

Selected Acquisition Report (SAR)

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



Multifunctional Information Distribution System (MIDS)

As of FY 2016 President's Budget

Defense Acquisition Management Information Retrieval (DAMIR)

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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 of July 24, 2012.

Responsible Office

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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 (2) 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 (3) 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 (1QFY10). It facilitated the Joint PEO (JPEO) JTRS incremental approach for fielding advanced JTRS transformational networking capability and transformed the MIDS-LVT into a four (4) channel, Software Communications Architecture (SCA) compliant, Joint Tactical Radio. A form-fit-function replacement to MIDS-LVT, MIDS JTRS also adds three (3) 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

The MIDS Program Office (MPO) consists of two products, the MIDS Low Volume Terminal (MIDS-LVT) and the MIDS Joint Tactical Radio System (MIDS JTRS). The MIDS PM has implemented an acquisition strategy that maintains continuous competition between the two U.S. production contractors, Datalink Solutions (DLS) and ViaSat, a software contract with BAE, and directed procurements to EuroMIDS for MIDS-LVT. DLS is a consortium between BAE Systems and Rockwell Collins. EuroMIDS is a consortium among Airbus Defence & Space (formerly Cassidian), Indra, SELEX, and Thales.

The MIDS JTRS Block Cycle 2 (BC2) incorporating MIDS on Ship (MOS) requirements conducted a Program Management / Trouble Report (PM/TR) Critical Design Review (CDR) on January 30, 2014. The CDR was chaired by Space and Naval Warfare System Command (SPAWAR) 5.0 with membership from MPO Engineering and Program Management Warfare (PMW-150). All Requests for Action (RFAs) were closed.

A MIDS Program Management Review (PMR) with PEO for Tactical Aircraft (PEO(T)) was held on February 11, 2014. The PMR provided PEO(T) an updated status on the From the Air Advanced Tactical Data Links (FTA ATDL) Strategy. At the PMR, the MIDS FTA ATDL Team was presented the "PEO(T) Excellence in Acquisition Award".

The Tactical Targeting Network Technology (TTNT) Justification and Approval (J&A) was approved by Assistant Secretary of the Navy (Research, Development, and Acquisition (ASN(RD&A)) for TTNT Development on February 26, 2014. This J&A authorized completing the design and development of the TTNT capability; design and development of the MIDS JTRS TTNT Amplifiers for multiple airborne platforms; build, test, and delivery of the MIDS JTRS TTNT Production Representative Terminals (PRTs); and providing support to platforms for integration, testing and qualification.

The MIDS-LVT Steering Committee (SC) #51 was held in Paris, France (FRA) on March 11-13, 2014, and focused on MIDS -LVT Block Upgrade 2 (BU2) status. MIDS JTRS was a significant topic of discussion for the SC and U.S. Bilateral discussions were held individually with each of the MIDS Nations (FRA, Germany (DEU), Italy (ITA), and Spain (ESP)). The MIDS Nations desire to further pursue MIDS JTRS cooperative opportunities in the Software Defined Radio (SDR) field and/or future waveform applications.

The FTA ATDL Technical Coordination Meeting (TCM) for SPAWAR Leadership was held on March 27, 2014 in San Diego, CA. The meeting provided FTA ATDL awareness and governance plans to SPAWAR Headquarters (HQ) and SPAWAR Systems Center Pacific (SSC PAC) personnel.

Deputy Assistant Secretary of the Navy for Command, Control, Computers, Communications, Intelligence, Information Operations and Space (DASN C4I/IO and Space) delegated the Link 16 waveform to the MIDS Program managed by PEO (T) on March 28, 2014. This aligns Link 16 waveform maintenance, sustainment, and upgrades with MIDS JTRS fielded by USN and USAF.

The MIDS International Communications Security (COMSEC) Working Group (MICWG) was held in Rome, ITA on April 1-4, 2014. The focus of the MICWG centered on MIDS-LVT BU2 upgrades to Cryptographic (Crypto) Modernization (CM), Enhanced Throughput (ET), and Frequency Remapping (FR). Discussions were held on various technical engineering and infrastructure issues.

The MIDS Releasability and Sales Policy meeting was conducted on April 24, 2014, in Washington, DC. Commands represented included PEO(T), Deputy Assistant Secretary of the Navy (Air Programs), Navy International Programs Office (NIPO), Defense Technology Security Administration (DTSA), and Department of State. The MPO provided an update on all current MIDS Releasability issues regarding MIDS-LVT and MIDS JTRS terminals.

A Multiple Award Contract (MAC) J&A was approved by ASN(RD&A) on April 25, 2014. This J&A authorized the issuance of two new, limited source, Indefinite Delivery/Indefinite Quantity (IDIQ) contracts to DLS and ViaSat for the award of Delivery Orders (DOs) for Production, Systems Engineering and Integration (SE&I), and Sustainment requirements for MIDS JTRS terminals.

MIDS-LVT BU2 Integrated Baseline Reviews (IBRs) were held with BAE, DLS and ViaSat, and EuroMIDS vendor facilities throughout the month of April 2014. The IBRs enabled the MPO to conduct interviews with the individual Control Account Managers (CAMs) and assess the contractors' production baselines.

The MIDS International Review Board (MIRB) #21 met in Vienna, Austria (AUT) on May 19-23, 2014. A record 33 nations with more than 260 participants attended. The MIRB addressed lifecycle support and continued interoperability for users of MIDS-LVT, the growth of MIDS JTRS requirements among the FMS community, the future of Link 16 and other tactical datalink tools, and the primary goal of ensuring interoperability in the future.

The TTNT Preliminary Design Review (PDR) was held on June 3-4, 2014, in San Diego. ATDL Systems of Systems, Platform Integration, ATDL Governance, Cyber Security and TTNT waveform and terminal design were evaluated. All RFAs were closed.

The MIDS-LVT BU2 PDR was held at BAE facilities in Wayne, New Jersey on June 9-12, 2014. All MIDS-LVT Industries partners and the Warner Robbins Software Support Activity (SSA) supported the PDR. All RFAs were closed.

