



## Selected Acquisition Report (SAR)

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



### Multifunctional Information Distribution System (MIDS)

As of FY 2017 President's Budget

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

## Table of Contents

Common Acronyms and Abbreviations for MDAP Programs .....	3
Program Information .....	5
Responsible Office .....	5
References .....	5
Mission and Description .....	6
Executive Summary .....	7
Threshold Breaches .....	10
Schedule .....	11
Performance .....	14
Track to Budget .....	29
Cost and Funding .....	34
Low Rate Initial Production .....	66
Foreign Military Sales .....	67
Nuclear Costs .....	69
Unit Cost .....	70
Cost Variance .....	73
Contracts .....	77
Deliveries and Expenditures .....	84
Operating and Support Cost .....	85

## Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance  
ACAT - Acquisition Category  
ADM - Acquisition Decision Memorandum  
APB - Acquisition Program Baseline  
APPN - Appropriation  
APUC - Average Procurement Unit Cost  
\$B - Billions of Dollars  
BA - Budget Authority/Budget Activity  
Blk - Block  
BY - Base Year  
CAPE - Cost Assessment and Program Evaluation  
CARD - Cost Analysis Requirements Description  
CDD - Capability Development Document  
CLIN - Contract Line Item Number  
CPD - Capability Production Document  
CY - Calendar Year  
DAB - Defense Acquisition Board  
DAE - Defense Acquisition Executive  
DAMIR - Defense Acquisition Management Information Retrieval  
DoD - Department of Defense  
DSN - Defense Switched Network  
EMD - Engineering and Manufacturing Development  
EVM - Earned Value Management  
FOC - Full Operational Capability  
FMS - Foreign Military Sales  
FRP - Full Rate Production  
FY - Fiscal Year  
FYDP - Future Years Defense Program  
ICE - Independent Cost Estimate  
IOC - Initial Operational Capability  
Inc - Increment  
JROC - Joint Requirements Oversight Council  
\$K - Thousands of Dollars  
KPP - Key Performance Parameter  
LRIP - Low Rate Initial Production  
\$M - Millions of Dollars  
MDA - Milestone Decision Authority  
MDAP - Major Defense Acquisition Program  
MILCON - Military Construction  
N/A - Not Applicable  
O&M - Operations and Maintenance  
ORD - Operational Requirements Document  
OSD - Office of the Secretary of Defense  
O&S - Operating and Support  
PAUC - Program Acquisition Unit Cost

PB - President's Budget  
PE - Program Element  
PEO - Program Executive Officer  
PM - Program Manager  
POE - Program Office Estimate  
RDT&E - Research, Development, Test, and Evaluation  
SAR - Selected Acquisition Report  
SCP - Service Cost Position  
TBD - To Be Determined  
TY - Then Year  
UCR - Unit Cost Reporting  
U.S. - United States  
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

## Program Information

**Program Name**

Multifunctional Information Distribution System (MIDS)

**DoD Component**

Navy

**Joint Participants**

Air Force; Army

Navy is the lead Component as specified in the Under Secretary of Defense for Acquisition, Technology, and Logistics (USD (AT&L)) Navy Program Delegation Decisions Acquisition Decision Memorandum (ADM) dated July 24, 2012

## Responsible Office

CAPT Robert Croxson  
MIDS Program Office  
33050 Nixie Way  
Bldg 17A, Suite 422  
San Diego, CA 92147-5416

**Phone:** 619-524-1549  
**Fax:** 619-524-1639  
**DSN Phone:** 524-1549  
**DSN Fax:** 524-1639  
**Date Assigned:** May 19, 2015

[robert.d.croxson@navy.mil](mailto:robert.d.croxson@navy.mil)

## 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 consists of two products, MIDS Low Volume Terminal (MIDS-LVT) and MIDS Joint Tactical Radio System (MIDS JTRS).

The MIDS-LVT is the product of the MIDS International Program Office (IPO), a multinational (U.S., France (FRA), Germany (DEU), Italy (ITA), and Spain (ESP)) cooperative development program with joint service participation (U.S. Navy (USN), U.S. Army (USA), and U.S. Air Force (USAF)). The 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. MIDS-LVT provides interoperability with North Atlantic Treaty Organization (NATO) and non-NATO users, significantly increasing force effectiveness and minimizing hostile actions and friend-on-friend engagements. Three principal configurations of the terminal are in production and use an open system, modular architecture. MIDS-LVT (1) includes voice, Tactical Air Navigation (TACAN) and variable power transmission and provides a Link 16 capability to the F/A-18, which was previously unable to use Joint Tactical Information Distribution System (JTIDS) due to space and weight limitations. MIDS-LVT(2) is an Army variant of MIDS-LVT tailored as a functional replacement for the JTIDS Class 2M terminal. MIDS-LVT(3), also referred to, as MIDS Fighter Data Link (FDL), is a reduced function terminal for the Air Force (no voice, no TACAN). MIDS-LVT contracted for Block Upgrade 2 (BU2) to incorporate Cryptographic (Crypto) Modernization (CM), Enhanced Throughput (ET), and Frequency Remapping (FR) in the MIDS-LVT terminal.

MIDS JTRS is designed as a U.S. Only Pre-Planned Product Improvement (P3I), executed as an Engineering Change Proposal (ECP) to the production MIDS-LVT configuration, and is fully compatible with MIDS-LVT. MIDS JTRS completed qualification in first quarter of FY 2010. It facilitated the Joint Program Executive Office (JPEO) JTRS incremental approach for fielding advanced JTRS transformational networking capability and transformed the MIDS-LVT into a four channel, Software Communications Architecture (SCA) compliant, Joint Tactical Radio. A form-fit-function replacement to MIDS-LVT, MIDS JTRS also adds three programmable 2 Megahertz (MHz) to 2 Gigahertz (GHz) channels capable of hosting the JTRS legacy and networking Waveforms (WFs). In addition to the Link 16, TACAN, and voice functionality found in MIDS-LVT, and MIDS-LVT BU2, MIDS JTRS adds capabilities such as CM, ET, FR, software programmability, Four Net Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4), and Tactical Targeting Network Technology (TTNT). CMN-4 and TTNT are integral components of Naval Integrated Fire Control – Counter Air (NIFC-CA) and link together aircraft carrier strike group E-2Ds and EA-18s, and the aircraft carrier itself.

## Executive Summary

### Program Highlights Since Last Report:

The Multifunctional Information Distribution System (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) continues implementation of an acquisition strategy that maintains continuous competition between the two U.S. production contractors, Datalink Solutions (DLS) and ViaSat, a software contract with BAE Systems, and directed procurements to EuroMIDS for MIDS-LVT. DLS is a consortium between BAE Systems and Rockwell Collins. EuroMIDS is a consortium among Airbus Defense & Space, Indra, Finmeccanica, and Thales.

MIDS-LVT Block Upgrade 2 (BU2) is a 39-month Engineering Change Proposal (ECP) awarded November 2013 to bring National Security Agency (NSA) mandated Crypto Modernization (CM) and National Telecommunications and Information Agency and Federal Aviation Agency mandated Frequency Remapping (FR) capability to the terminal.

MIDS-LVT is continuing development efforts and working to mitigate software integration issues and a potential schedule delay and funding shortfall. MIDS-LVT conducted multiple Hardware (HW)/Software (SW) Critical Design Reviews (CDRs) with vendors in February and March 2015 in support of the MIDS-LVT and BU2 efforts to successfully demonstrate design maturity in the areas of system, software, hardware, and security:

- DLS Hardware CDR was conducted in Wayne, NJ, on February 9-10, 2015.
- The Joint BAE, Thales, and Warner Robins Air Logistics Complex Centralized Software Support Activity (CSSA) Software CDR was held in at Wayne, NJ, on February 11-13, 2015.
- The EuroMIDS BU2 Hardware CDR was conducted in Rome, ITA, on March 4-5, 2015.
- The ViaSat Hardware CDR was held at Carlsbad, CA, on March 25-26, 2015.

The MIDS Steering Committee #54 was hosted by Germany in Berlin, on March 17-19, 2015. Key agreements were obtained on the approval of the MIDS Program Management Plan (PMP) for the MIDS International Program Office (IPO) and concurrence on financial procedures for FY 2016. The next MIDS Steering Committee #55 was held in Rome, Italy on September 22-24, 2015. The meeting was chaired by Program Executive Officer for Tactical Aircraft Programs PEO(T) and focused on the status of the cooperative development of MIDS-LVT BU2.

The MIDS International Review Board (MIRB) #23 met in Brussels, Belgium, May 4-8, 2015, with 310 participants from 29 countries to discuss North Atlantic Treaty Organization's (NATO's) integration of MIDS and MIDS-LVT BU2. MIRB #24 was held in Washington, DC on November 16-20, 2015, with 335 attendees from 28 Nations/Agencies. Topics included keynote addresses by PEO(T) and Air Force Headquarters Air Combat Command Deputy Director of Plans, Programs and Requirements, and updates on MIDS Products, Software, and Platforms.

As a follow-on to the MIDS JTRS Core terminal, MIDS JTRS Four Net Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4) is being implemented as an ECP, and is considered a low risk enhancement to Link 16 while providing a significant upgraded capability for the Fleet. The MIDS Program Office (MPO) has coordinated all platform integration and test efforts with F/A-18 Program Management Air (PMA-265) throughout all MIDS efforts. This close relationship continues with the MIDS JTRS CMN-4 enhancement. Coordination involves over 3,500 hours of laboratory testing with no hardware failures, completion of the first MIDS JTRS CMN-4 flight in March 2015 and the completion of Government First Article Qualification Testing (GFAQT) in May 2015. MIDS JTRS CMN-4 Problem Reports (PRs) are being addressed as they are identified in Developmental Test (DT). Full MIDS JTRS CMN-4 functionality has been demonstrated successfully in the laboratory and inflight testing. MIDS JTRS is also enhancing the MIDS JTRS CMN-4 capability as MIDS Modernization Increments (MMI). MMI 1 development delivery orders were awarded to DLS and ViaSat in June 2015. The U.S. Air Force has also recognized the value of the MIDS JTRS CMN-4 capability and has begun development efforts to support migrating F-15, F-16 and F-22 squadrons to MIDS JTRS CMN-4.

The MIDS JTRS Tactical Targeting Network Technology (TTNT) L-Band development continued with a CDR on July 21-22, 2015. As a result of the Middle Class Tax Relief and Job Creation Act of 2012 and resulting spectrum sell-off, the MIDS

JTRS TTNT spectrum use will now include S-Band. Compensation for the sell-off and S-Band transition is being provided to the Services. The program office worked with Department of Navy Chief Information Officer (DoN CIO) and Office of the Chief of Naval Operations (OPNAV) for Information Dominance (N2/N6) on the appropriate use of the Spectrum Relocation Funds (SRF) and guidelines for spending and accounting of SRF dollars. The program office then led a SRF Planning Meeting on August 19, 2015 to plan the path forward for S-band integration into MIDS JTRS TTNT, the cost distribution between SRF and DoD funds, and the underlying assumptions for building the cost estimate for the L&S-Bands MIDS JTRS TTNT development. Expansion to S-Band impacts MIDS JTRS TTNT baseline, requiring redesign of the MIDS JTRS TTNT Transceiver (XCVR), MIDS JTRS TTNT External Power Amplifier (TEPA) and High Power Amplifier (HPA).

