the F-15C/D/E that are being procured on a separate contract. The FY 1996 funding (TY 3.0\$M) reports the United States Air Force funds contributed to the qualification and build of six FDL terminals. Additional funds in excess of \$8M were contributed by the contractor, Data Link Solutions L.L.C., for completion of the full qualification program requirements.

**Cost Quantity Information****3080 | Procurement | Other Procurement, Air Force**

<b>Fiscal Year</b>	<b>Quantity</b>	<b>End Item Recurring Flyaway (Aligned with Quantity) BY 2003 \$M</b>
1996	6	3.2
1997	--	--
1998	77	19.3
1999	173	33.8
2000	294	50.3
2001	148	26.5
2002	97	18.2
2003	30	0.4
<b>Subtotal</b>	<b>825</b>	<b>151.7</b>

## Low Rate Initial Production

	<b>Initial LRIP Decision</b>	<b>Current Total LRIP</b>
<b>Approval Date</b>	5/11/2000	12/8/2003
<b>Approved Quantity</b>	70	544
<b>Reference</b>	Milestone II ADM	Milestone C ADM
<b>Start Year</b>	2000	2000
<b>End Year</b>	2001	2003

The Milestone Decision Authority authorized LRIP on May 11, 2000 for 70 MIDS Low Volume Terminal (MIDS-LVT). Three additional LRIP decisions were authorized for a cumulative total of 544 MIDS-LVT and MIDS-LVT(2) variants (about 25 percent of the then planned procurement of 2,145 terminals). Based on a Milestone C decision in 2003 for the MIDS program, Under Secretary of Defense (Acquisition, Training, and Logistics) General Counsel and senior staff changed the title of the 2009 Defense Acquisition Board decision for MIDS JTRS to Limited Production and Fielding. A follow-on decision for the MIDS JTRS variant was made for Full Production and Fielding, and not Full Rate Production. On December 23, 2009, an Acquisition Decision Memorandum (ADM) approved the award of the limited production of 41 MIDS JTRS variant terminals to support the F/A-18E/F production schedule and Joint Surveillance Target Attack Radar System integration and testing requirements. On January 31, 2011, an ADM approved an award of a second limited production for 42 MIDS JTRS variant terminals to support F/A-18E/F production, RC-135 Rivet Joint, EC-130H Compass Call, and other Service requirements.

## Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost \$M	Memo
Australia	8/5/2013	227	53.5	Total Costs are cumulative over multiple years and FMS cases (AT-D-QCI; AT-P-GOV; AT-P-LAB; AT-P-LCE; AT-P-LCK; AT-P-LCQ; AT-P-LDN; AT-P-LER; AT-P-LET; AT-P-SAF; AT-P-SCF; AT-P-SCI). Date of sale listed is the most current buy.
Japan	8/5/2013	102	24.3	Total Costs are cumulative over multiple years and FMS cases (JA-P-LTY; JA-P-LTD; JA-P-LTV; JA-P-LUD; JA-P-LVM; JA-P-LVY; JA-P-LUO; JA-P-LUP; JA-P-LVE; JA-P-LWC; JA-P-LWJ; JA-P-LWO; JA-P-LXB; JA-P-LXC; JA-P-LXD; JA-P-LXE; JA-P-LXF; JA-P-LXM; JA-P-LXN; JA-P-LXO; JA-P-LYC; JA-P-LYL). Date of sale listed is the most current buy.
Oman	8/5/2013	50	9.7	Date of sale listed is the most current buy on FMS case MU-D-SAB.
Poland	8/5/2013	76	16.6	Total Costs are cumulative over multiple years and FMS cases (PL-D-SAC; PL-P-LAM). Date of sale listed is the most current buy.
Saudi Arabia	8/5/2013	213	13.8	Total Costs are cumulative over multiple years and FMS cases (SR-D-QAB; SR-D-SAI). Date of sale listed is the most current buy. *Not all cost data is available. 165 terminals without pricing.*
Thailand	8/5/2013	17	3.2	Date of sale listed is the most current buy on FMS case TH-D-QCZ.
United Arab Emirates	8/5/2013	22	3.3	Total Costs are cumulative over multiple years and FMS cases (AE-P-LAA; AE-B-UAF; AE-B-ZUG). Date of sale listed is the most current buy.
Taiwan	6/4/2013	196	59.4	Total Costs are cumulative over multiple years and FMS cases (TW-P-GNU; TW-B-YYV; TW-P-GMK; TW-P-LEJ; TW-P-SEG; TW-P-GMG). Date of sale listed is the most current buy.
Jordan	11/30/2012	10	1.4	Date of sale listed is the most current buy on FMS case JO-P-LAZ.
Turkey	9/21/2012	314	61.1	Total Costs are cumulative over multiple years and FMS cases (TK-D-NCU; TK-P-LKT; TK-D-SMB). Date of sale listed is the most current buy.
Finland	8/9/2012	116	22.5	Total Costs are cumulative over multiple years and FMS cases (FI-P-LBC; FI-P-LBD; FI-P-LBH; FI-P-LBJ). Date of sale listed is the most current buy.
South Korea	8/9/2012	24	7.5	Total Costs are cumulative over multiple years and FMS cases (KS-P-BTV; KS-P-GOL; KS-P-LPN; KS-P-QDW). Date of sale listed is the most