The MIDS-LVT Problem Report Review (PRR) / International Communications Security (COMSEC) Working Group (ICWG) / Technical Working Group (PRR/ICWG/TWG) was held in Paris, FRA on June 24-26, 2014. Attendees from the MIDS Nations, MPO, MIDS-LVT Platforms and MIDS Vendors participated. Topics included MIDS-LVT BU2 program status, MIDS-LVT Cryptographic Module (LCM)/Signal Message Processor (SMP) status and concerns, Remote Power Supply (RPS) redesign background and solution initiatives, MIDS-LVT(12) variant status, and country/platform specific subjects.

A successful MIDS JTRS Four Net Concurrent Multi-Netting with Concurrent Contention Receive (CMN-4) Test Readiness Review (TRR) was conducted on July 9, 2014, at ViaSat in Carlsbad, CA. Contractor First Article Qualification Testing (CFAQT) commenced July 31, 2014, to deliver terminals for F-18 Developmental Testing (DT)/Operational Assessment (OA).

The MIDS JTRS Test and Evaluation Master Plan (TEMP) Annex J for MIDS JTRS CMN-4 was signed by the Director, Operational Test and Evaluation (DOT&E) on July 15, 2014.

The FTA ATDL Interim Program Review (IPR) #2 brief to ASN(RD&A) was held on July 24, 2014. The entrance and exit criteria for IPR #2, and the FTA ATDL strategy were approved by ASN(RD&A).

The updated MIDS Acquisition Strategy (AS) was signed by ASN(RD&A) on July 28, 2014.

The MIDS JTRS Joint Logistics Working Group (JLWG) was held at ViaSat, Carlsbad, CA on July 29-30, 2014, with participation from MPO, Industry vendors, and platform and service representatives. Briefings facilitated discussions on current, historical, and future logistics life cycle factors affecting the MIDS JTRS terminals and associated platforms.

MIDS-LVT Lot 15 DOs totaling \$27M for 133 terminals and associated spare parts were awarded on August 8, 2014, to DLS and ViaSat.

MIDS JTRS Lot 3 DOs totaling \$31M for 87 terminals were awarded on August 8, 2014, to DLS and ViaSat.

The MIDS-LVT U.S. JLWG was held in Hampton, VA on August 11-15, 2014. The JLWG included discussions on MIDS-LVT BU2 Logistics Integrated Product Team (IPT) #2 and the United States Air Force (USAF) Warner Robbins Air Logistics Command (WR-ALC) Link 16 PMR. The JLWG had representatives from all Services and multiple platforms interested or equipped with MIDS-LVT.

The FTA ATDL TCM hosted by Program Management Air (PMA)/PMW-101 was held in Patuxent River, MD on August 20, 2014. Senior leadership, including USAF, Commander Operational Test and Evaluation Force (COMOPTEVFOR) and Deputy Chief of Naval Operations for Information Dominance (OPNAV N2/N6) supported the meeting. The meeting highlighted that the migration from legacy Link 16 terminals to the MIDS JTRS SDR is critical to achieve mission success.

The MIDS JTRS TTNT Full Development Contract was awarded to DLS and ViaSat on August 21, 2014.

MIDS JTRS BC1+ and MIDS JTRS CMN-4 retrofit DOs were awarded to DLS and ViaSat on September 8 and 9, 2014, to retrofit USAF terminals to BC1+ and F/A-18 test terminals to MIDS JTRS CMN-4. MIDS JTRS BC1+ upgrades USAF terminals with CM and includes fixes for several Problem Reports (PRs) and ECPs. The MIDS JTRS CMN-4 terminals will be used for MIDS JTRS CMN-4 DT/Operational Test (DT/OT).

The MIDS-LVT SC #53 was hosted by in Madrid, ESP on September 23-25, 2014. MIDS-LVT Decision Points were obtained from the five MIDS Nations (FRA, DEU, ITA, ESP, and U.S.) on funding, contracts and documentation release to MIDS-LVT Third Party Nations. The focus of the meeting centered on the cost, schedule and performance of the MIDS-LVT BU2 contracts. As requested through previous SC actions, the U.S. policy for Direct Commercial Sales (DCS), FMS and U.S Policy for future Link 16 SDR efforts between U.S. and MIDS European Partner Nations was discussed, successfully closing the U.S. SC actions.

The MIDS-LVT MICWG met in San Diego, CA on October 1-2, 2014, with representatives from the five MIDS Nations Ministries of Defense (MoDs). MIDS-LVT COMSEC was addressed including MIDS-LVT BU2 specifics on cryptographic key loading and logistics for getting the new initial production crypto modules to Thales, FRA. A cryptographic loading demo was presented and discussions were held on various technical engineering and infrastructure issues.

The MIDS-LVT International Logistics Working Group (ILWG) was held in Paris, FRA on October 20-21, 2014. Discussions included MIDS-LVT BU2 retrofit planning and other European logistics issues.

The delivery of the first four MIDS JTRS CMN-4 terminals for laboratory integration testing in the F/A-18 was completed on October 20, 2014. DLS and ViaSat each delivered a PRT to F/A-18 Advanced Weapons Laboratory (AWL) at Naval Air Warfare Center, Weapons Division (NAWCWD), China Lake, CA, and to Boeing in St Louis, MO.

The MIDS IPO conducted MIDS-LVT PMRs with ViaSat in Carlsbad, CA on October 14-15, 2014, with EuroMIDS in Paris, FRA on October 22-23, 2014, and with MIDS IPO DLS in Wayne, NJ on October 29-30, 2014. The objective of the PMRs was to status each vendor's hardware readiness scheduled for CDR in February 2015.

Mr. Kurt Reese, PMW/PMA-101 Deputy PM (DPM), assumed duties as PMA/PMW-101 PM (Acting) effective October 28, 2014.

The MIDS JTRS Block Cycle 2 TRR was conducted on November 6, 2014, in Carlsbad, CA. Industry presented a thorough review of dry run Formal Qualification Test (FQT) results, the plan ahead to complete dry runs, and the plan to conduct FQT testing.