A successful L-Band MIDS JTRS TTNT XCVR risk reduction demonstration and early waveform porting was completed, which saved approximately five months of design and integration on the MIDS JTRS TTNT development effort. L-Band development continues and the award for the L&S-Bands MIDS JTRS TTNT design and development is anticipated in late FY 2016.

MIDS completed a review of PM Joint Tactical Network (JTN) processes for management of Software Defined Radio (SDR) waveforms in preparation for the transition of Link 16 waveform responsibilities to PMA/Program Management Warfare (PMW)-101. On June 4, 2015, all responsibilities of Link 16 waveform were transferred to PMA/PMW-101. Subsequently, PMA/PMW-101 participated in a Link 16 Evolution Kickoff Summit in Washington, DC on July 14, 2015. The meeting was chaired by Under Secretary of Defense for Acquisition, Acquisition, Technology, and Logistics (USD(AT&L)) Command, Control, and Communications (C3), Cyber and Business Systems (C3CB) and focused on ensuring DoD is evolving/modernizing Link 16 to increase future capabilities, and is fostering communication across DoD stakeholders.

MIDS-LVT Lot 16 delivery orders were awarded to DLS and ViaSat on August 31, 2015, 113 terminals and 8 receivers/transmitters units for \$21M. MIDS JTRS Lot 4 production was awarded to DLS and ViaSat on September 18, 2015, 209 terminals for \$70.8M.

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

#### **History of Significant Developments Since Program Initiation:**

April 1990: Joint Requirements Oversight Council Memorandum (JROCM 031-90) approved the Mission Need Statement (MNS) for MIDS-LVT.

December 1993: At MS II, USD(AT&L) authorized MIDS to proceed with MIDS-LVT EMD.

September 2001: USD(AT&L) directed the MIDS Program to update the Acquisition Strategy to include a JTRS Compliance Migration Strategy.

September 2003: At MS III, ASN(RDA) authorized Full Rate Production for MIDS-LVT.

July 2004: ASN(RDA) approved the Acquisition Strategy to develop MIDS JTRS via an Engineering Change Proposal.

February 2005: USD(AT&L) authorized the establishment of the Joint Program Executive Office (JPEO) Joint Tactical Radio System (JTRS) for authority over all JTRS products, including MIDS.

May 2008: JROCM 112-08 approved MIDS JTRS Capability Production Document.

December 2009: MIDS JTRS completed Contractor First Article Qualification Test and Government First Article Qualification Test (GFAQT). USD(AT&L) approved the Limited Production & Fielding of MIDS JTRS.

April 2011: MIDS JTRS completed Initial Operational Test & Evaluation including Verification of the Correction of Deficiencies(VCD), COMOPTEVFOR (Naval Command Operational Test and Evaluation Force) and Director of Operational Test & Evaluation Reports.

April 2012: USD(AT&L) approved the Full Production and Fielding of MIDS JTRS.

July 2012: USD(AT&L) directed the JPEO JTRS reorganization and realignment to transfer MIDS to Navy MDA alignment and designated MIDS as an ACAT IC program.

November 2012: ASN(RDA) approved MIDS JTRS IOC.

January 2013: ASN(RDA) designated MIDS as the Program Manager Air/Program Manager Warfare-101.

January 2013: ASN(RDA) authorized development of MIDS JTRS TTNT and MIDS JTRS CMN-4 capabilities to be managed as ECPs to the MIDS ACAT IC Program.

January 2013: PEO(Tactical Aircraft) assigned MIDS as the Naval Integrated Fire Control – Counter Air From the Air Advanced Tactical Data Link (ATDL) lead to coordinate with F/A-18, E-2D, EA-18G and other platform offices.

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

July 2013: MIDS JTRS CMN-4 Cooperative Development delivery orders were awarded to ViaSat and DLS.

November 2013: Due to the May Program Deviation Report, a revised Acquisition Program Baseline (APB) was approved by ASN(RD&A).

November 2013: MIDS-LVT Block Upgrade 2 (BU2) Award. MIDS-LVT BU2 development contracts were awarded to DLS, EuroMIDS and ViaSat. MIDS-LVT BU2 is a 39-month ECP to bring National Security Agency mandated Crypto Modernization and National Telecommunications and Information Agency and Federal Aviation Administration mandated Frequency Remapping capabilities to the MIDS-LVT Link-16 product line.

August 2014: MIDS JTRS TTNT L-Band Full Development Contract was awarded to DLS and ViaSat.

November 2014: MIDS JTRS TTNT waveform development was completed. The next step is early porting and demonstration of the waveform.

March 2015: Conducted the first MIDS JTRS CMN-4 flight on F/A-18 aircraft at China Lake.

May-June 2015: MIDS Modernization Increment 1 (MMI 1) demonstration testing was conducted, and development delivery orders were awarded to DLS and ViaSat.

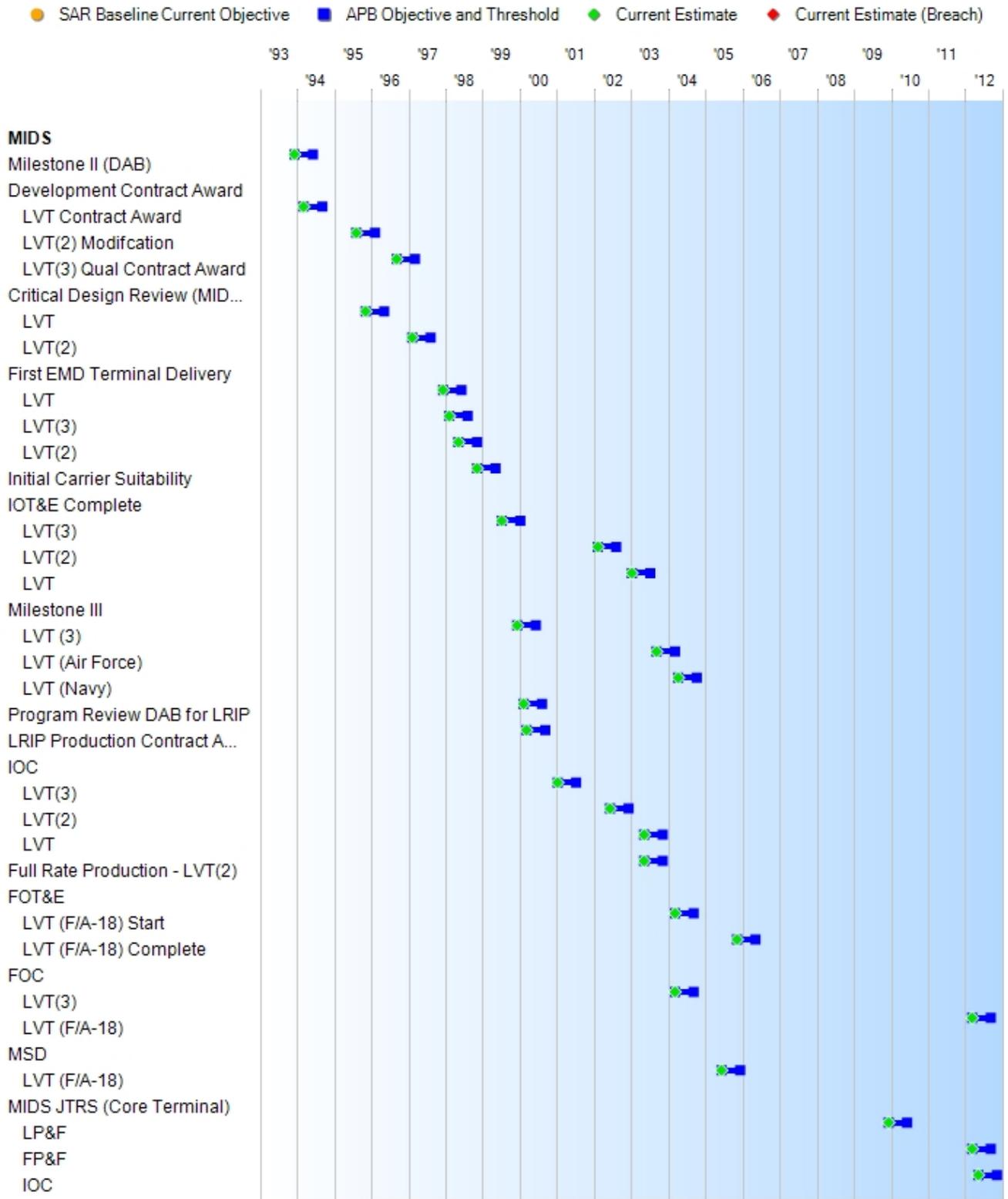
June 2015: Responsibilities for the Link-16 waveform were transferred to MIDS program office from Joint Tactical Networking Center (JTNC).

August-September 2015: MIDS-LVT Lot 16 and MIDS JTRS Lot 4 production delivery orders were awarded to DLS and ViaSat.

## Threshold Breaches

APB Breaches		Explanation of Breach
<b>Schedule</b>	<input type="checkbox"/>	The Procurement and O&S breaches occurred when the U.S. Air Force received the Resource Management Decision (RMD) funding for 1497 Concurrent Multi-Netting (CMN-4) and Tactical Targeting Network Technology (TTNT) MIDS Joint Tactical Radio System (JTRS) terminals in addition to the Navy 385 terminals. Additionally the services purchased 267 Low Volume Terminals (LVT). The PAUC and APUC overall continue below thresholds.
<b>Performance</b>	<input type="checkbox"/>	
<b>Cost</b>	<input type="checkbox"/>	
RDT&E	<input type="checkbox"/>	
Procurement	<input checked="" type="checkbox"/>	
MILCON	<input type="checkbox"/>	A Program Deviation Report (PDR) was signed by the MIDS PM on February 16, 2016. The PDR was submitted to PEO(T) for review and forwarding to the Assistant Secretary of the Navy for Research, Development, and Acquisition (ASN RD&A). A revised APB is in process.
Acq O&M	<input type="checkbox"/>	
<b>O&amp;S Cost</b>	<input checked="" type="checkbox"/>	
<b>Unit Cost</b>	<input type="checkbox"/>	
PAUC	<input type="checkbox"/>	
APUC	<input type="checkbox"/>	
Nunn-McCurdy Breaches		
<b>Current UCR Baseline</b>		
PAUC	None	
APUC	None	
<b>Original UCR Baseline</b>		
PAUC	None	
APUC	None	

# Schedule



Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate
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) Modification	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

### Notes

An OSD decision was made in December 2009 that MIDS Joint Tactical Radio System (MIDS JTRS) (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

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

Performance Characteristics				
SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
<b>Interoperability</b>				
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
<b>Waveform Compatibility</b>				
STANAG 4175 & JTIDS SSS	STANAG 4175 & JTIDS SSS	STANAG 4175 & JTIDS SSS	JITC Certified	STANAG 4175 & JTIDS SSS
<b>Message Standard</b>				
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
<b>Maximum Power Transmission (w)</b>				
<b>LVT</b>				
Multiple selectable levels	Multiple selectable levels	>=200 with IF for 1000	200 with IF	Multiple selectable levels
<b>LVT(2)</b>				
Multiple selectable levels	Multiple selectable levels	>=200 or 25 selectable	200/25	Multiple selectable levels
<b>LVT(3)</b>				
Multiple selectable levels	Multiple selectable levels	>=50	50	Multiple selectable levels
<b>IER (Kbps)</b>				
1000	>=1000	28.8 -115.2	1100 kbps	>=1000
<b>Paired Time Slot Relay Capability</b>				
Integral and automated	Integral and automated	Integral and automated	Integral and automated	Integral and automated
<b>Repromulgation Relay (nm) MIDS-LVT(2)</b>				
4 hop	4 hops	3 hops	4 hops	4 hops
<b>Paired Time Slot Relay Range (nm) (USN Only)</b>				