Country	Date of Sale	Quantity	Unit Cost	Description
Canada	4/12/2012	125	28.5	current buy. Total Costs are cumulative over multiple years and FMS cases (CN-P-LHF; CN-P-LHS; CN-P-LIC; CN-P-LIQ; CN-P-LJC). Date of sale listed is the most current buy.
Hungary	9/16/2010	22	4.1	Date of sale listed is the most current buy on FMS case HU-P-LAD.
Pakistan	9/16/2010	68	16.1	Total Costs are cumulative over multiple years and FMS cases (PK-D-NAP; PK-D-SAF). Date of sale listed is the most current buy.
Morocco	5/14/2010	30	4.8	Date of sale listed is the most current buy on FMS case MO-D-SAY.
Singapore	4/22/2010	46	4.4	Total Costs are cumulative over multiple years and FMS cases (SN-D-SAA; SN-D-SAC). Date of sale listed is the most current buy.
Norway	6/23/2009	77	22.9	Total Costs are cumulative over multiple years and FMS cases (NO-D-OAF; NO-D-OAG; NO-P-LBE; NO-P-LBO). Date of sale listed is the most current buy.
Greece	12/22/2008	40	6.9	Total Costs are cumulative over multiple years and FMS cases (GR-B-XJU; GR-D-SNY). Date of sale listed is the most current buy.
Portugal	6/11/2008	44	8.1	Date of sale listed is the most current buy on FMS case PT-D-NAE.
Austria	5/12/2008	24		FMS total costs not releasable for Austria. AU-P-LAD.
Netherlands	12/19/2007	5	4.2	Total Costs are cumulative over multiple years and FMS cases (NE-P-LFT; NE-P-LGT). Date of sale listed is the most current buy.
Belgium	7/13/2007	82	17.7	Total Costs are cumulative over multiple years and FMS cases (BE-D-DZV; BE-D-QAT). Date of sale listed is the most current buy.
Switzerland	1/27/2007	55	11.9	Date of sale listed is the most current buy on FMS case SZ-P-LAC.
Sweden	8/28/2006	28	4.9	Date of sale listed is the most current buy on FMS case SW-P-LAO.
New Zealand	6/10/2005	3	0.7	Date of sale listed is the most current buy on FMS case NZ-P-LAJ.
Germany	2/20/2004	10	6.4	Date of sale listed is the most current buy on FMS case GY-P-LGI.
Denmark	5/16/2002	3	0.9	Date of sale listed is the most current buy on FMS case DE-D-OAB.

Above FMS cases, with the exception of Australia AT-P-SCI for MIDS Joint Tactical Radio System terminals, are for MIDS Low Volume Terminals (MIDS-LVT).

Direct Commercial Sales totaling 849 MIDS-LVT terminals have been implemented to date with Australia (2), Belgium (2), Denmark (68), Greece (4), Iceland (3), Japan (2), Korea (129), North Atlantic Treaty Organization (NATO) Air Command and Control System (ACCS) Management Agency (NACMA) (50), Netherlands (149), NATO

EuroFighter 2000 and Tornado Management Agency (36), Norway (31), Sweden (140), Turkey (6) and United Kingdom (227). (Cost information for direct commercial sales is not available nor is date of sale).

Other foreign sales for 41 MIDS-LVT terminals at a cost of 12.1\$M were implemented through February 2014 with the European Participating Air Force (3) and German competitive buys (38).