The MPO released a Request for Proposal (RFP) on November 17, 2014, for a MIDS JTRS Multifunction Advanced Data Link (MADL) demonstration. The objective demonstrated the MADL waveform in the MIDS JTRS CMN-4 terminal and to maintain compatibility and interoperability with the current MADL waveform implemented by the F-35 program. Proposals for this delivery order were received in December, 2014. Statements of Work (SOWs) were sent to Industry on January 14, 2015 with award anticipated in April 2015. This demo is being funded by the USAF.

MIRB #22 met on November 17-21, 2014, in Seville, ESP, in conjunction with the Joint International Configuration Review Board (JICRB). The meeting was attended by more than 300 participants from 28 countries, including MIDS Nations and MIDS international customer nations/agencies. The agenda covered Link 16 topics of interest to include MIDS-LVT BU2, MIDS JTRS, MIDS JTRS CMN-4 and network development.

A MIDS JTRS BC2 High Power Amplifier (HPA) contract modification was awarded to ViaSat on November 19, 2014 and to DLS on November 25, 2014. This modification will add the interface needed for the MIDS JTRS terminal to function with the Link 16 HPA under development for MOS and E-2D.

MIDS JTRS CMN-4 Electromagnetic Interference (EMI) testing for DLS and ViaSat was completed on November 20, 2014. Environmental Thermal and Tactical Air Navigation (TACAN) Functional Performance Test (FPT) testing were also both complete (passed 100% of test cases).-

The MIDS Technology Transfer and Security Assistance Review Board (TTSARB) was signed by the Chief of Naval Operations (CNO) and ASN(RD&A) on November 24, 2014. The approved update to the MIDS TTSARB provides guidance

on foreign disclosure for MIDS JTRS CMN-4 and MIDS-LVT BU2.

MIDS JTRS conducted an Italian RFA PMR with ViaSat, Selex, and Italian MoD representatives on December 4, 2014, and reviewed current program and test status.

The MIDS Quarterly PMR and Program Overview were presented to PEO(T) in San Diego, CA on December 8, 2014. Indepth reviews of MIDS JTRS, TTNT, MIDS-LVT BU2, MIDS IPO, and Force Modernization were provided.

MIDS JTRS conducted a Production PMR in Carlsbad, CA, with ViaSat on December 9, 2014, and reviewed program status, risks, issues, delivery schedules, and logistics/repair status. more than 100 participants from the MIDS Nations and industry partners. MIDS-LVT PRs, Engineering Change Proposals (ECPs), Qualification Testing, and logistics issues were discussed. A Government only session on December 10, 2014, identified key issues and action items to be mitigated prior to MIDS-LVT BU2 CDR in 2nd Quarter (2Q) FY2015.

The Naval Integrated Fire Control - Counter Air (NIFC-CA) Information Assurance (IA) team completed the TTNT key specification on 10 December enabling developmental key production and verification for TTNT development phase.

The MPO conducted the quarterly Joint Link 16 PMR with PMW-150 and OPNAV N2/N6 in San Diego, CA on December 10, 2014. Updates were provided on MIDS JTRS BC2, Link 16 HPA interface, and the MIDS JTRS BC2 – MIDS JTRS CMN-4 baseline merge.

The TTNT 1000 Watt HPA Technology Development Contract covering the period December 2014 to E-2D PDR was awarded to DLS and ViaSat on December 11, 2014.

ViaSat delivered a MIDS JTRS CMN-4 PRT to China Lake AWL on December 12, 2014, used for F/A-18 ground testing. This testing facilitates a 2QFY2015 first flight of a MIDS JTRS CMN-4 terminal.

MIDS JTRS conducted a Technical Interchange Meeting (TIM) with the F-22 System Program Office (SPO) in San Diego on December 15-16, 2014, to begin technical and programmatic discussions on development and integration of MIDS JTRS in the F-22. Discussions continued on December 17-18, 2014, at Lockheed Martin in Fort Worth, TX, with participation from MPO, F-22 SPO, DLS, ViaSat and Lockheed Martin.

PMA/PMW-101 participated in two PMA-298 T&E meetings at China Lake AWL on December 9-10, 2014. Meetings included an overview and status update of the MIDS JTRS CMN-4 and TTNT Behavioral models, explored what Constructive analysis the models can support, limitations to Virtual integration in reference to the Live Virtual Constructive NIFC-CA testing strategy, and determined Link 16 network loads to be used in MIDS JTRS CMN-4 DT and OT. Participants included VX-9, COMOPTEVFOR, PMA-265, PMA-298, PMA/PMW-101, and the Link 16 Network Design Facility (NDF).

The MIDS PM provided an overview of the MIDS Program at the PEO(T) Quarterly Review with ASN(RD&A) in Washington, DC on December 23, 2014.

Completed Quadrennial DoD Information Assurance Certification and Accreditation Process (DIACAP) review for MIDS JTRS and MIDS-LVT on December 30, 2014 receiving Operational Designated Accrediting Authority (DAA) (Commander, U.S. Fleet Cyber Command) Authority To Operate (ATO) until December 2018.

A MIDS program overview was provided to RDML Ailes, (SPAWAR 5.0, Chief Engineer) on January 8, 2015.

The first four MIDS-LVT LCM production units were delivered to the U.S. Government on January 9, 2015. These first four units are going to EuroMIDS to support BU2 terminal development and integration.

Conducted F-22 MIDS JTRS TIM at Lockheed Martin in Fort Worth, TX on January 22-23, 2015. The discussions focused on requirements for integrating MIDS JTRS, coordination of early work and Associate Contractor Agreements (ACAs), and on Crypto requirements.

As of December 31, 2014, 8,413 MIDS-LVT terminals have been contracted with DLS, ViaSat and EuroMIDS, of which 8,073 have been delivered. These terminals are for the USN, USAF, USA, United States Marine Corps (USMC), MIDS

Participant Nations (FRA, DEU, ITA and ESP) and FMS. These totals do not include additional MIDS-LVT terminals procured by DCS (e.g., non-MPO contracts).