1200	>=1200	>=500	520	>=1200
<b>Communication Range</b>				
<b>LVT (USN: C2 to C2)</b>				
300	>=300	>=300	350	>=300
<b>LVT (USN: Non-C2 to C2)</b>				
240	>=240	>=220	240	>=240
<b>LVT (USN: Non-C2 to Non-C2)</b>				
200	>=200	>=180	220	>=200
<b>LVT (USN: Surface Platforms)</b>				
LOS up to 300	LOS >=300	LOS >=300	300	LOS >=300
<b>LVT (F-16: Non-C2 to C2)</b>				
300	>=300	>=200	200	>=300
<b>LVT (F-16: Non-C2 to Non-C2)</b>				
150	>=150	>=100	150	>=150
<b>LVT(2)</b>				
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
<b>LVT(3) (Non-C2 to C2)</b>				
300	>=300	>=200	300	>=300
<b>LVT(3) (Non-C2 to Non-C2)</b>				
150	>=150	>=100	170	>=150
<b>Voice Channels: LVT (USN)</b>				
Capable of 2	Capable of 2	1	2	Capable of 2
<b>Coded Message Error Probability (%)</b>				
<b>LVT</b>				
1	<=1	<=2	Passed	<=1
<b>LVT(3)</b>				
< 1 detected	<= 1 detected	<=2	Passed	<= 1 detected
<b>LVT(2)</b>				
1	<=1	<=2	Passed	<=1
<b>Jam Resistance</b>				
<b>LVT (USN) (db)</b>				
MJCS-194 - 89	MJCS-194-89	MJCS-194-89	Compliant	MJCS-194-89
<b>LVT (F-16) (%)</b>				
< 1 detected error	<=1 detected error	<= 1 detected error	Passed	<=1 detected error

<b>LVT(2) (%)</b>				
< 1 detected error	<= 1 detected error	<= 5	Passed	<= 1 detected error
<b>LVT(3) (%)</b>				
< 1 detected error	<= 1 detected error	<= 1 detected error	Passed	<= 1 detected error
<b>Ao</b>				
<b>LVT</b>				
.90	>=.90	>=.90	.91	>=.90
<b>LVT(2) (Terminal)</b>				
.94	>=.94	>=.90	.94	>=.94
<b>LVT(3)</b>				
.97	>=.97	>=.95	.965	>=.97
<b>MTBF (hr)(lab)</b>				
<b>USN</b>				
1000	>=1000	>=1000	1850	>=1000
<b>USA</b>				
1800	>=1800	>=1000	1850	>=1800
<b>USAF</b>				
1500	>=1500	>=1000	1850	>=1500
<b>MFHBOMF/MTBOMF (hr)</b>				
<b>System</b>				
25	>=25	>=25	32	>=25
<b>LVT (Aircraft) (Terminal)</b>				
300	>=300	>=220	240	>=300
<b>LVT (Ships) (Terminal)</b>				
350	>=350	>=257	275	>=350
<b>LVT(2) (Terminal)</b>				
393	>=393	>=393	425	>=393
<b>MTTR (O-level) (min)</b>				
<b>LVT(2) (Terminal)</b>				
30	<=30	<=30	25	<=30
<b>MCMTOMF</b>				
<b>LVT (USN Aircraft)</b>				
60	<=60	<=90	75	<=60
<b>LVT (USN Ships)</b>				
60	<=60	<=90	80	<=60
<b>LVT (USAF)</b>				

MRT < 20	MRT < 20	MRT < 30	25	MRT < 20
<b>LVT(3)</b>				
MRT < 20	MRT < 20	MRT < 30	28	MRT < 20
<b>Volume (Cubic Feet)</b>				
<b>LVT</b>				
< .6	<= .6	<= .6	.58	<= .6
<b>LVT(2)</b>				
< 1.4	<=1.4	<=1.4	1.32	<=1.4
<b>LVT(3)</b>				
< .6	<= .6	<= .6	.56	<= .6
<b>Weight (lbs)</b>				
<b>LVT</b>				
< 65	<=65	<=65	63.8	<=65
<b>LVT(2)</b>				
< 88	<=88	<=88	87.9	<=88
<b>LVT(3)</b>				
< 65	<=65	<=65	63.8	<=65
<b>MIDS-LVT Enhancement ECPs</b>				
<b>Message Standards</b>				
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
<b>Communications Range</b>				
N/A	see note 12c through 17c	see note 12c through 17c	TBD until MIDS-LVT BU2 ET is implemented	TBD until MIDS-LVT BU2 is implemented
<b>Information Exchange Rate (Kbps)</b>				
<b>LET 0</b>				
N/A	>=358	>=107	TBD until MIDS-LVT BU2 ET is implemented	>=358
<b>LET 1</b>				
N/A	>=546	>=358	TBD until MIDS-LVT BU2 ET is implemented	>=546
<b>LET 2</b>				
N/A	>=833	>=546	TBD until MIDS-LVT BU2 ET is	>=833

			implemented	
<b>LET 3</b>				
N/A	>=968	>=833	TBD until MIDS-LVT BU2 ET is implemented	>=968
<b>LET 4</b>				
N/A	>=1100	>=968	TBD until MIDS-LVT BU2 ET is implemented	>=1100
<b>Coded Message Error Probability (%)</b>				
<b>LET 0</b>				
N/A	<=1%	<=2%	TBD until MIDS-LVT BU2 ET is implemented	<=1%
<b>LET 1</b>				
N/A	<=1%	<=2%	TBD until MIDS-LVT BU2 ET is implemented	<=1%
<b>LET 2</b>				
N/A	<=1%	<=2%	TBD until MIDS-LVT BU2 ET is implemented	<=1%
<b>LET 3</b>				
N/A	<=1%	<=2%	TBD until MIDS-LVT BU2 ET is implemented	<=1%
<b>LET 4</b>				
N/A	<=1%	<=2%	TBD until MIDS-LVT BU2 ET is implemented	<=1%
<b>Jam Resistance</b>				
N/A	MJCS-194-89	MJCS-194-89	TBD until MIDS-LVT BU2 ET is implemented	MJCS-194-89
<b>MIDS JTRS Performance Parameters</b>				
<b>Link-16 Waveform compatibility</b>				
N/A	STANAG 4175 and MIDS LVT SSS	STANAG 4175 and MIDS LVT SSS	Passed JITC waveform conformance test.	Passed JITC waveform conformance test.
<b>Link-16 Message Standard</b>				
N/A	MIL-STD-6016C and STANAG 5516	MIL-STD-6016C and STANAG 5516	Passed JITC waveform conformance test.	Passed JITC waveform conformance

				test.
<b>Link-16 IER</b>				
<b>Normal Operations with JTRS</b>				
N/A	>=1100 Kbps	>=28-115.2 Kbps	128	128
<b>LET 0</b>				
N/A	>=358	>=107	107	107
<b>LET 1</b>				
N/A	>=546	>=358	358	358
<b>LET 2</b>				
N/A	>=833	>=546	546	546
<b>LET 3</b>				
N/A	>=968	>=833	837	837
<b>LET 4</b>				
N/A	>=1100	>=968	968	968
<b>Interoperability: All top level IERs will be satisfied to the standards specified in the threshold (T) and objective (O) values.</b>				
N/A	All top-level Information exchange Requirements (IERs) are met.	All top-level Information Exchange Requirements (IERs) are met.	All top-level IERs transferred.	All top-level IERs transferred.
<b>Link-16 Coded Message Error Probability (CMEP)</b>				
<b>LET 0</b>				
N/A	<=1%	<=2%	<=2%	<=1%
<b>LET 1</b>				
N/A	<=1%	<=2%	<=2%	<=1%
<b>LET 2</b>				
N/A	<=1%	<=2%	<=2%	<=1%
<b>LET 3</b>				
N/A	<=1%	<=2%	<=2%	<=1%
<b>LET 4</b>				
N/A	<=1%	<=2%	<=2%	<=1%
<b>Weight/Volume</b>				
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.
<b>Link-16 Jam Resistance</b>				
<b>JTRS (USN) (db)</b>				
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.

<b>All Others</b>				
N/A	<=1% Detected message error rate	<=1% Detected message error rate	.98%	.98%
<b>Link-16 J-Voice Channels</b>				
N/A	2	2	2	2
<b>Link-16 Communications Range Data</b>				
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.
<b>Link-16 Communications Range J-Voice</b>				
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.
<b>Link-16 Relay</b>				
N/A	≥1200nm	≥500nm	Not tested yet.	≥500 nm
<b>Multi-Channels/Networks</b>				
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.
<b>Scan Frequencies</b>				
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.
<b>Terminal Start-up/Restart (Link-16 only)</b>				
N/A	<=2.0 min	<=3.5 minutes	3.2 min	3.2 min
<b>IBIT Performance (Link-16 only)</b>				
N/A	<=30seconds	<=70 seconds	29 seconds	29 seconds
<b>Link-16 Net Entry/Synchronization</b>				
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
<b>Crypto-Rekeying</b>				
N/A	Over the Air Rekeying	At O-level	Not implemented in	Not implemented

	(OTAR) through electronic media, or common reprogramming hardware / software		Core Terminal.	in Core Terminal.
<b>Link-16 Transmission of Unit Position and Status Reports</b>				
N/A	<=100 ft accuracy	<=300 ft accuracy	78 ft	78 ft
<b>TACAN Performance Start-up/Restart</b>				
N/A	<=14 seconds	<=30 seconds	15 seconds	15 seconds
<b>MFHBOMF (System/Single Channel)</b>				
N/A	>=36 hrs (Other Platforms)	>=25 hrs (F/A-18E/F, EA-18G, TACAIR)	36.5 hrs.	36.5 hrs
<b>MTBF Lab (Ch. 1(Link-16))</b>				
N/A	>=1800 hrs	>= 1200 hrs	1285 hrs	1285 hrs
<b>MTBF Lab (Ch. 2, 3 &amp; 4)</b>				
N/A	>=1800 hrs	>=1550 hrs	1550 hrs	1550 hrs
<b>MFHBOMF (Terminal/Single Channel)</b>				
N/A	>=300 hrs	>=220 hrs	724 (includes lab data)	220 hrs
<b>MCMTOMF (Single Channel)</b>				
N/A	<= 60 min	<=120 min; <= 90 min (F/A-18 E/F, EA-18G, NAVAIR)	60 min	60 min (Single channel)
<b>MRT</b>				
N/A	<= 20 min	<= 45 min	20 min	45 min
<b>BIT PCD</b>				
N/A	PCD>= 98%	PCD>= 95%	97%	97%
<b>BIT MFHBFA</b>				
N/A	MFHBFA: >= 451 hrs	MFHBFA: >= 113 hrs	80 hrs	120 hrs
<b>Start-Up (Terminal/Single Channel)</b>				
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
<b>Start-Up (Waveform/Link-16 only)</b>				
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
<b>Restart &lt; 50 milliseconds (Core configuration only)</b>				
N/A	Operates through	Operates through	Operates through	Operates through
<b>Restart &lt;10 seconds (Terminal)</b>				
N/A	<=2min	<=3.5min	2.5 min	2.5 min
<b>Restart &lt;10 seconds (Link-16 waveform)</b>				

N/A	<=10sec	<=10sec	9 sec	9 sec
<b>Restart &gt;=10 seconds and &lt;2min (Terminal)</b>				
N/A	<=2min	<=3.5min	3.2 min	3.2 min
<b>Restart &gt;=10 seconds and &lt;2min (Link-16)</b>				
N/A	<=2min	<=4min	3.2 min	3.2 min
<b>Restart &gt;= 2 min (Terminal)</b>				
N/A	<=2min	<=3.5min	3.2 min	3.2 min
<b>Restart &gt;=2 min (Link-16 Waveform)</b>				
N/A	<=2min	<=4min	3.2 min	3.2 min
<b>TACAN Start-up/Restart</b>				
N/A	<=14sec	<=30sec	15 sec	15 sec
<b>IBIT Performance</b>				
N/A	<=30sec	<=70sec	30 sec	30 sec
<b>Terminal Operating Frequency Range</b>				
N/A	Operate 2-2000 MHz	Operate 2-2000 MHz	Operation within 2-2000 MHz	Operate 2-2000 MHz
<b>MIDS JTRS Capability</b>				
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.
<b>Functionality</b>				
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 porting 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 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.	15 of 15 Performance measures have been achieved.	15 of 15 Performance measures have been achieved.