## **Nuclear Costs**

None

## Unit Cost

### Unit Cost Report

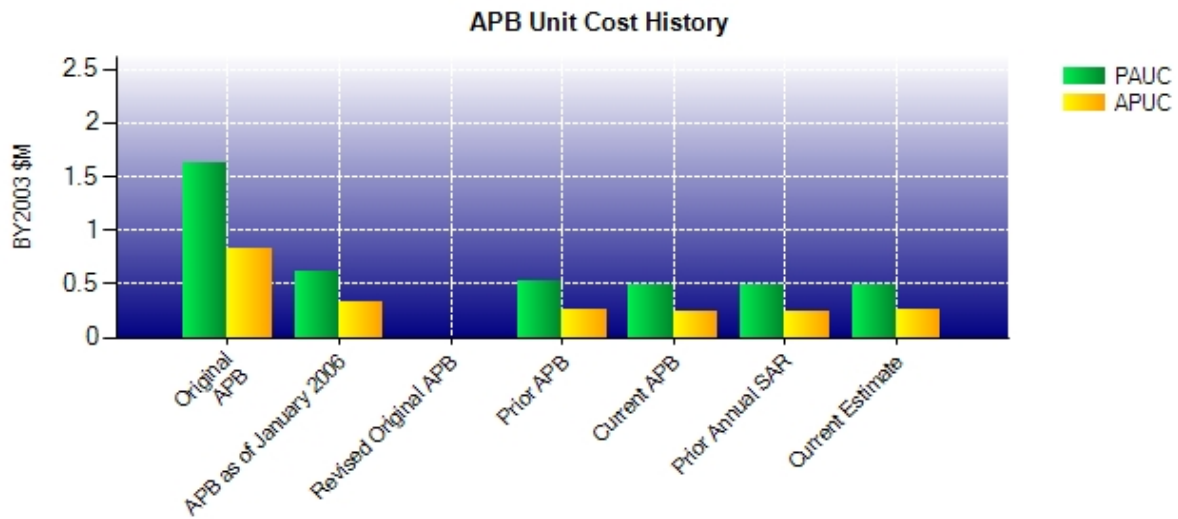
	BY2003 \$M	BY2003 \$M	
Unit Cost	Current UCR Baseline (NOV 2013 APB)	Current Estimate (DEC 2013 SAR)	BY % Change
<b>Program Acquisition Unit Cost (PAUC)</b>			
Cost	3031.0	3111.4	
Quantity	6233	6293	
Unit Cost	0.486	0.494	+1.65
<b>Average Procurement Unit Cost (APUC)</b>			
Cost	1393.5	1477.0	
Quantity	5745	5756	
Unit Cost	0.243	0.257	+5.76

	BY2003 \$M	BY2003 \$M	
Unit Cost	Original UCR Baseline (MAR 1994 APB)	Current Estimate (DEC 2013 SAR)	BY % Change
<b>Program Acquisition Unit Cost (PAUC)</b>			
Cost	1091.4	3111.4	
Quantity	672	6293	
Unit Cost	1.624	0.494	-69.58
<b>Average Procurement Unit Cost (APUC)</b>			
Cost	523.7	1477.0	
Quantity	630	5756	
Unit Cost	0.831	0.257	-69.07



### Unit Cost History



	Date	BY2003 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
<b>Original APB</b>	MAR 1994	1.625	0.831	1.666	0.931
<b>APB as of January 2006</b>	JUN 2004	0.616	0.339	0.614	0.352
<b>Revised Original APB</b>	N/A	N/A	N/A	N/A	N/A
<b>Prior APB</b>	APR 2012	0.533	0.255	0.573	0.280
<b>Current APB</b>	NOV 2013	0.486	0.243	0.535	0.276
<b>Prior Annual SAR</b>	DEC 2012	0.486	0.243	0.535	0.276
<b>Current Estimate</b>	DEC 2013	0.494	0.257	0.547	0.295

### SAR Unit Cost History

#### Initial SAR Baseline to Current SAR Baseline (TY \$M)

Initial PAUC Dev Est	Changes								PAUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
1.670	-0.023	-1.090	0.015	-0.017	0.058	0.000	0.001	-1.056	0.614

**Current SAR Baseline to Current Estimate (TY \$M)**

PAUC Prod Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.614	0.005	-0.143	-0.005	0.101	-0.037	0.000	0.012	-0.067	0.547

**Initial SAR Baseline to Current SAR Baseline (TY \$M)**

Initial APUC Dev Est	Changes								APUC Prod Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.931	-0.019	-0.520	0.016	-0.036	-0.021	0.000	0.001	-0.579	0.352