As of December 30, 2014, 593 MIDS JTRS terminals have been contracted with DLS and ViaSat, of which 441 MIDS JTRS terminals have been delivered. These terminals and spares are for the USN, USAF, FMS, and MPO. These totals do not include CMN-4 Production Representative terminals and/or spare Shop Replaceable Units/Line Replaceable Units (SRUs/LRUs).

Six operational F/A-18 squadrons are equipped with MIDS JTRS: VFA-27, VFA-31, VFA-86, VFA-97, VFA-151, and VFA-213, and three training squadrons: VFA-106, VFA-122 and VAQ-129. Reliability and failure data is based on hours through November 30, 2014. Since June 2012, Mean Time Between Failure (MTBF) is 775 hours based on 75 confirmed failures and 64,322 operational hours.

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

Threshold Breaches

APB Breaches					
Schedule					
Performanc	е				
Cost	RDT&E				
	Procurem	ient 🗖			
	MILCON				
	Acq O&M				
O&S Cost					
Unit Cost	PAUC				
	APUC				
Nunn-McCu	rdy Breach	nes			
Current UCR Baseline					
	PAUC	None			
	APUC	None			

Original UCR Baseline

PAUC	None
APUC	None

Schedule



Schedule Events				
Events	SAR Baseline Production Estimate	Curre Prode Objective	nt APB uction /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) Modifcation	Aug 1995	Aug 1995	Feb 1996	Aug 1995
LVT(3) Qual Contract Award	Sep 1996	Sep 1996	Mar 1997	Sep 1996
Critical Design Review (MIDS Terminal)	N/A			
LVT	Nov 1995	Nov 1995	May 1996	Nov 1995
LVT(2)	Feb 1997	Feb 1997	Aug 1997	Feb 1997
First EMD Terminal Delivery				
LVT	Dec 1997	Dec 1997	Jun 1998	Dec 1997
LVT(3)	Feb 1998	Feb 1998	Aug 1998	Feb 1998
LVT(2)	May 1998	May 1998	Nov 1998	May 1998
Initial Carrier Suitability	Nov 1998	Nov 1998	May 1999	Nov 1998
IOT&E Complete				
LVT(3)	Jul 1999	Jul 1999	Jan 2000	Jul 1999
LVT(2)	Feb 2002	Feb 2002	Aug 2002	Feb 2002
LVT	Jan 2003	Jan 2003	Jul 2003	Jan 2003
Milestone III				
LVT (3)	Dec 1999	Dec 1999	Jun 2000	Dec 1999
LVT (Air Force)	Sep 2003	Sep 2003	Mar 2004	Sep 2003
LVT (Navy)	Apr 2004	Apr 2004	Oct 2004	Apr 2004
Program Review DAB for LRIP	Feb 2000	Feb 2000	Aug 2000	Feb 2000
LRIP Production Contract Award	Mar 2000	Mar 2000	Sep 2000	Mar 2000
IOC				
LVT(3)	Jan 2001	Jan 2001	Jul 2001	Jan 2001
LVT(2)	Jun 2002	Jun 2002	Dec 2002	Jun 2002
LVT	May 2003	May 2003	Nov 2003	May 2003
Full Rate Production - LVT(2)	May 2003	May 2003	Nov 2003	May 2003
FOT&E				
LVT (F/A-18) Start	Mar 2004	Mar 2004	Sep 2004	Mar 2004
LVT (F/A-18) Complete	Nov 2005	Nov 2005	May 2006	Nov 2005
FOC				
LVT(3)	Mar 2004	Mar 2004	Sep 2004	Mar 2004
LVT (F/A-18)	Mar 2012	Mar 2012	Sep 2012	Mar 2012

MSD				
LVT (F/A-18)	Jun 2005	Jun 2005	Dec 2005	Jun 2005
MIDS JTRS (Core Terminal)				
LP&F	N/A	Dec 2009	Jun 2010	Dec 2009
FP&F	N/A	Mar 2012	Sep 2012	Mar 2012
IOC	N/A	May 2012	Nov 2012	May 2012

Change Explanations

None

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	
Interoperabi	ility				
All top level IERs in SMORD	All top level IERs in SMORD	All critical top level IERs in SMORD	100% Demonstrat- ed	All top level IERs in SMORD	
Waveform C	ompatibility				
STANAG 4175 & JTIDS SSS	STANAG 4175 & JTIDS SSS	STANAG 4175 & JTIDS SSS	JITC Certified	STANAG 4175 & JTIDS SSS	
Message St	andard				
STANAG 5516 (& 5616 for Data Fwds) & MIL-STD- 6016B	STANAG 5516 (& 5616 for Data Fwds) & MIL-STD- 6016B	STANAG 5516 (& 5616 for Data Fwds) & MIL-STD-6016B	JITC Certified	STANAG 5516 (& 5616 for Data Fwds) & MIL- STD-6016B	
Maximum Pe	ower Transmission (w)				
LVT					
Multiple selectable levels	Multiple selectable levels	>=200 with IF for 1000	200 with IF	Multiple selectable levels	
LVT(2)					
Multiple selectable levels	Multiple selectable levels	>=200 or 25 selectable	200/25	Multiple selectable levels	
LVT(3)					
Multiple selectable levels	Multiple selectable levels	>=50	50	Multiple selectable levels	
IER (Kbps)					
1000	>=1000	28.8 -115.2	1100 kbps	>=1000	
Paired Time	Slot Relay Capability				
Integral and automated	Integral and automated	Integral and automated	Integral and automated	Integral and automated	
Repromulga	tion Relay (nm) MIDS-LVT	(2)			
4 hop	4 hops	3 hops	4 hops	4 hops	
Paired Time	Slot Relay Range (nm) (U	SN Only)			