<b>Number of Channels</b>				
N/A	Threshold same as Objective (One TACAN/Link-16 plus three additional channels for JTRS Waveforms).	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 Implementation - Link-16 for B-1.	1 of 1 Performance measures have been achieved.	1 of 1 Performance measures have been achieved.
<b>Net Ready</b>				
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, authentication, 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.	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 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; 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.	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.

<b>Operational Availability (Ao)</b>				
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%
<b>Software Configurable</b>				
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 environment	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 environment	1 of 1 Performance measures have been achieved.	1 of 1 Performance measures have been achieved.
<b>Growth</b>				
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.
<b>Navigation – Link-16 Position (PPLI)</b>				
N/A	≤100 feet	≤300 feet	Operation at ≤100 feet	≤100 feet
<b>Tactical Air Navigation (TACAN)</b>				
N/A	Capabilities equivalent to LVT	Capabilities equivalent to LVT	Capabilities equivalent to LVT	Capabilities equivalent to LVT
<b>Spectrum Certification</b>				
N/A	Meets DD-1494 Stage 4	Meets DD-1494 Stage 4	DD-1494 Stage 4 issued.	Meets DD-1494 Stage 4
<b>Memory/Processor Reserve</b>				
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
<b>Operational Communications</b>				
<b>Passive Synchronization</b>				

N/A	Fine Sync achieved passively	Fine Sync achieved passively	Achieved Fine Sync passively	Fine Sync achieved passively
<b>Automatic Message Acknowledgement</b>				
N/A	IAW Mil-STD 6016C	IAW Mil-STD 6016C	Automatic Message Acknowledgement IAW Mil-STD 6016C	IAW Mil-STD 6016C
<b>Crypto Control (CTP-11)</b>				
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
<b>Multi-Net (CTP-10)/8d</b>				
N/A	2 simultaneous nets	2 simultaneous nets	Performance of two simultaneous nets	2 simultaneous nets
<b>GIG Requirements</b>				
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
<b>Key Information Profile (KIP)</b>				
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
<b>Design per NCOW RM</b>				
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
<b>Information Exchange Requirements met</b>				
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
<b>Enable CMN/CCR Reception</b>				
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)

**Requirements Reference**

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

**Change Explanations**

None

**Notes**

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  
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  
OTAR - Over the Air Re-keying  
PAC4 - Packed-4

PCD - Percent Correct Detect

sec - second(s)

SINGARS - 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

### General Notes

The current RDT&E increased to fully fund MIDS Joint Tactical Radio System (JTRS) Tactical targeting Network technology (TTNT) development.

The current production terminal procurement estimate increased by a total of 2,149 terminals due to the large procurement order from the U.S. Air Force (Platforms: F-15, F-16, F-22).

### RDT&E

Appn	BA	PE		
Navy	1319	05	0205604N	
	<b>Project</b>		<b>Name</b>	
	2126		Tactical Data Links	(Shared) (Sunk)
	<b>Notes:</b>		ATDLS Integration	
Navy	1319	07	0205604N	
	<b>Project</b>		<b>Name</b>	
	2126		Tactical Data Links	(Shared)
	<b>Notes:</b>		ATDLS Integration	
	3020		Tactical Data Links	(Shared)
	<b>Notes:</b>		MIDS/JTRS	
Navy	1319	05	0604234N	
	<b>Project</b>		<b>Name</b>	
	3051		Advanced Hawkeye	(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)	(Shared) (Sunk)
	<b>Notes:</b>		MIDS/JTRS	
	3073		Joint Tactical Radio System (JTRS)	(Shared) (Sunk)
	<b>Notes:</b>		AMF/JTRS	
Army	2040	05	0603713A	
	<b>Project</b>		<b>Name</b>	
	D370			(Shared) (Sunk)
	<b>Notes:</b>		Army MIDS/Army MIDS	
Army	2040	05	0604280A	
	<b>Project</b>		<b>Name</b>	
	162		Joint Tactical Radio System	(Shared) (Sunk)

(JTRS)

**Notes:** Network Enterprise Domain (NED)

Air Force	3600	07	0101126F	
	<b>Project</b>		<b>Name</b>	
	675344		B-1B Squadrons	(Shared)
Air Force	3600	07	0101127F	
	<b>Project</b>		<b>Name</b>	
	675345		B-2 Squadrons	(Shared)
Air Force	3600	05	0207130F	
	<b>Project</b>		<b>Name</b>	
	F15		Air Force MIDS/F-15C/D	(Shared) (Sunk)
Air Force	3600	07	0207133F	
	<b>Project</b>		<b>Name</b>	
	672671		F-16 Squadrons	(Shared)
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	07	0207134F	
	<b>Project</b>		<b>Name</b>	
	676020		F-15 Squadrons	(Shared)
Air Force	3600	07	0207138F	
	<b>Project</b>		<b>Name</b>	
	674788		F-22 Squadrons	(Shared)
Air Force	3600	07	0207417F	
	<b>Project</b>		<b>Name</b>	
	67411L		Airborne Warning and Control System (AWACS)	(Shared)
Air Force	3600	07	0207448F	
	<b>Project</b>		<b>Name</b>	
	675045		C2ISR Tactical Data Link	(Shared)
Air Force	3600	07	0208006F	
	<b>Project</b>		<b>Name</b>	
	675380		Mission Planning Systems	(Shared)
Air Force	3600	07	0305207F	
	<b>Project</b>		<b>Name</b>	
	674754		Manned Reconnaissance Systems	(Shared)
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)	

Air Force	3600	05	0604281F
	<b>Project</b>	<b>Name</b>	
	655050	Tactical Data Networks Enterprise (Shared)	

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**

	<b>Appn</b>	<b>BA</b>	<b>PE</b>
Navy	1506	01	0204136N
	<b>Line Item</b>	<b>Name</b>	
	0145	F-18 Series (Shared) (Sunk)	

Navy	1506	05	0204154N
	<b>Line Item</b>	<b>Name</b>	
	0511	EA-6 Series (Shared)	

Navy	1506	05	0204136N
	<b>Line Item</b>	<b>Name</b>	
	0525	F-18 Series (Shared)	

Navy	1506	05	0204152N
	<b>Line Item</b>	<b>Name</b>	
	0544	EW Development (Shared) (Sunk)	
	<b>Notes:</b>	EA-6 Series Sunk FY16	

Navy	1611	02	0204112N
	<b>Line Item</b>	<b>Name</b>	
	2001	Carrier Replacement Program (Shared)	
	2086	Multi-Purpose CVNs (Shared) (Sunk)	

Navy	1611	02	0204222N
	<b>Line Item</b>	<b>Name</b>	
	2122	DDG (Shared)	

Navy	1611	02	0204230N
	<b>Line Item</b>	<b>Name</b>	
	2127	Littoral Combat Ship (Shared)	

Navy	1611	03	0204411N
	<b>Line Item</b>	<b>Name</b>	
	3035	Amphibious Assault Ships	(Shared) (Sunk)
	3036	LPD-17	(Shared)
Navy	1611	05	0204411N
	<b>Line Item</b>	<b>Name</b>	
	5110	Outfitting	(Shared)
Navy	1810	02	0205604N
	<b>Line Item</b>	<b>Name</b>	
	2614	Advanced Tactical Data Link System	(Shared)
Army	2035	02	0214400A
	<b>Line Item</b>	<b>Name</b>	
	B22603	Radio Terminal Set, MIDS-LVT (2)	(Shared)
Air Force	3010	05	0604281F
	<b>Line Item</b>	<b>Name</b>	
	655262	Tactical Data Networks Enterprise	(Shared)
Air Force	3010	05	0207446F
	<b>Line Item</b>	<b>Name</b>	
	B00200	ABL	(Shared)
Air Force	3010	07	0207132F
	<b>Line Item</b>	<b>Name</b>	
	F01500	F-15	(Shared)
Air Force	3010	05	0207130F
	<b>Line Item</b>	<b>Name</b>	
	F01500	F-15	(Shared) (Sunk)
Air Force	3010	05	0207133F
	<b>Line Item</b>	<b>Name</b>	
	F01600	F-16	(Shared)
Air Force	3010	07	0207133F
	<b>Line Item</b>	<b>Name</b>	
	F0160P	F-16	(Shared) (Sunk)
Air Force	3010	05	0207423F
	<b>Line Item</b>	<b>Name</b>	
	MN9860	Joint Tactical Radio System	(Shared)
Air Force	3010	05	0207133F
	<b>Line Item</b>	<b>Name</b>	
	OTHACF	Other Aircraft	(Shared)
	<b>Notes:</b>	Battlefield ABN Comm Node (BACN)	
Air Force	3080	03	0207448F
	<b>Line Item</b>	<b>Name</b>	

831010 Comsec Equipment (Shared)  
 834010 General Information (Shared)  
 Technology

Air Force 3080 03 0401840F  

Line Item	Name
834070	AMC Command and Control System

 (Shared)

Air Force 3080 03 0201131F  

Line Item	Name
835140	Air Combat Command Communications

 (Shared)  
**Notes:** AFCENT

Air Force 3080 02 0207133F  

Line Item	Name
F01600	F-16

 (Shared) (Sunk)

Defense-Wide 0300 02  

Line Item	Name
10	DOD

 (Shared) (Sunk)

Defense-Wide 0300 02 0208865C  

Line Item	Name
2257	DA, Patriot

 (Shared) (Sunk)

Defense-Wide 0300 02 0208861C  

Line Item	Name
2260	DA, THAAD

 (Shared) (Sunk)

Defense-Wide 0300 02  

Line Item	Name
30	GAPO

 (Shared) (Sunk)

## Cost and Funding

### Cost Summary

Total Acquisition Cost							
Appropriation	BY 2003 \$M			BY 2003 \$M	TY \$M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	869.4	1637.5	1801.3	1738.8	825.8	1750.6	1877.0
Procurement	955.4	1393.5	1532.9	2133.5 <sup>1</sup>	993.1	1585.6	2615.7
Flyaway	--	--	--	1946.3	--	--	2407.1
Recurring	--	--	--	1873.8	--	--	2335.7
Non Recurring	--	--	--	72.5	--	--	71.4
Support	--	--	--	187.2	--	--	208.6
Other Support	--	--	--	39.8	--	--	44.8
Initial Spares	--	--	--	147.4	--	--	163.8
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	3872.3	1818.9	3336.2	4492.7

<sup>1</sup> APB Breach

#### Confidence Level

Confidence Level of cost estimate for current APB: 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.