**Current SAR Baseline to Current Estimate (TY \$M)**

APUC Prod Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.352	0.004	0.002	-0.005	-0.012	-0.059	0.000	0.013	-0.057	0.295

**SAR Baseline History**

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	Current Estimate
Milestone I	N/A	N/A	N/A	N/A
Milestone II	N/A	DEC 1993	DEC 1993	DEC 1993
Milestone III	N/A	N/A	N/A	N/A
IOC	N/A	DEC 2000	MAY 2003	MAY 2003
Total Cost (TY \$M)	N/A	1119.5	1818.9	3439.8
Total Quantity	N/A	672	2964	6293
Prog. Acq. Unit Cost (PAUC)	N/A	1.666	0.614	0.547

The baseline includes separate Milestone (MS) III decisions for the MIDS Low Volume Terminal (MIDS-LVT) Variant (1) and MIDS-LVT Variant (3) and a separate Initial Operational Capability for each MIDS variant. A MS III decision was originally planned for the United States Army unique MIDS-LVT Variant (2) but it was replaced by a Full Rate Production decision approved by the Assistant Secretary of the Navy (Research, Development and Acquisition) in the Acquisition Decision Memorandum dated December 8, 2003.

**Cost Variance**

<b>Summary Then Year \$M</b>				
	<b>RDT&amp;E</b>	<b>Proc</b>	<b>MILCON</b>	<b>Total</b>
SAR Baseline (Prod Est)	825.8	993.1	--	1818.9
Previous Changes				
Economic	+14.4	+24.4	--	+38.8
Quantity	+82.9	+1043.8	--	+1126.7
Schedule	-0.2	-31.0	--	-31.2
Engineering	+705.5	-78.8	--	+626.7
Estimating	+118.5	-443.9	--	-325.4
Other	--	--	--	--
Support	+3.7	+78.0	--	+81.7
Subtotal	+924.8	+592.5	--	+1517.3
Current Changes				
Economic	-3.9	-4.0	--	-7.9
Quantity	+5.8	+4.5	--	+10.3
Schedule	--	+1.7	--	+1.7
Engineering	--	+11.8	--	+11.8
Estimating	-9.2	+102.7	--	+93.5
Other	--	--	--	--
Support	--	-5.8	--	-5.8
Subtotal	-7.3	+110.9	--	+103.6
Total Changes	+917.5	+703.4	--	+1620.9
CE - Cost Variance	1743.3	1696.5	--	3439.8
CE - Cost & Funding	1743.3	1696.5	--	3439.8

<b>Summary Base Year 2003 \$M</b>				
	<b>RDT&amp;E</b>	<b>Proc</b>	<b>MILCON</b>	<b>Total</b>
SAR Baseline (Prod Est)	869.4	955.4	--	1824.8
Previous Changes				
Economic	--	--	--	--
Quantity	+76.6	+819.1	--	+895.7
Schedule	-0.4	-8.6	--	-9.0
Engineering	+592.8	-61.6	--	+531.2
Estimating	+95.9	-372.1	--	-276.2
Other	--	--	--	--
Support	+3.2	+61.3	--	+64.5
Subtotal	+768.1	+438.1	--	+1206.2
Current Changes				
Economic	--	--	--	--
Quantity	+4.7	+3.3	--	+8.0
Schedule	--	--	--	--
Engineering	--	+9.2	--	+9.2
Estimating	-7.8	+75.2	--	+67.4
Other	--	--	--	--
Support	--	-4.2	--	-4.2
Subtotal	-3.1	+83.5	--	+80.4
Total Changes	+765.0	+521.6	--	+1286.6
CE - Cost Variance	1634.4	1477.0	--	3111.4
CE - Cost & Funding	1634.4	1477.0	--	3111.4