1200	>=1200	>=500	520	>=1200
Communica	tion Range			
LVT (USN:	: C2 to C2)			
300	>=300	>=300	350	>=300
LVT (USN:	Non-C2 to C2)			
240	>=240	>=220	240	>=240
LVT (USN:	Non-C2 to Non-C2)			
200	>=200	>=180	220	>=200
LVT (USN:	Surface Platforms)			
LOS up to 300	LOS >=300	LOS >=300	300	LOS >=300
LVT (F-16:	Non-C2 to C2)			
300	>=300	>=200	200	>=300
LVT (F-16:	Non-C2 to Non-C2)			
150	>=150	>=100	150	>=150
LVT(2)				
Up to 300 with LOS at 200 w	Up to 300 with LOS at 200 w	Up to 300 with LOS at 200 w	300	Up to 300 with LOS at 200 w
LVT(3) (No	on-C2 to C2)			
300	>=300	>=200	300	>=300
LVT(3) (No	on-C2 to Non-C2)			
150	>=150	>=100	170	>=150
Voice Chanr	nels: LVT (USN)			
Capable of 2	Capable of 2	1	2	Capable of 2
Coded Mess	age Error Probability (%)			
LVT				
1	<=1	<=2	Passed	<=1
LVT(3)				
< 1 detected	<= 1 detected	<=2	Passed	<= 1 detected
LVT(2)				
1	<=1	<=2	Passed	<=1
Jam Resista	nce			
LVT (USN)	(db)			
MJCS-194 - 89	MJCS-194-89	MJCS-194-89	Compliant	MJCS-194-89
LVT (F-16)	(%)			
< 1 detected error	<=1 detected error	<= 1 detected error	Passed	<=1 detected error

LVT(2) (%))			
< 1 detected error	<= 1 detected error	<= 5	Passed	<= 1 detected error
LVT(3) (%))			
< 1 detected error	<= 1 detected error	<= 1 detected error	Passed	<= 1 detected error
Ao				
LVT				
.90	>=.90	>=.90	.91	>=.90
LVT(2) (Te	erminal)			
.94	>=.94	>=.90	.94	>=.94
LVT(3)				
.97	>=.97	>=.95	.965	>=.97
MTBF (hr)(la	ab)			
USN				
1000	>=1000	>=1000	1850	>=1000
USA				
1800	>=1800	>=1000	1850	>=1800
USAF				
1500	>=1500	>=1000	1850	>=1500
MFHBOMF/	MTBOMF (hr)			
System				
25	>=25	>=25	32	>=25
LVT (Aircr	aft) (Terminal)			
300	>=300	>=220	240	>=300
LVT (Ship	s) (Terminal)			
350	>=350	>=257	275	>=350
LVT(2) (Te	erminal)			
393	>=393	>=393	425	>=393
MTTR (O-lev	vel) (min)			
LVT(2) (Te	erminal)			
30	<=30	<=30	25	<=30
MCMIOMF				
LVT (USN	Aircraft)			
60	<=60	<=90	/5	<=60
	Snips)	00	00	00
60	<=60	<=90	80	<=60
LVT (USA	F)			

MRT < 20	MRT < 20	MRT < 30	25	MRT < 20
LVT(3)				
MRT < 20	MRT < 20	MRT < 30	28	MRT < 20
Volume (Cu	bic Feet)			
LVT				
< .6	<= .6	<= .6	.58	<= .6
LVT(2)				
< 1.4	<=1.4	<=1.4	1.32	<=1.4
LVT(3)				
< .6	<= .6	<= .6	.56	<= .6
Weight (lbs)				
LVT				
< 65	<=65	<=65	63.8	<=65
LVT(2)				
< 88	<=88	<=88	87.9	<=88
LVT(3)				
< 65	<=65	<=65	63.8	<=65
MIDS-LVT E	inhancement ECPs			
Message	Standards			
N/A	STANAG 5516 (& 5616 for Data Fwds) & MIL-STD- 6016C	STANAG 5516 (& 5516 for Data Fwds) & MIL-STD-6016B	To Be Determined (TBD) until Block Upgrade 2 (BU2) Enhanced Throughput (ET) is implemented	STANAG 5516 (& 5616 for Data Fwds) & MIL- STD-6016C
Communi	cations Range			
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
Informatio	on Exchange Rate (Kbps)			
LET 0				
N/A	>=358	>=107	TBD until MIDS- LVT BU2 ET is implemented	>=358
LET 1				
N/A	>=546	>=358	TBD until MIDS- LVT BU2 ET is implemented	>=546
LET 2				
N/A	>=833	>=546	TBD until MIDS- LVT BU2 ET is	>=833

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

				test.
Link-16 IE	R			
Normal	Operations with JTRS			
N/A	>=1100 Kbps	>=28-115.2 Kbps	128	128
LET 0				
N/A	>=358	>=107	107	107
LET 1				
N/A	>=546	>=358	358	358
LET 2				
N/A	>=833	>=546	546	546
LET 3				
N/A	>=968	>=833	837	837
LET 4				
N/A	>=1100	>=968	968	968
Interopera	ability: All top level IERs w	ill be satisfied to the standards s	pecified in the thre	shold (T) and
objective	e (O) values.			
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.
Link-16 Co	oded Message Error Proba	ability (CMEP)		
LET 0				
N/A	<=1%	<=2%	<=2%	<=1%
LET 1				
N/A	<=1%	<=2%	<=2%	<=1%
LET 2				
N/A	<=1%	<=2%	<=2%	<=1%
LET 3				
N/A	<=1%	<=2%	<=2%	<=1%
LET 4				
N/A	<=1%	<=2%	<=2%	<=1%
Weight/Vo	lume			
N/A	<=65 lbs, <=.6 cu.ft.	<=65 lbs, <=.6 cu.ft.	Measured 54.7 lbs; measured .573 cu. ft.	<=65 lbs, <=.6 cu.ft.
Link-16 Ja	am Resistance			
JTRS (USN) (db)			
N/A	MJCS-194-89	MJCS-194-89	Exceeds threshold by 1-3 db in 95% of all cases.	Exceeds threshold by 1-3 db in 95% of all cases.