#### Cost Notes

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.

The current production terminal procurement estimate increased by a total of 2,149 terminals due to the procurement order from the U.S. Air Force (Platforms: F-15, F-16, F-22).

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	143	488	604
Procurement	2821	5745	8000
Total	2964	6233	8604

#### Quantity Notes

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).

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.

The current production terminal procurement estimate increased by a total of 2,149 terminals due to the procurement order from the U.S. Air Force (Platforms: F-15, F-16, F-22) and the U.S. Navy.

## Cost and Funding

### Funding Summary

Appropriation Summary									
FY 2017 President's Budget / December 2015 SAR (TY\$ M)									
Appropriation	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
RDT&E	1670.4	73.7	57.4	21.1	17.8	18.1	18.5	0.0	1877.0
Procurement	1403.8	100.9	155.2	223.4	252.0	195.3	115.1	170.0	2615.7
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 2017 Total	3074.2	174.6	212.6	244.5	269.8	213.4	133.6	170.0	4492.7
PB 2016 Total	2999.2	137.4	137.6	119.5	80.8	71.6	0.0	0.0	3546.1
Delta	75.0	37.2	75.0	125.0	189.0	141.8	133.6	170.0	946.6

Quantity Summary										
FY 2017 President's Budget / December 2015 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Development	604	0	0	0	0	0	0	0	0	604
Production	0	5063	320	438	688	744	432	133	182	8000
PB 2017 Total	604	5063	320	438	688	744	432	133	182	8604
PB 2016 Total	548	4941	203	176	232	157	142	0	0	6399
Delta	56	122	117	262	456	587	290	133	182	2205

## Cost and Funding

### Annual Funding By Appropriation

Annual Funding							
0400   RDT&E   Research, Development, Test, and Evaluation, Defense-Wide							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
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
Subtotal	70	--	--	--	--	--	372.7

Annual Funding							
0400   RDT&E   Research, Development, Test, and Evaluation, Defense-Wide							
Fiscal Year	Quantity	BY 2003 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
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
Subtotal	70	--	--	--	--	--	397.6

Annual Funding							
1319   RDT&E   Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
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	--	--	--	--	--	--	100.8
2013	--	--	--	--	--	--	47.2
2014	--	--	--	--	--	--	120.7
2015	--	--	--	--	--	--	80.5
2016	--	--	--	--	--	--	70.2
2017	--	--	--	--	--	--	57.4
2018	--	--	--	--	--	--	21.1
2019	--	--	--	--	--	--	17.8
2020	--	--	--	--	--	--	18.1
2021	--	--	--	--	--	--	18.5
Subtotal	202	--	--	--	--	--	1366.0

Annual Funding							
1319   RDT&E   Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2003 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
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	--	--	--	--	--	--	82.0
2013	--	--	--	--	--	--	38.0
2014	--	--	--	--	--	--	95.8
2015	--	--	--	--	--	--	63.1
2016	--	--	--	--	--	--	54.1
2017	--	--	--	--	--	--	43.5
2018	--	--	--	--	--	--	15.7
2019	--	--	--	--	--	--	13.0
2020	--	--	--	--	--	--	12.9
2021	--	--	--	--	--	--	13.0
Subtotal	202	--	--	--	--	--	1213.5

Annual Funding							
2040   RDT&E   Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
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
2014	--	--	--	--	--	--	0.2
Subtotal	78	--	--	--	--	--	27.1

Annual Funding 2040   RDT&E   Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	BY 2003 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
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
2014	--	--	--	--	--	--	0.2
Subtotal	78	--	--	--	--	--	25.9

Annual Funding							
3600   RDT&E   Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
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	--	--	--	--	--	--	3.6
2014	--	--	--	--	--	--	2.6
2015	--	--	--	--	--	--	18.2
2016	--	--	--	--	--	--	3.5
Subtotal	254	--	--	--	--	--	111.2

Annual Funding							
3600   RDT&E   Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 2003 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1997	--	--	--	--	--	--	4.1
1998	--	--	--	--	--	--	8.4
1999	--	--	--	--	--	--	0.2
2000	--	--	--	--	--	--	6.5
2001	--	--	--	--	--	--	3.9
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	--	--	--	--	--	--	2.9
2014	--	--	--	--	--	--	2.1
2015	--	--	--	--	--	--	14.3
2016	--	--	--	--	--	--	2.7
Subtotal	254	--	--	--	--	--	101.8

Annual Funding 0300   Procurement   Procurement, Defense-Wide							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
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
2012	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	--
2014	2	0.5	--	--	0.5	--	0.5
Subtotal	58	14.1	0.2	4.5	18.8	2.0	20.8

Annual Funding 0300   Procurement   Procurement, Defense-Wide							
Fiscal Year	Quantity	BY 2003 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
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
2012	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	--
2014	2	0.4	--	--	0.4	--	0.4
Subtotal	58	13.5	0.2	4.7	18.4	2.0	20.4

This appropriation provides for the procurement of the Army unique MIDS Low Volume Terminal (MIDS-LVT) (2) and MIDS-LVT (11) variants for the Patriot Air Defense System, THAAD and GAPO. There was an overall decrease in this appropriation due to the Army GAPO de-obligating 2 terminals since the previous SAR.

Annual Funding 1506   Procurement   Aircraft Procurement, Navy								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
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	31.6	0.2	--	31.8	7.5	39.3	
2013	262	74.8	0.2	--	75.0	--	75.0	
2014	176	48.5	0.2	--	48.7	2.5	51.2	
2015	62	13.6	0.2	--	13.8	7.2	21.0	
2016	215	57.3	0.2	--	57.5	5.7	63.2	
2017	235	65.1	0.2	--	65.3	7.1	72.4	
2018	268	76.6	0.2	--	76.8	4.1	80.9	
2019	190	63.6	0.2	--	63.8	2.7	66.5	
2020	154	93.2	0.2	--	93.4	2.9	96.3	
2021	86	86.8	0.2	--	87.0	1.6	88.6	
2022	78	78.5	0.2	--	78.7	--	78.7	
2023	43	63.8	--	--	63.8	--	63.8	
Subtotal	3510	1088.8	31.3	36.3	1156.4	120.8	1277.2	

Annual Funding 1506   Procurement   Aircraft Procurement, Navy								
Fiscal Year	Quantity	BY 2003 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
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	3.2	27.1	
2012	128	25.4	0.2	--	25.6	6.0	31.6	
2013	262	59.5	0.2	--	59.7	--	59.7	
2014	176	38.1	0.2	--	38.3	1.9	40.2	
2015	62	10.5	0.2	--	10.7	5.6	16.3	
2016	215	43.6	0.2	--	43.8	4.3	48.1	
2017	235	48.6	0.1	--	48.7	5.4	54.1	
2018	268	56.1	0.1	--	56.2	3.0	59.2	
2019	190	45.7	0.1	--	45.8	1.9	47.7	
2020	154	65.6	0.1	--	65.7	2.1	67.8	
2021	86	59.9	0.1	--	60.0	1.1	61.1	
2022	78	53.1	0.1	--	53.2	--	53.2	
2023	43	42.3	--	--	42.3	--	42.3	
Subtotal	3510	851.7	28.8	36.9	917.4	105.1	1022.5	

This appropriation identifies the MIDS Low Volume Terminal (MIDS-LVT) and MIDS Joint Tactical Radio System (MIDS JTRS) core, CMN4 and TTNT that are planned for the Navy F/A-18C/D/E/F, E/A-18G, E-2D, P-3, P-8, KC-130, EP-3E, MH-60R/S, the EA-6B.

This appropriation increased by 72 MIDS-LVT terminals and 403 MIDS JTRS terminals since the previous SAR.

Annual Funding 1611   Procurement   Shipbuilding and Conversion, Navy								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
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	5	0.9	--	--	0.9	--	0.9	
2014	5	0.9	--	--	0.9	--	0.9	
2015	3	0.5	--	--	0.5	--	0.5	
2016	3	0.7	--	--	0.7	--	0.7	
2017	8	2.3	--	--	2.3	--	2.3	
2018	3	1.1	--	--	1.1	--	1.1	
2019	4	2.8	--	--	2.8	--	2.8	
2020	5	5.3	--	--	5.3	--	5.3	
2021	4	4.3	--	--	4.3	--	4.3	
2022	1	2.6	--	--	2.6	--	2.6	
2023	1	2.2	--	--	2.2	--	2.2	
Subtotal	85	33.5	--	--	33.5	--	33.5	

Annual Funding 1611   Procurement   Shipbuilding and Conversion, Navy								
Fiscal Year	Quantity	BY 2003 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
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	0.9	--	--	0.9	--	0.9	
2012	7	0.9	--	--	0.9	--	0.9	
2013	5	0.6	--	--	0.6	--	0.6	
2014	5	0.6	--	--	0.6	--	0.6	
2015	3	0.3	--	--	0.3	--	0.3	
2016	3	0.4	--	--	0.4	--	0.4	
2017	8	1.4	--	--	1.4	--	1.4	
2018	3	0.7	--	--	0.7	--	0.7	
2019	4	1.6	--	--	1.6	--	1.6	
2020	5	3.0	--	--	3.0	--	3.0	
2021	4	2.4	--	--	2.4	--	2.4	
2022	1	1.4	--	--	1.4	--	1.4	
2023	1	1.2	--	--	1.2	--	1.2	
Subtotal	85	21.7	--	--	21.7	--	21.7	

This appropriation identifies the MIDS on Ship variant for new construction surface ships. This appropriation increased by 6 MIDS-LVT terminals and 26 MIDS JTRS terminals since the previous SAR.

Annual Funding 1810   Procurement   Other Procurement, Navy								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
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	6	1.2	--	--	1.2	--	1.2	
2013	26	7.0	--	--	7.0	--	7.0	
2014	6	1.3	--	--	1.3	--	1.3	
2015	15	2.8	--	--	2.8	--	2.8	
2016	30	8.0	--	--	8.0	--	8.0	
2017	35	9.3	--	--	9.3	--	9.3	
2018	27	9.3	--	--	9.3	--	9.3	
2019	15	11.4	--	--	11.4	--	11.4	
2020	15	9.5	--	--	9.5	--	9.5	
2021	5	4.2	--	--	4.2	--	4.2	
2022	1	4.9	--	--	4.9	--	4.9	
Subtotal	313	99.8	--	0.1	99.9	0.7	100.6	

Annual Funding 1810   Procurement   Other Procurement, Navy								
Fiscal Year	Quantity	BY 2003 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
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	6	1.0	--	--	1.0	--	1.0	
2013	26	5.6	--	--	5.6	--	5.6	
2014	6	1.0	--	--	1.0	--	1.0	
2015	15	2.2	--	--	2.2	--	2.2	
2016	30	6.1	--	--	6.1	--	6.1	
2017	35	7.0	--	--	7.0	--	7.0	
2018	27	6.8	--	--	6.8	--	6.8	
2019	15	8.2	--	--	8.2	--	8.2	
2020	15	6.7	--	--	6.7	--	6.7	
2021	5	2.9	--	--	2.9	--	2.9	
2022	1	3.3	--	--	3.3	--	3.3	
Subtotal	313	77.7	--	0.1	77.8	0.7	78.5	

This appropriation increased by 57 MIDS-Low Volume Terminal (MIDS-LVT) terminals and 107 MIDS Joint Tactical Radio System (JTRS) terminals since the previous SAR.