Previous Estimate: December 2012

RDT&E	\$M	
	Base Year	Then Year
<b>Current Change Explanations</b>		
Revised escalation indices. (Economic)	N/A	-3.9
Adjustment for current and prior escalation. (Estimating)	+1.7	+2.1
Increase 1 Qty MIDS Joint Tactical Radio System (MIDS JTRS) Four Net Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4) Production Representative Terminal (PRT) purchased for Foreign Comparative Testing for the testing of the Selex Radio Frequency Amplifier (0400). (Quantity)	+0.2	+0.3
Increase 2 Qty MIDS Low Volume Terminal (MIDS-LVT) Variant (2) purchased with United States Army (USA) RDT&E (2040). (Quantity)	+0.3	+0.4
Increase 10 Qty MIDS JTRS terminals purchased with United States Air Force RDT&E (3600). (Quantity)	+2.7	+3.3
Increase 1 Qty MIDS-LVT Variant (11) purchased with USA RDT&E (2040). (Quantity)	+0.2	+0.2
Increase 5 Qty MIDS-LVT Variant (1) and (2) MIDS JTRS terminals purchased for Navy (1319). (Quantity)	+1.3	+1.6
Increase in 28 Qty for MIDS Program Office (no funding change as was in controls, but Quantities were not listed previously). FY 2012 increase 7 Qty MIDS-LVT Variant (1). FY 2014 increase 4 Qty MIDS-LVT Variant (1), 3 Qty MIDS-LVT Variant (3), 4 Qty MIDS-LVT Variant (11), and 12 Qty MIDS JTRS CMN-4 PRTs. FY 2016, 2 Qty decrease in MIDS Program Office terminals needed from 12 to 10 Qty. (Quantity)	0.0	0.0
Revised estimate to reflect funding realignments. (Estimating)	-8.6	-11.2
Revised estimate for Navy's Contracted Services Reduction and various rate adjustments. (Estimating)	-5.7	-7.3
FY 2015 PB Budgetary reduction for Program's share of the shared PE. (Estimating)	-2.8	-3.5
Revised estimate alligns with the FY 2015 PB controls for MIDS JTRS Tactical Targeting Network Technology . (Estimating)	+7.6	+10.7
<b>RDT&amp;E Subtotal</b>	<b>-3.1</b>	<b>-7.3</b>

Procurement	\$M	
	Base Year	Then Year
<b>Current Change Explanations</b>		
Revised escalation indices. (Economic)	N/A	-4.0
Adjustment for current and prior escalation. (Estimating)	+1.1	+0.9
Total Qty variance resulting from an increase of 15 MIDS terminals from 1266 to 1281 (Air Force). (Subtotal)	+2.5	+3.3
Qty variance resulting from an increase of 15 MIDS terminals from 1266 to 1281 (Air Force). (Quantity)	(+4.4)	(+5.8)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-0.1)	(-0.1)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-0.3)	(-0.4)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-1.5)	(-2.0)
Total Qty variance resulting from a decrease of 16 MIDS terminals from 504 to 488 (United States Army). (Subtotal)	-2.2	-3.0
Qty variance resulting from a decrease of 13 MIDS-LVT terminals from 504 to 491 (Army 2035). (Quantity)	(-3.8)	(-5.2)

Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+0.1)	(+0.1)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(+0.2)	(+0.3)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+1.3)	(+1.8)
Total Qty variance resulting from an increase of 2 MIDS terminals from 136 to 138 (Navy). (Subtotal)	+0.3	+0.4
Qty variance resulting from an increase of 2 MIDS terminals from 136 to 138 (Navy). (Quantity)	(+0.6)	(+0.8)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-0.3)	(-0.4)
Total Qty variance resulting from an increase of 5 MIDS terminals from 42 to 47 (Navy). (Subtotal)	+0.9	+1.4
Qty variance resulting from an increase of 5 MIDS terminals from 42 to 47 (Navy). (Quantity)	(+1.5)	(+2.2)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-0.1)	(-0.2)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-0.5)	(-0.6)
Total Qty variance resulting from an increase of 2 MIDS terminals from 2916 to 2918 (Navy). (Subtotal)	+0.3	+0.4
Qty variance resulting from an increase of 2 MIDS terminals from 2916 to 2918 (Navy). (Quantity)	(+0.6)	(+0.9)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-0.3)	(-0.5)
Stretch-out of Proc buy profile to better fit the Fleet's need and latest production schedule over FY 2013-FY 2019 (United States Navy). (Schedule)	0.0	+1.5
Stretch-out of Proc buy profile from FY 2013-2017 to FY 2013-2019 to fit the current need of MIDS terminals. (Schedule)	0.0	+0.4
Acceleration of Proc buy profile in FY 2012 for United States Air Force to meet current need of the available aircraft platforms (Air Force). (Schedule)	0.0	-0.2
Increased funding for the conversion of Army MIDS-LVT(2) variants to MIDS-LVT(11) variants (2035). (Engineering)	+9.3	+12.0
Increase in Eng for modification of one MIDS-LVT terminal for Navy (1506). (Engineering)	+0.1	+0.1
Revised estimate to align with the FY 2015 PB dollars and Qtys for the procurement of MIDS JTRS terminals (1506). (Estimating) (QR)	+13.3	+19.1
Revised estimating assumptions for Cost Model for terminal price. (Subtotal)	+37.8	+51.5
Revised estimating assumptions for Cost Model for terminal price (Navy 1506). (Estimating)	(+35.7)	(+49.0)
Revised estimating assumptions for Cost Model for terminal price (Navy 1611). (Estimating)	(-0.4)	(-0.5)
Revised estimating assumptions for Cost Model for terminal price (Air Force 3010). (Estimating)	(+2.5)	(+3.0)
Increased funding for the retrofit kits to convert to Block Upgrade 2 (BU2) specifications (2035) (Estimating)	+24.2	+32.8
Increased funding for an Additional Problem Report Investigation (PR 3537) (2035). (Estimating)	+0.1	+0.1
Adjustment for current and prior escalation. (Support)	0.0	+0.4
Decrease in Other Support due to training efforts no longer required with purchase of terminals (Navy 1506). (Support) (QR)	-4.1	-5.5
Increase in Initial Spares due to updated Naval Inventory Control Point actuals and change in estimating methodology for future price projections (Navy 1506). (Support) (QR)	+4.3	+5.1