All Othe	ers				
N/A	<=1% Detected message error rate	<=1% Detected message error rate	.98%	.98%	
Link-16 J-	Voice Channels				
N/A	2	2	2	2	
Link-16 Co	ommunications Range Data	a			
N/A	≥300 nm (C2-C2 w/HPA); ≥240 nm (C2-non-C2); ≥200 nm (non-C2-non- C2)	≥300 nm (C2-C2 w/HPA); ≥220 nm (C2-non-C2); ≥180 nm (non- C2-non-C2)	>=250 nm	>=250 nm.	
Link-16 Co	ommunications Range J-Vo	bice			
N/A	>=220nm (C2-C2 w/HPA); >=140nm (C2-non-C2); >=90nm (non-C2- nonC2/non C2-C2)	>=220nm (C2-C2 w/HPA); >=140nm (C2-non-C2); >=90nm (non-C2-nonC2/non C2-C2)	>=220nm (C2-C2 w/HPA) - Not Tested; >=140nm (C2-non-C2 - Not tested; >=90nm (non-C2- nonC2/non C2-C2) - 150.	>=220nm (C2- C2 w/HPA) - Terminal not installed in C2 platform yet; >=140nm (C2- non-C2 - Terminal not installed in C2 platform yet; >=90nm (non-C2 -nonC2/non C2- C2) - 150.	
Link-16 Re	elay				
N/A	>=1200nm	>=500nm	Not tested yet.	>=500 nm	
Multi-Cha	nnels/Networks				
N/A	4 Channels simultaneously with TACAN/multi-net (single network) Link-16 fixed operation on Channel 1	4 Channels simultaneously with TACAN/multi-net (single network) Link-16 fixed operation on Channel 1	4 Channels passed.	4 Channels passed.	
Scan Free	luencies				
N/A	Scan a minimum of 10 frequencies or presets	Scan a minimum of 10 frequencies or presets	FOT&E: No MIDS JTRS waveforms require presets.	FOT&E: No MIDS JTRS waveforms require presets.	
Terminal S	Start-up/Restart (Link-16 or	nly)			
N/A	<=2.0 min	<=3.5 minutes	3.2 min	3.2 min	
IBIT Perfo	rmance (Link-16 only)				
N/A	<=30seconds	<=70 seconds	29 seconds	29 seconds	
Link-16 Ne	et Entry/Synchronization				
N/A	<=30 seconds	Not to exceed 4 min from time that coarse sync is initiated	30 sec - 2.5 min	30 sec - 2.5 min	
Crypto-Re	keying				
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.				
Link-16 Tr	ransmission of Unit Positio	on and Status Reports						
N/A	<=100 ft accuracy	<=300 ft accuracy	78 ft	78 ft				
TACAN P	erformance Start-up/Resta							
N/A	<=14 seconds	15 seconds	15 seconds					
MFHBOM	F (System/Single Channel)							
N/A	>=36 hrs (Other >=25 hrs (F/A-18E/F, EA-18G, TACAIR)		36.5 hrs.	36.5 hrs				
MTBF Lab	o (Ch. 1(Link-16))							
N/A	>=1800 hrs	>= 1200 hrs	1285 hrs	1285 hrs				
MTBF Lab	o (Ch. 2, 3 & 4)							
N/A	>=1800 hrs	>=1550 hrs	1550 hrs	1550 hrs				
MFHBOM	F (Terminal/Single Channe	el))						
N/A	>=300 hrs	>=220 hrs	724 (includes lab data)	220 hrs				
МСМТОМ	MCMTOMF (Single Channel)							
N/A	<= 60 min <= 120 min; <= 90 min (F/A-18 60 min E/F, EA-18G, NAVAIR)		60 min	60 min (Single channel)				
MRT								
N/A	<= 20 min	<= 45 min	20 min	45 min				
BIT PCD								
N/A	PCD>= 98%	PCD>= 95%	97%	97%				
BIT MFHE	BFA							
N/A	MFHBFA: >= 451 hrs	MFHBFA: >= 113 hrs	80 hrs	120 hrs				
Start-Up (Terminal/Single Channel)							
N/A	<=2min (OE, crypto and waveform); <=2min (fine sync)	<=3.5min (OE, Crypto and waveform); <=4min (fine sync)	3.2 min	3.2 min				
Start-Up (Waveform/Link-16 only)							
N/A	<=2min (OE, crypto, and waveform); <=2min (fine sync)	<=3.5min (OE, crypto, and waveform); <=4min (fine sync)	.5 - 2.5 min	.5 - 2.5 min				
Restart <	50 milliseconds (Core cont	figuration only)						
N/A	Operates through	Operates through	Operates through	Operates through				
Restart <1	10 seconds (Terminal)							
N/A	<=2min	<=3.5min	2.5 min	2.5 min				
Restart <1	Restart <10 seconds (Link-16 waveform)							

N/A	<=10sec	<=10sec	9 sec	9 sec	
Restart >=	10 seconds and <2min (Te	erminal)			
N/A	<=2min	<=3.5min	3.2 min	3.2 min	
Restart >=	10 seconds and <2min (Li	nk-16)			
N/A	<=2min	<=4min	3.2 min	3.2 min	
Restart >=	= 2 min (Terminal)				
N/A	<=2min	<=3.5min	3.2 min	3.2 min	
Restart >=	2 min (Link-16 Waveform)				
N/A	<=2min	<=4min	3.2 min	3.2 min	
TACAN St	art-up/Restart				
N/A	<=14sec	<=30sec	15 sec	15 sec	
IBIT Perfo	rmance				
N/A	<=30sec	<=70sec	30 sec	9 sec3.2 min3.2 min3.2 min3.2 min3.2 min3.2 min3.2 min3.2 min3.2 min30 sec30 sec11 of 11Performance measures have been achieved in a Developmental Test period.15 of 15Performance measures have been achieved.	
Terminal (Operating Frequency Rang	ge in the second se			
N/A	Operate 2-2000 MHz	Operate 2-2000 MHz	Operation within 2- 2000 MHz	Operate 2-2000 MHz	
MIDS JTRS	Capability				
N/A	F3I for MIDS-LVT (1) and shall meet the performance measures in MIDS JTRS Core Terminal in Table 6 of the CPD in addition to TACAN and J- Voice.	F3I for MIDS-LVT (1) and shall meet the performance measures in MIDS JTRS Core Terminal in Table 6 of the CPD in addition to TACAN and J-Voice.	11 of 11 Performance measures have been achieved in a Developmental Test period.	11 of 11 Performance measures have been achieved in a Developmental Test period.	
Functionality	y				
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.	