Annual Funding								
2035   Procurement   Other Procurement, Army								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
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	2.0	--	--	2.0	0.1	2.1	
2013	5	3.3	--	--	3.3	0.4	3.7	
2014	1	1.1	--	--	1.1	0.1	1.2	
2015	2	0.1	--	--	0.1	3.9	4.0	
2016	1	9.4	--	--	9.4	--	9.4	
2017	1	12.4	--	--	12.4	--	12.4	
2018	1	12.4	--	--	12.4	--	12.4	
2019	1	11.4	--	--	11.4	--	11.4	
2020	1	5.5	--	--	5.5	--	5.5	
2021	1	6.5	--	--	6.5	--	6.5	
Subtotal	427	159.8	--	--	159.8	12.5	172.3	

Annual Funding 2035   Procurement   Other Procurement, Army								
Fiscal Year	Quantity	BY 2003 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
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	1.6	--	--	1.6	0.1	1.7	
2013	5	2.6	--	--	2.6	0.3	2.9	
2014	1	0.9	--	--	0.9	--	0.9	
2015	2	0.1	--	--	0.1	3.0	3.1	
2016	1	7.2	--	--	7.2	--	7.2	
2017	1	9.3	--	--	9.3	--	9.3	
2018	1	9.1	--	--	9.1	--	9.1	
2019	1	8.2	--	--	8.2	--	8.2	
2020	1	3.9	--	--	3.9	--	3.9	
2021	1	4.5	--	--	4.5	--	4.5	
Subtotal	427	131.8	--	--	131.8	10.2	142.0	

This appropriation provides for the procurement of the Army unique MIDS Low Volume Terminal (MIDS-LVT) (2) and MIDS-LVT (11) variants. This appropriation increased by 2 MIDS-LVT terminals since the previous SAR.

Annual Funding								
3010   Procurement   Aircraft Procurement, Air Force								
Fiscal Year	Quantity	TY \$M						Total Program
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support		
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	--	25.8	
2013	43	11.3	--	--	11.3	--	11.3	
2014	34	11.7	--	--	11.7	--	11.7	
2015	1	5.8	--	--	5.8	--	5.8	
2016	65	17.8	--	--	17.8	--	17.8	
2017	148	46.4	--	--	46.4	--	46.4	
2018	377	109.4	--	--	109.4	--	109.4	
2019	522	153.3	--	--	153.3	--	153.3	
2020	233	72.7	--	--	72.7	--	72.7	
2021	37	11.5	--	--	11.5	--	11.5	
2022	23	7.0	--	--	7.0	--	7.0	
2023	13	3.9	--	--	3.9	--	3.9	
2024	22	6.9	--	--	6.9	--	6.9	
Subtotal	2717	719.5	--	4.5	724.0	59.4	783.4	

Annual Funding								
3010   Procurement   Aircraft Procurement, Air Force								
Fiscal Year	Quantity	BY 2003 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
2001	52	8.5	--	4.4	12.9	6.9	19.8	
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	32.7	--	0.1	32.8	4.0	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	3.7	16.4	
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	20.8	--	--	20.8	--	20.8	
2013	43	8.9	--	--	8.9	--	8.9	
2014	34	9.1	--	--	9.1	--	9.1	
2015	1	4.5	--	--	4.5	--	4.5	
2016	65	13.4	--	--	13.4	--	13.4	
2017	148	34.3	--	--	34.3	--	34.3	
2018	377	79.4	--	--	79.4	--	79.4	
2019	522	109.1	--	--	109.1	--	109.1	
2020	233	50.7	--	--	50.7	--	50.7	
2021	37	7.9	--	--	7.9	--	7.9	
2022	23	4.7	--	--	4.7	--	4.7	
2023	13	2.6	--	--	2.6	--	2.6	
2024	22	4.4	--	--	4.4	--	4.4	
Subtotal	2717	567.5	--	4.5	572.0	56.0	628.0	

This appropriation identifies the MIDS Low Volume Terminal (MIDS-LVT) and MIDS Joint Tactical Radio System (MIDS JTRS) terminals that are planned for the F-15, F-22, F-16, AC-130, RC-135, EC130E/H, B-1, E-8C, the Airborne Laser and United States Air Force shore sites. This appropriation increased by 67 MIDS-LVT terminals and 1346 MIDS JTRS terminals since the previous SAR.

Annual Funding								
3080   Procurement   Other Procurement, Air Force								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
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	
2004	--	--	--	--	--	--	--	
2005	--	--	--	--	--	--	--	
2006	--	--	--	--	--	--	--	
2007	--	--	--	--	--	--	--	
2008	--	--	--	--	--	--	--	
2009	--	--	--	--	--	--	--	
2010	--	--	--	--	--	--	--	
2011	--	--	--	--	--	--	--	
2012	--	--	--	--	--	--	--	
2013	--	--	--	--	--	--	--	
2014	--	--	--	--	--	--	--	
2015	--	--	--	--	--	--	--	
2016	6	1.8	--	--	1.8	--	1.8	
2017	11	12.4	--	--	12.4	--	12.4	
2018	12	10.3	--	--	10.3	--	10.3	
2019	12	6.6	--	--	6.6	--	6.6	
2020	24	6.0	--	--	6.0	--	6.0	
Subtotal	890	187.1	1.6	26.0	214.7	13.2	227.9	

Annual Funding 3080   Procurement   Other Procurement, Air Force							
Fiscal Year	Quantity	BY 2003 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1996	6	3.2	--	--	3.2	--	3.2
1997	--	--	--	0.3	0.3	--	0.3
1998	77	19.2	--	15.7	34.9	1.0	35.9
1999	173	33.8	0.3	--	34.1	2.2	36.3
2000	294	50.3	0.7	0.5	51.5	3.8	55.3
2001	148	26.5	0.6	4.4	31.5	1.0	32.5
2002	97	18.2	--	5.4	23.6	--	23.6
2003	30	0.4	--	--	0.4	5.2	5.6
2004	--	--	--	--	--	--	--
2005	--	--	--	--	--	--	--
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	--
2014	--	--	--	--	--	--	--
2015	--	--	--	--	--	--	--
2016	6	1.4	--	--	1.4	--	1.4
2017	11	9.5	--	--	9.5	--	9.5
2018	12	7.7	--	--	7.7	--	7.7
2019	12	4.8	--	--	4.8	--	4.8
2020	24	4.3	--	--	4.3	--	4.3
Subtotal	890	179.3	1.6	26.3	207.2	13.2	220.4

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 \$3.0M) reports the United States Air Force funds contributed to the qualification and build of six FDL terminals. Additional funds in excess of \$8.0M were contributed by the contractor, Data Link Solutions L.L.C., for completion of the full qualification program requirements.

This appropriation also includes the MIDS-Low Volume Terminal (MIDS-LVT) procurement for the Air Force. This appropriation increased by 65 MIDS-LVT terminals since the previous SAR.

## Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
<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 MDA 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, USD (AT&L) General Counsel and senior staff changed the title of the 2009 DAB decision for MIDS JTRS to Limited Production and Fielding (LP&F). A follow-on decision for the MIDS JTRS variant was made for Full Production and Fielding (FP&F), and not FRP. On December 23, 2009 an 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 (JSTARS) 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	Description
Kuwait	9/24/2015	4	0.9	Date of sale listed is the most current buy on FMS case KU-B-UMG.
Netherlands	9/24/2015	10	5.4	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.
Australia	9/18/2015	271	60.4	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; AT-P-LFA). Date of sale listed is the most current buy.
United Kingdom	9/18/2015	10	3.2	Total Costs are cumulative over multiple years and FMS cases (UK-D-SAO; UK-P-LVE). Date of sale listed is the most current buy.
Oman	8/31/2015	72	13.7	Total Costs are cumulative over multiple years and FMS cases (MU-D-SAB; MU-P-LAP). Date of sale listed is the most current buy.
Romania	8/31/2015	15	2.7	Total Cost is cumulative over multiple years. Date of sale listed is the most current buy on FMS case RO-D-QAH.
Thailand	8/31/2015	24	4.5	Total Costs are cumulative over multiple years and FMS cases (TH-D-QCZ; TH-P-LFA). Date of sale listed is the most current buy.
Singapore	3/6/2015	61	7.5	Total Costs are cumulative over multiple years and FMS cases (SN-D-SAA; SN-D-SAC; SN-D-BAA; SN-D-QAT). Date of sale listed is the most current buy.
Japan	3/5/2015	149	32.8	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; JA-P-LYQ; JA-P-LYP; JA-P-LYT; JA-P-LYV; JA-P-LYX; JA-P-LZG; JA-P-NAF). Date of sale listed is the most current buy.
Saudi Arabia	2/20/2015	241	18.6	Total Costs are cumulative over multiple years and FMS cases (SR-D-QAB; SR-D-SAI, SR-P-LCO; SR-D-QBP). Date of sale listed is the most current buy. *Not all cost data is available. 165 terminals without pricing.*
Belgium	1/20/2015	84	18.2	Total Costs are cumulative over multiple years and FMS cases (BE-D-DZV; BE-D-QAT, BE-P-LBB). Date of sale listed is the most current buy.
Canada	1/20/2015	144	31.3	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, CN-P-LJR). Date of sale listed is the most current buy.

Poland	1/20/2015	78	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.
South Korea	12/29/2014	34	9.0	Total Costs are cumulative over multiple years and FMS cases (KS-P-BTV; KS-P-GOL; KS-P-LPN; KS-P-QDW; KS-P-BVB). Date of sale listed is the most current buy.
Finland	9/30/2014	120	23.2	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.
New Zealand	9/30/2014	9	1.6	Date of sale listed is the most current buy on FMS case (NZ-P-LAJ; NZ-P-LAZ; NZ-P-LAU).
Chile	8/7/2014	25	3.7	Date of sale listed is the most current buy on FMS case CI-P-LCW.
Jordan	8/7/2014	34	5.6	Total Costs are cumulative over multiple years and FMS cases (JO-P-LAZ; JO-P-LBG; JO-D-QBK). Date of sale listed is the most current buy.
Portugal	8/7/2014	46	8.5	Date of sale listed is the most current buy on FMS case PT-D-NAE; PT-P-LDH.
Switzerland	8/5/2013	60	14.6	Date of sale listed is the most current buy on FMS case SZ-P-LAC; SZ-P-LAH.
United Arab Emirates	8/5/2013	19	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.
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.
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.
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.
Austria	5/12/2008	24	0.0	FMS total costs not releasable for Austria. AU-P-LAD.
Sweden	8/28/2006	28	4.9	Date of sale listed is the most current buy on FMS case SW-P-LAO.
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.
---------	-----------	---	-----	---

**Notes**

The above FMS cases, with the exception of United Kingdom (UK-D-SAO; UK-P-LVE) and Australia (AT-P-SCI; AT-P-LFA) for MIDS Joint Tactical Radio System (MIDS JTRS) terminals, are for MIDS Low Volume Terminals (MIDS-LVT).

Direct Commercial Sales (DCS) totaling 968 MIDS-LVT terminals have been implemented to date with Australia (16), Belgium (2), Denmark (77), Greece (6), Iceland (3), Japan (2), Korea (183), North Atlantic Treaty Organization (NATO) Air Command and Control System (ACCS) Management Agency (NACMA) (72), Netherlands (149), NATO EuroFighter 2000 and Tornado Management Agency (36), Norway (31), Poland (2), Singapore (7), Sweden (140), Turkey (15) and United Kingdom (227). (Cost information for direct commercial sales is not available nor is date of sale). Per CJCSI 6510.0C, DCS sales for MIDS-LVT and MIDS JTRS are no longer sanctioned, except for a case-by-case basis with Australia, Canada, New Zealand, and the United Kingdom, or a one-time waiver has already been obtained.