Decrease in Other Support due to Army funding for converting MIDS-LVT Variant (2) to MIDS-LVT Variant (11) and the purchase of BU2 retrofit kits instead of purchasing new terminals (Army 2035). (Support) (QR)	-3.5	-4.5
Decrease in Other Support due to training efforts no longer required with purchase of terminals (Air Force 3010). (Support) (QR)	-0.9	-1.3
Procurement Subtotal	+83.5	+110.9

(QR) Quantity Related

## Contracts

### General Contract Memo

Cost and Schedule variance reporting is not required on these Firm Fixed Price contracts. All Cost Plus Fixed Fee orders on these contracts are below the threshold for Earned Value Management reporting.

### Appropriation: Procurement

Contract Name	<b>MIDS Production Contract</b>
Contractor	BAE Systems/Rockwell Collins Data Link Solutions L.L.C. (DLS)
Contractor Location	Cedar Rapids, IA 52498
Contract Number, Type	N00039-10-D-0031, IDIQ/FFP/CPFF
Award Date	March 10, 2010
Definitization Date	March 10, 2010

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price at Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
134.8	N/A	59	159.8	N/A	529	485.6	485.6

### Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to exercising options on the Indefinite Delivery/Indefinite Quantity (IDIQ) contract for award of more Delivery Orders (non-Earned Value (EV)).

### Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this IDIQ/FFP/CPFF contract.

### Contract Comments

Original value of the contract when awarded was 134.8\$M in 2010. Since then more IDIQ orders have been awarded and options exercised increasing the value of the contract to now be 485.6\$M (although only 159.8\$M has been obligated).

This production contract includes nonrecurring engineering, supportability, and the manufacture of MIDS-Low Volume Terminal, MIDS Joint Tactical Radio System terminal, and associated spares. FMS are not included in the supplemental contract cost information.

This is a Multiple Award Firm Fixed Price IDIQ contract. Delivery Orders are competed between two vendors, ViaSat and DLS. Current Contract Target Price reflects orders awarded to this vendor except for EV efforts which are accounted for separately.



**Appropriation: Procurement**

Contract Name	<b>MIDS Production Contract</b>
Contractor	ViaSat, INC
Contractor Location	Carlsbad, CA 92009
Contract Number, Type	N00039-10-D-0032, IDIQ/FFP/CPFF
Award Date	March 10, 2010
Definitization Date	March 10, 2010

Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price at Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
134.8	N/A	76	196.1	N/A	629	527.4	527.4

**Target Price Change Explanation**

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to delivery orders not yet awarded.

**Cost and Schedule Variance Explanations**

Cost and Schedule Variance reporting is not required on this IDIQ/FFP/CPFF contract.

**Contract Comments**

Original value of the contract when awarded was 134.8\$M in 2010. Since then more Indefinite Delivery/Indefinite Quantity (IDIQ) orders have been awarded and options exercised increasing the value of the contract to now be 527.4\$M (although only 196.1\$M has been obligated).