Number of C	Channels			
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.
Net Ready				
N/A	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net- Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration (Table 31), 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, 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.

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Operational Availability (Ao)										
N/A	Each MIDS JTRS Core Terminal shall demonstrate an Ao of >0.99 for all channels.	Each MIDS JTRS Core Terminal shall demonstrate an Ao of >0.90 for Link-16 / TACAN Channel and >0.96 for the remaining channels.	96.8%.	96.8%						
Software Co	Software Configurable									
N/A	Each MIDS JTRS Core Terminal shall provide any designated operator with the ability to load and reconfigure its modes/ capabilities via software while in the operational 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.						
Growth										
N/A	MIDS JTRS Core Terminal shall provide an internal growth capability through an open systems architecture approach, and shall be modular, scaleable and flexible as designed to suit specific operational requirements.	MIDS JTRS Core Terminal shall provide an internal growth capability through an open systems architecture approach, and shall be modular, scaleable and flexible as designed to suit specific operational requirements.	2 of 2 Performance measures achieved.	2 of 2 Performance measures achieved.						
Navigation -	- Link-16 Position (PPLI)									
N/A	≤100 feet	≤300 feet	Operation at ≤100 feet	≤100 feet						
Tactical Air	Navigation (TACAN)									
N/A	Capabilities equivalent to LVT	Capabilities equivalent to LVT	Capabilities equivalent to LVT	Capabilities equivalent to LVT						
Spectrum C	ertification									
N/A	Meets DD-1494 Stage 4	Meets DD-1494 Stage 4	DD-1494 Stage 4 issued.	Meets DD-1494 Stage 4						
Memory/Pro	ocessor Reserve									
N/A	Provide growth memory and processor reserve to allow for an increased capability or functionality of each set and with each generation of radios	Provide growth memory and processor reserve to allow for an increased capability or functionality of each set and with each generation of radios	Met with no issues.	Provide growth memory and processor reserve to allow for an increased capability or functionality of each set and with each generation of radios						
Operational	Communications									
Passive S	yncronization									

MIDS

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

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) SINCGARS - Single Channel Ground and Airborne Radio System SMORD - Single MIDS ORD SSS - System Segment Specification STANAG - Standardization Agreement TACAN - Tactical Air Navigation TV - Technical View w - watt(s)

Track to Budget

RDT&E				
Appn		BA	PE	
Navy	1319	07	0205604N	
	Proj	ect	Name	
	2126		ATDLS Integration	(Shared)
Navy	1319	05	0205604N	
	Proj	ect	Name	
	2126		ATDLS Integration	(Shared) (Sunk)
Navy	1319	07	0205604N	
	Proj	ect	Name	
	3020		MIDS/JTRS	(Shared)
Navy	1319	05	0604234N	
	Proj	ect	Name	
	3051		E-2D Adv Hawkeye	(Shared)
Navy	1319	05	0604270N	
	Proj	ect	Name	
	E0556		Navy EA-6B Integration/EA-6B	(Shared) (Sunk)
	E2781		Navy EA-6B Integration/EA-6B	(Shared) (Sunk)
Navy	1319	05	0604280N	
	Proj	ect	Name	
	3020		MIDS/JTRS	(Shared) (Sunk)
	3073		AMF/JTRS	(Shared) (Sunk)
Army	2040	05	0603713A	
	Proj	ect	Name	
	D370		Army MIDS/Army MIDS	(Shared) (Sunk)
Army	2040	05	0604280A	
	Proj	ect	Name	
	162		Joint Tactical Radio / Network Enterprise	(Shared) (Sunk)
	3600	05		
AILLOICE	Broi		Namo	
	E15	501		(Shared) (Sunk)
	3600	05	0207133E	
	Proi	ect	Name	
	672671	501		(Shared) (Sunk)
Air Force	3600	05	0207134F	
/ / 0/00	Proi	ect -	Name	
	674703	501	Air Force MIDS/E-15E	(Shared) (Sunk)
Air Force	3600	05	0604240F	
/ 1 0100	0000	00		

Project		ect	Name			
	11B002	2	Air Force MIDS	(Shared)	(Sunk)	
Air Force	3600	05	0604280F	, ,		
	Proj	ect	Name			
	655068	3	Joint Tactical Radio System (JTRS)	(Shared)	(Sunk)	
Defense-Wide	0400	05	0603883C		· · · · ·	
	Proj	ect	Name			
	0010		DOD	(Shared)	(Sunk)	
Defense-Wide	0400	05	0604771D			
	Proj	ect	Name			
	P771		OSD, DA/JTRS	(Shared)	(Sunk)	
	P773		OSD, DA/Multifunctional Information Distribution System	(Shared)	(Sunk)	
Procurement						
Appn		BA	PE			
Navy	1506	01	0204136N			
	Line	ltem	Name			
	0145		F-18 Series	(Shared	d) (Sunk)	
Navy	1506	05	0204154N			
	Line	ltem	Name			
	0511		EA-6 Series	(Shared	d)	
Navy	1506	05	0204136N			
	Line	ltem	Name			
	0525		F-18 Series	(Shared	d)	
Navy	1506	05	0204152N			
	Line	ltem	Name			
	0544		E-2 Series	(Shared	d)	
Navy	1611	02	0204112N			
	Line	ltem	Name			
	2001		Navy	(Shared	d) (Sunk)	
	2086		Multi-Purpose CVNs	(Shared	d) (Sunk)	
Navy	1611	02	0204222N			
	Line	ltem	Name			
	2122		DDG-51	(Shared	d) (Sunk)	
Navy	1611	02	0204230N			
	Line	ltem	Name			
	2127		Navy	(Shared	d) (Sunk)	
Navy	1611	03	0204411N			
	Line	ltem	Name			
	3035		Amphibious Assault Ships	(Shared	d) (Sunk)	
	3036		LPD-17	(Shared	d) (Sunk)	
Navy	1810	02	0205604N			