Other foreign sales for 42 MIDS-LVT terminals at a cost of 12.2\$M were implemented through February 2015 with the European Participating Air Force (3) and German competitive buys (39).

**Nuclear Costs**

None

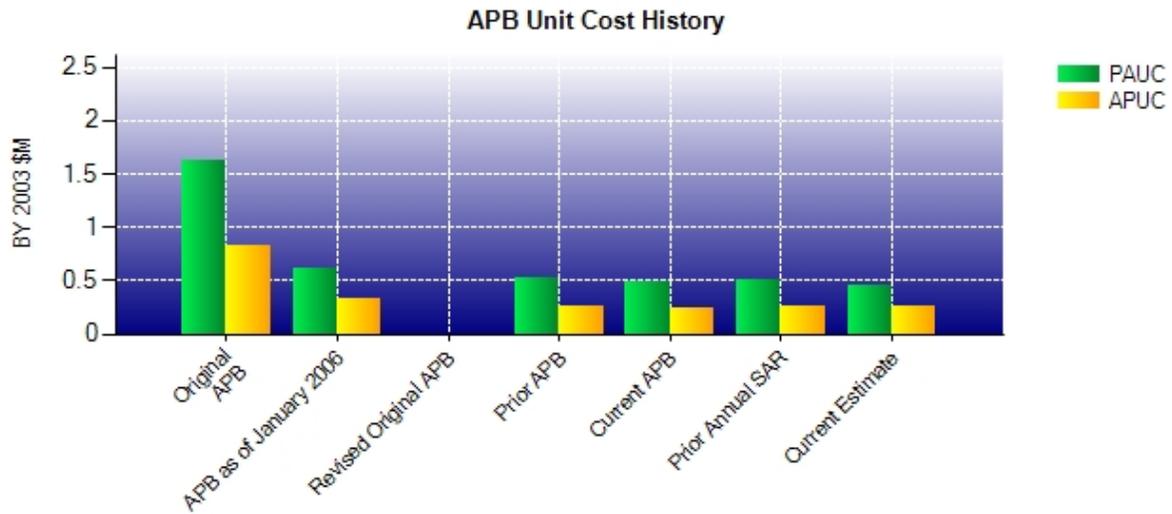
## Unit Cost

### Unit Cost Report

Item	BY 2003 \$M	BY 2003 \$M	% Change
	Current UCR Baseline (Nov 2013 APB)	Current Estimate (Dec 2015 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	3031.0	3872.3	
Quantity	6233	8604	
Unit Cost	0.486	0.450	-7.41
<b>Average Procurement Unit Cost</b>			
Cost	1393.5	2133.5	
Quantity	5745	8000	
Unit Cost	0.243	0.267	+9.88

Item	BY 2003 \$M	BY 2003 \$M	% Change
	Original UCR Baseline (Mar 1994 APB)	Current Estimate (Dec 2015 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	1091.4	3872.3	
Quantity	672	8604	
Unit Cost	1.624	0.450	-72.29
<b>Average Procurement Unit Cost</b>			
Cost	523.7	2133.5	
Quantity	630	8000	
Unit Cost	0.831	0.267	-67.87

**Unit Cost History**



Item	Date	BY 2003 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Mar 1994	1.625	0.831	1.666	0.931
APB as of January 2006	Jun 2004	0.616	0.339	0.614	0.352
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Apr 2012	0.533	0.255	0.573	0.280
Current APB	Nov 2013	0.486	0.243	0.535	0.276
Prior Annual SAR	Dec 2014	0.500	0.258	0.554	0.296
Current Estimate	Dec 2015	0.450	0.267	0.522	0.327

**SAR Unit Cost History**

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Production Estimate
	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 Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.614	0.002	-0.159	-0.007	0.068	-0.003	0.000	0.007	-0.092	0.522

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Production Estimate
	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 Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.352	0.001	0.021	-0.007	-0.015	-0.032	0.000	0.007	-0.025	0.327

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	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	Dec 1999
IOC	N/A	Dec 2000	N/A	Jan 2001
Total Cost (TY \$M)	N/A	1119.5	1818.9	4492.7
Total Quantity	N/A	672	2964	8604
PAUC	N/A	1.666	0.614	0.522

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 IOC 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 an FRP decision approved by the Assistant Secretary of the Navy (Research, Development and Acquisition) in an ADM dated December 8, 2003.

## Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	825.8	993.1	--	1818.9
Previous Changes				
Economic	+7.1	+14.5	--	+21.6
Quantity	+92.4	+1089.2	--	+1181.6
Schedule	-0.2	-31.5	--	-31.7
Engineering	+705.6	-69.2	--	+636.4
Estimating	+178.0	-319.0	--	-141.0
Other	--	--	--	--
Support	+3.7	+56.6	--	+60.3
Subtotal	+986.6	+740.6	--	+1727.2
Current Changes				
Economic	-1.6	-3.0	--	-4.6
Quantity	+13.9	+894.9	--	+908.8
Schedule	--	-26.0	--	-26.0
Engineering	--	-47.4	--	-47.4
Estimating	+52.3	+61.7	--	+114.0
Other	--	--	--	--
Support	--	+1.8	--	+1.8
Subtotal	+64.6	+882.0	--	+946.6
Total Changes	+1051.2	+1622.6	--	+2673.8
CE - Cost Variance	1877.0	2615.7	--	4492.7
CE - Cost & Funding	1877.0	2615.7	--	4492.7

Summary BY 2003 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	869.4	955.4	--	1824.8
Previous Changes				
Economic	--	--	--	--
Quantity	+84.3	+850.4	--	+934.7
Schedule	-0.4	-9.0	--	-9.4
Engineering	+592.9	-53.9	--	+539.0
Estimating	+138.7	-278.6	--	-139.9
Other	--	--	--	--
Support	+3.2	+44.3	--	+47.5
Subtotal	+818.7	+553.2	--	+1371.9
Current Changes				
Economic	--	--	--	--
Quantity	+10.9	+636.0	--	+646.9
Schedule	--	-15.0	--	-15.0
Engineering	--	-33.4	--	-33.4
Estimating	+39.8	+35.8	--	+75.6
Other	--	--	--	--
Support	--	+1.5	--	+1.5
Subtotal	+50.7	+624.9	--	+675.6
Total Changes	+869.4	+1178.1	--	+2047.5
CE - Cost Variance	1738.8	2133.5	--	3872.3
CE - Cost & Funding	1738.8	2133.5	--	3872.3

Previous Estimate: December 2014

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-1.6
Quantity variance resulting from an increase of 35 MIDS Joint Tactical Radio System (JTRS) terminals (Air Force). (Quantity)	+8.4	+10.7
Quantity variance resulting from an increase of 11 MIDS-Low Volume Terminal (LVT) terminals and 6 MIDS JTRS terminals (Navy). (Quantity)	+2.5	+3.2
Revised estimate to align with FY 2017 PB to fully fund MIDS JTRS Tactical Targeting Network Technology (TTNT) (Navy). (Estimating)	+13.0	+18.5
Revised estimate for rate adjustments (Navy). (Estimating)	-1.7	-2.3
Congressional Reduction in FY 2017 (Navy). (Estimating)	-1.3	-1.8
Revised estimate for purchase of 4 MIDS-LVT Block Upgrade 2 retrofit kits for risk reduction terminals (Air Force). (Estimating)	+1.3	+1.6
FY 2014 - FY 2015 New funding for Investigation Reports for implementation of MIDS JTRS to Air Force Platforms (Air Force). (Estimating)	+8.5	+10.8
Additional Funding in FY 2015 for MIDS Modernization and MIDS JTRS TTNT (Navy). (Estimating)	+17.2	+21.9
Revised estimate for MIDS JTRS TTNT High Powered Amplifier technical development (Navy). (Estimating)	+2.0	+2.6
Adjustment for current and prior escalation. (Estimating)	+0.8	+1.0
<b>RDT&amp;E Subtotal</b>	<b>+50.7</b>	<b>+64.6</b>

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-3.0
Acceleration of procurement buy profile (Navy) F-18 earlier buy from FY 2015 to FY 2013 (Schedule)	0.0	-4.8
Quantity variance resulting from an increase of 65 MIDS-LVT terminals from 825 to 890 (Air Force). (Other Procurement, Air Force - OPAF) (Subtotal)	+13.0	+17.6
Quantity variance resulting from an increase of 65 MIDS-LVT terminals from 825 to 890 (Air Force). (OPAF) (Quantity)	(+19.2)	(+26.0)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-0.5)	(-0.6)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-1.1)	(-1.6)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-4.6)	(-6.2)
Quantity variance resulting from an increase of 67 MIDS-LVT terminals and 1346 MIDS JTRS terminals (Air Force). (Aircraft Procurement, Air Force - APAF) (Subtotal)	+285.2	+399.5
Quantity variance resulting from an increase of 67 MIDS-LVT terminals and 1346 MIDS JTRS terminals (Air Force). (APAF) (Quantity)	(+417.8)	(+585.3)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-10.0)	(-14.1)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-21.9)	(-30.8)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-100.7)	(-140.9)
Quantity variance resulting from an increase of 2 MIDS-LVT terminals from 425 to 427 (Army). (Other Procurement, Army - OPA) (Subtotal)	+0.4	+0.6
Quantity variance resulting from an increase of 2 MIDS-LVT terminals from 425 to 427 (Army). (OPA) (Quantity)	(+0.6)	(+0.8)

Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-0.2)	(-0.2)
Quantity variance resulting from an increase of 57 MIDS-LVT terminals and 107 MIDS JTRS terminals (Navy). (Other Procurement, Navy - OPN) (Subtotal)	+33.4	+44.6
Quantity variance resulting from an increase of 57 MIDS-LVT terminals and 107 MIDS JTRS terminals (Navy). (OPN) (Quantity)	(+48.2)	(+64.5)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-1.0)	(-1.3)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-2.3)	(-3.1)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-11.5)	(-15.5)
Quantity variance resulting from an increase of 6 MIDS-LVT terminals and 26 MIDS JTRS terminals (Navy). (Shipbuilding and Conversion, Navy - SCN) (Subtotal)	+6.4	+11.0
Quantity variance resulting from an increase of 6 MIDS-LVT terminals and 26 MIDS JTRS terminals (Navy). (SCN) (Quantity)	(+9.5)	(+16.1)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-0.1)	(-0.2)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-0.4)	(-0.8)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-2.6)	(-4.1)
Quantity variance resulting from an increase of 72 MIDS LVT terminals and 403 MIDS JTRS (Navy). (Aircraft Procurement, Navy - APN) (Subtotal)	+95.2	+136.8
Quantity variance resulting from an increase of 72 MIDS LVT terminals and 403 MIDS JTRS(Navy). (APN) (Quantity)	(+141.3)	(+203.0)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-3.4)	(-5.0)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-7.7)	(-11.1)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-35.0)	(-50.1)
Quantity variance resulting from a decrease of 2 MIDS-LVT terminals from 60 to 58 (DoD). (Procurement Defense Agency - PDA) (Subtotal)	-0.4	-0.5
Quantity variance resulting from a decrease of 2 MIDS-LVT terminals from 60 to 58 (DoD). (PDA) (Quantity)	(-0.6)	(-0.8)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+0.2)	(+0.3)
Revised estimation due to quantity change and retrofit inclusion (OPAF) (Estimating) (QR)	+14.6	+19.5
Revised estimation due to quantity change and retrofit inclusion (OPN) (Estimating) (QR)	+14.6	+20.9
Revised estimation due to quantity change and retrofit inclusion (APAF) (Estimating) (QR)	+18.8	+26.3
Revised estimation due to quantity change and retrofit inclusion (APN) (Estimating) (QR)	+134.9	+198.0
Revised estimation due to quantity change and retrofit inclusion (OPA). (Estimating) (QR)	+0.8	+2.2
Revised estimation due to quantity change and retrofit inclusion (SCN) (Estimating) (QR)	+6.0	+10.8
Adjustment for current and prior escalation. (Estimating)	+0.5	+0.7
Adjustment for current and prior escalation. (Support)	-0.2	-0.2
Decrease in other support for MIDS JTRS and MIDS-LVT due to change in estimation of support necessary for MIDS retrofit kits and repairs (Navy). (APN) (Support)	-1.8	-2.2
Increase in initial spares due to estimation change (Navy). (APN) (Support)	+1.6	+1.7
FY 2015 Increased support due to additional procurement of MIDS-LVT retrofit kits (Army). (OPA) (Support)	+0.7	+0.9
FY 2015 Increased quantity of spares resulting from additional procurement of MIDS-LVT spares (Army). (OPA) (Support)	+2.7	+3.5
FY 2015 Decrease in other support due to an estimating correction (Air Force)(APAF) (Support)	-1.5	-1.9
<b>Procurement Subtotal</b>	<b>+624.9</b>	<b>+882.0</b>

(QR) Quantity Related

## Contracts

### Contract Identification

**Appropriation:** Procurement  
**Contract Name:** MIDS Production Contract  
**Contractor:** BAE Systems/Rockwell Collins Data Link Solutions L.L.C. (DLS)  
**Contractor Location:** 350 Collins Rd NE  
 Cedar Rapids, IA 52498  
**Contract Number:** N00039-10-D-0031  
**Contract Type:** Indefinite Delivery Indefinite Quantity (IDIQ), Firm Fixed Price (FFP), Cost Plus Fixed Fee (CPFF)  
**Award Date:** March 10, 2010  
**Definitization Date:** March 10, 2010

Contract Price							
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	216.4	N/A	619	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 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.

### General Contract Variance Explanation

Cost variance and Schedule variance is not reported for this contract because the contract includes only the production portion, which is FFP and level of effort. The Delivery Orders with EVM are not reported in this Contract value.

**Notes**

The Production for MIDS-Low Volume Terminal (MIDS-LVT) and MIDS Joint Tactical Radio System (MIDS JTRS) terminals are on new contracts which have been added to the report.

The original value of the contract when awarded was \$134.8M in 2010. Since then more IDIQ orders have been awarded and options exercised increasing the value of the contract to \$485.6M (although only \$216.4M has been obligated).

This production contract includes nonrecurring engineering, supportability, and the manufacture of MIDS-LVT terminals, MIDS JTRS 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 DLS. Current Contract Target Price reflects orders awarded to this vendor except for EV efforts which are accounted for separately.

This contract is more than 90% complete; therefore, this is the final report for this contract.

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** MIDS Production Contract  
**Contractor:** ViaSat, INC  
**Contractor Location:** 6155 El Camino Real  
 Carlsbad, CA 92009  
**Contract Number:** N00039-10-D-0032  
**Contract Type:** Indefinite Delivery Indefinite Quantity (IDIQ), Firm Fixed Price (FFP), Cost Plus Fixed Fee (CPFF)  
**Award Date:** March 10, 2010  
**Definitization Date:** March 10, 2010

Contract Price							
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	258.0	N/A	781	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.

**General Contract Variance Explanation**

Cost variance and Schedule variance is not reported for this contract because the contract includes only the production portion, which is FFP and level of effort. The Delivery Orders with EVM are not reported in this Contract value.

**Notes**

The Production for MIDS-Low Volume Terminals (MIDS-LVT) and MIDS Joint Tactical Radio System (MIDS JTRS) terminals are on new contracts which have been added to the report.

The original value of the contract when awarded was \$134.8M in 2010. Since then more IDIQ orders have been awarded and options exercised increasing the value of the contract to \$527.4M (although only \$258M has been obligated).

This production contract includes nonrecurring engineering, supportability, and the manufacture of MIDS-LVT terminals, MIDS JTRS 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.

This contract is more than 90% complete; therefore, this is the final report for this contract.

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** MIDS JTRS Production Contract  
**Contractor:** BAE Systems/Rockwell Collins Data Link Solutions L.L.C. (DLS)  
**Contractor Location:** 350 Collins Rd NE  
 Cedar Rapids, IA 52498  
**Contract Number:** N00039-15-D-0007  
**Contract Type:** Indefinite Delivery Indefinite Quantity (IDIQ), Firm Fixed Price (FFP), Cost Plus Fixed Fee (CPFF)  
**Award Date:** June 17, 2015  
**Definitization Date:** June 17, 2015

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
50.1	N/A	153	50.1	N/A	153	478.6	478.6

**Cost and Schedule Variance Explanations**

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

**General Contract Variance Explanation**

Cost and Schedule variance is not reported for this contract, because thus far no delivery order requiring EVM has been awarded.

**Notes**

This is the first time this contract is being reported.

The overall value with all Options included of this contract is \$478.6M. In the future, more IDIQ orders will be awarded and options exercised increasing the current of the contract.

This production contract includes nonrecurring engineering, supportability, and the manufacture of MIDS Joint Tactical Radio terminals. 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.

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** MIDS Production Contract  
**Contractor:** ViaSat, INC  
**Contractor Location:** 6155 El Camino Real  
 Carlsbad, CA 92009  
**Contract Number:** N00039-15-D-0008  
**Contract Type:** Indefinite Delivery Indefinite Quantity (IDIQ), Firm Fixed Price (FFP), Cost Plus Fixed Fee (CPFF)  
**Award Date:** May 28, 2015  
**Definitization Date:** May 28, 2015

Contract Price								
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager	
19.6	N/A	42	19.6	N/A	42	478.6	478.6	

**Cost and Schedule Variance Explanations**

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

**General Contract Variance Explanation**

Cost and Schedule variance is not reported for this contract, because thus far no delivery order requiring EVM has been awarded.

**Notes**

This is the first time this contract is being reported.

The overall value with all Options included of this contract is \$478.6M. In the future, more IDIQ orders will be awarded and options exercised increasing the current of the contract.

This production contract includes nonrecurring engineering, supportability, and the manufacture of MIDS Joint Tactical Radio System terminal. 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.

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** MIDS-LVT Production Contract  
**Contractor:** BAE Systems/Rockwell Collins Data Link Solutions L.L.C. (DLS)  
**Contractor Location:** 350 Collins Rd NE  
 Cedar Rapids, IA 52498  
**Contract Number:** N00039-15-D-0042  
**Contract Type:** Indefinite Delivery Indefinite Quantity (IDIQ), Firm Fixed Price (FFP), Cost Plus Fixed Fee (CPFF)  
**Award Date:** August 27, 2015  
**Definitization Date:** August 27, 2015

Contract Price								
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager	
14.6	N/A	57	14.6	N/A	57	538.5	538.5	

**Cost and Schedule Variance Explanations**

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

**General Contract Variance Explanation**

Cost and Schedule variance is not reported for this contract, because thus far no delivery order requiring EVM has been awarded.

**Notes**

This is the first time this contract is being reported.

The overall value with all Options included of this contract is \$538.5M. In the future, more IDIQ orders will be awarded and options exercised increasing the current of the contract.

This production contract includes nonrecurring engineering, supportability, and the manufacture of MIDS-Low Volume Terminal (MIDS-LVT). 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.

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** MIDS Production Contract  
**Contractor:** ViaSat, INC  
**Contractor Location:** 6155 El Camino Real  
 Carlsbad, CA 92009  
**Contract Number:** N00039-15-D-0043  
**Contract Type:** Indefinite Delivery Indefinite Quantity (IDIQ), Firm Fixed Price (FFP), Cost Plus Fixed Fee (CPFF)  
**Award Date:** August 21, 2015  
**Definitization Date:** August 21, 2015

Contract Price								
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager	
5.1	N/A	26	5.1	N/A	26	514.3	514.3	

**Cost and Schedule Variance Explanations**

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

**General Contract Variance Explanation**

Cost and Schedule variance is not reported for this contract, because thus far no delivery order requiring EVM has been awarded.

**Notes**

This is the first time this contract is being reported.

The overall value with all Options included of this contract is \$514.3M. In the future, more IDIQ orders will be awarded and options exercised increasing the current of the contract.

This production contract includes nonrecurring engineering, supportability, and the manufacture of MIDS-Low Volume Terminal (MIDS-LVT). 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.

## Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	520	520	604	86.09%
Production	4420	4440	8000	55.50%
Total Program Quantity Delivered	4940	4960	8604	57.65%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	4492.7	Years Appropriated	27
Expended to Date	3090.3	Percent Years Appropriated	77.14%
Percent Expended	68.78%	Appropriated to Date	3248.8
Total Funding Years	35	Percent Appropriated	72.31%

The above data is current as of February 09, 2016.

Total deliveries listed above do not contain EuroMIDS (non-U.S. vendor) terminals (which are not reported in the SAR).

## Operating and Support Cost

### Cost Estimate Details

<b>Date of Estimate:</b>	February 26, 2016
<b>Source of Estimate:</b>	POE
<b>Quantity to Sustain:</b>	8000
<b>Unit of Measure:</b>	Terminal
<b>Service Life per Unit:</b>	20.00 Years
<b>Fiscal Years in Service:</b>	FY 1996 - FY 2044

The O&S costs are based on the POE (dated February 26, 2016), 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 (FP&F) decision. The quantity of 8,000 includes U.S. only terminals currently fielded and on contract plus known requirements for FY 2015 through FY 2044. This period includes a phase-in, steady state, and phase-down profile. Development units have no sustainment costs.

The current production terminal procurement estimate increased by a total of 2,149 terminals due to the procurement order from the U.S. Air Force (Platforms: F-15, F-16, F-22).

### 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, maintenance 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 ORD.

### Antecedent Information

No Antecedent. 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.

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

Item	Total O&S Cost \$M			N/A (Antecedent)
	MIDS		N/A (Antecedent)	
	Current Production APB Objective/Threshold	Current Estimate		
<b>Base Year</b>	1176.6	1294.3	<b>1638.4<sup>1</sup></b>	N/A
<b>Then Year</b>	1573.7	N/A	2184.5	N/A

<sup>1</sup> APB O&S Cost Breach

#### Equation to Translate Annual Cost to Total Cost

The calculation of total O&S costs is based on total quantities of 8000 multiplied by an economic life of 20 years multiplied by a unit cost of \$10.24K per year.

O&S Cost Variance		
Category	BY 2003 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2014 SAR	1198.3	
Programmatic/Planning Factors	440.1	Increased quantity
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	
<b>Total Changes</b>	<b>440.1</b>	
Current Estimate	1638.4	

#### Disposal Estimate Details

Date of Estimate:

**Source of Estimate:**

**Disposal/Demilitarization Total Cost (BY 2003 \$M):**

Disposal costs are not identified at this time.