This production contract includes nonrecurring engineering, supportability, and the manufacture of MIDS-Low Volume terminals, MIDS Joint Tactical Radio System terminals, and associated spares. FMS are not included in the supplemental contract cost information.

This is a Multiple Award Firm Fixed Price IDIQ contract. Delivery Orders are competed between two vendors, ViaSat and Data Link Solutions L.L.C.. Current Contract Target Price reflects orders awarded to this vendor except for Earned Value efforts which are accounted for separately.

## Deliveries and Expenditures

Delivered to Date	Plan to Date	Actual to Date	Total Quantity	Percent Delivered
Development	427	427	537	79.52%
Production	3953	4173	5756	72.50%
Total Program Quantity Delivered	4380	4600	6293	73.10%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	3439.8	Years Appropriated	25
Expended to Date	2668.5	Percent Years Appropriated	83.33%
Percent Expended	77.58%	Appropriated to Date	2868.0
Total Funding Years	30	Percent Appropriated	83.38%

The above data is current as of 2/25/2014.

Total deliveries listed above do not contain EuroMIDS (non-United States (US) vendor) terminals (which are not reported in the SAR). Total deliveries including EuroMIDS is 7,712 MIDS terminals.

## Operating and Support Cost

### MIDS

#### Assumptions and Ground Rules

##### Cost Estimate Reference:

The O&S costs are based on the Program Office Life Cycle Cost Estimate (dated February 29, 2012), which was evaluated by the Air Force Cost Analysis Agency and Naval Center for Cost Analysis in support of the MIDS Joint Tactical Radio System (MIDS JTRS) Full Production & Fielding decision. Cost portion of the current program office estimate depicts 5,756 MIDS terminals which have a 20-year operational life. The quantity of 5,756 includes United States-only terminals currently fielded and on contract plus known requirements for FY 2014 through FY 2019. This period includes a phase-in, steady state, and phase-down profile for a total 33-year support period.

##### Sustainment Strategy:

The annual operating hours per aircraft for peacetime deployment are estimated to be approximately 400. The annual operating hours per ship for peacetime deployment are estimated to be 3,977. The annual operating hours per Army Ground Air Defense station are estimated to be 2,212.

For Navy aircraft and Army platforms, O&S is a three-level structure (i.e. Organizational, Intermediate/Direct Support and Depot). For Navy ships and Air Force aircraft platforms it is a two-level structure (i.e. Organizational and Depot). Navy aircraft support costs assume the use of the Consolidated Automated Support System at the Intermediate level of maintenance. The terminal reliability and maintainability characteristics used are consistent with the requirements contained in the Operational Requirements Document.

##### Antecedent Information:

There is no antecedent system. The MIDS Low volume Terminal (MIDS-LVT) does not replace an existing DoD system because it provides Link 16 capability to platforms that were unable to employ analogous systems due to space and weight constraints. The MIDS JTRS terminal is a form, fit, and function replacement and upgrade for MIDS-LVT in selected DoD systems.

Unitized O&S Costs BY2003 \$K			
Cost Element	MIDS		N/A (Antecedent)
	Avg Annual Cost Per Terminal		N/A
Unit-Level Manpower	0.250		0.000
Unit Operations	0.000		0.000
Maintenance	0.440		0.000
Sustaining Support	4.120		0.000
Continuing System Improvements	5.430		0.000
Indirect Support	0.000		0.000
Other	0.000		0.000
<b>Total</b>	<b>10.240</b>		<b>--</b>

Unitized Cost Comments:

Base Year 2003 \$

The calculation of total O&S costs is based on total quantities of 5,756; times an economic life of 20 years; times unit cost of \$10.24K per year.

	Total O&S Cost \$M			
	Current Production APB Objective/Threshold		Current Estimate	
	MIDS		MIDS	N/A (Antecedent)
<b>Base Year</b>	1176.6	1294.3	1178.8	N/A
<b>Then Year</b>	1573.7	N/A	1576.7	N/A

Total O&S Costs Comments:

O&S Cost Variance		
Category	Base Year 2003 \$M	Change Explanation
Prior SAR Total O&S Estimate DEC 2012	1,176.6	
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Programmatic/Planning Factors	+2.2	Increased number of fielded terminals
Other	0.0	
<b>Total Changes</b>	<b>+2.2</b>	
<b>Current Estimate</b>	<b>1,178.8</b>	

**Disposal Costs:**

Disposal costs are negligible.