	Line I	tem	Name		
	2614		Advanced Tactical Data Link System	(Shared)	(Sunk)
Army	2035	02	0214400A		
	Line I	tem	Name		
	B22603	3	Radio Terminal Set, MIDS-LVT(2)	-	
Air Force	3010	05	0604281F	_	
	Line I	tem	Name		
	655262		Tactical Data Networks Enterprise	(Shared)	
Air Force	3010	05	0207446F		
	Line I	tem	Name		
	B00200)	ABL	(Shared)	
Air Force	3010	05	0207130F	_	
	Line l	tem	Name		
	F01500)	F-15	(Shared)	(Sunk)
Air Force	3010	05		-	
	Line l	tem	Name		
	F01600)	F-16	(Shared)	(Sunk)
Air Force	3010	05	0207423F	-	
	Line I	tem	Name		
	MN986	0	Joint Tactical Radio System	(Shared)	
Air Force	3080	02		-	
	Line I	tem	Name		
	F01600		F-16	(Shared)	(Sunk)
Defense-Wide	0300	02			
	Line I	tem	Name		
	10		DOD	(Shared)	(Sunk)
Defense-Wide	0300	02	0208865C		
	Line I	tem	Name		
	2257		DA, Patriot	(Shared)	(Sunk)
Defense-Wide	0300	02	0208861C		
	Line I	tem	Name		
	2260		DA, THAAD	(Shared)	(Sunk)
Defense-Wide	0300	02			
	Line I	tem	Name		
	30		DOD	(Shared)	(Sunk)

Cost and Funding

Cost Summary

Total Acquisition Cost									
	B	Y 2003 \$M		BY 2003 \$M		ТҮ \$М			
Appropriation	SAR Baseline Production Estimate	Curren Produ Objective/	nt APB action Threshold	Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate		
RDT&E	869.4	1637.5	1801.3	1688.1	825.8	1750.6	1812.4		
Procurement	955.4	1393.5	1532.9	1508.6	993.1	1585.6	1733.7		
Flyaway				1322.9			1527.0		
Recurring				1248.0			1452.6		
Non Recurring				74.9			74.4		
Support				185.7			206.7		
Other Support				42.4			48.0		
Initial Spares				143.3			158.7		
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	3196.7	1818.9	3336.2	3546.1		

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 Managment 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.

Total Quantity						
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate			
RDT&E	143	488	548			
Procurement	2821	5745	5851			
Total	2964	6233	6399			

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). The current estimate does not include procurement quantities for MIDS Low Volume Terminal (MIDS-LVT) Block Upgrade 2 (BU2).

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

Cost and Funding

Funding Summary

Appropriation Summary												
FY 2016 President's Budget / December 2014 SAR (TY\$ M)												
Appropriation	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total			
RDT&E	1569.1	55.4	70.3	59.2	21.5	18.3	18.6	0.0	1812.4			
Procurement	1329.6	45.1	67.1	78.4	98.0	62.5	53.0	0.0	1733.7			
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 2016 Total	2898.7	100.5	137.4	137.6	119.5	80.8	71.6	0.0	3546.1			
PB 2015 Total	2868.0	96.6	127.7	128.5	136.1	82.9	0.0	0.0	3439.8			
Delta	30.7	3.9	9.7	9.1	-16.6	-2.1	71.6	0.0	106.3			

Quantity Summary											
FY 2016 President's Budget / December 2014 SAR (TY\$ M)											
Quantity	Undistributed	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total	
Development	548	0	0	0	0	0	0	0	0	548	
Production	0	4830	111	203	176	232	157	142	0	5851	
PB 2016 Total	548	4830	111	203	176	232	157	142	0	6399	
PB 2015 Total	537	4750	82	165	267	321	171	0	0	6293	
Delta	11	80	29	38	-91	-89	-14	142	0	106	
Cost and Funding

Annual Funding By Appropriation

Annual Funding 0400 RDT&E Research, Development, Test, and Evaluation, Defense-Wide								
				TY \$M				
Fiscal Year	Quantity	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&F Research, Development, Test, and Evaluation, Defense-Wide									
		BY 2003 \$M							
Fiscal Year	Quantity	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		

Total Program

> 2.9 4.7 10.0 12.4 23.0 18.4 31.0 28.2 39.8 45.4 62.3 37.7 26.2 16.8 22.4 27.6 98.2 162.5 77.2 26.6 16.2 24.2 100.8 47.2 119.5 55.4 70.3 59.2 21.5 18.3 18.6 1324.5

	4		Annual Fu	unding	voluction No	
		319 RDT&E RE	esearch, Developi	TY \$M	valuation, Na	vy
Fiscal Year	Quantity	End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Suppor
1990						
1991						
1992						
1993						
1994						
1995						
1996						
1997						
1998						
1999						
2000						
2001						
2002						
2003						
2004						
2005						
2006						
2007						
2008						
2009						
2010						
2011						
2012						
2013						
2014						
2015						
2016						
2017						
2018						
2019						
2020						
Subtotal	191					

Annual Funding									
	1	319 RDT&E Ri	esearch, Developi	ment, Test, and E	Evaluation, Na	vy			
			Non End	Β1 2003 ψ					
Fiscal Year	Quantity	End Item Recurring Flyaway	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							81.9		
2013							37.8		
2014							94.7		
2015							43.2		
2016							53.9		
2017							44.6		
2018							15.9		
2019							13.2		
2020							13.2		
Subtotal	191						1180.8		

Annual Funding 2040 RDT&E Research, Development, Test, and Evaluation, Army									
		ТҮ \$М							
Fiscal Year	Quantity	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		

MIDS	
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Annual Funding 2040 RDT&E Research, Development, Test, and Evaluation, Army									
BY 2003 \$M									
Fiscal Year	Quantity	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								
TY \$M								
Fiscal Year	Quantity	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							1.2	
Subtotal	209						88.1	

Annual Funding										
	BY 2003 \$M									
Fiscal Year	Quantity	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							4.0			
2002							2.9			
2003							4.3			
2004							13.8			
2005							18.4			
2006							4.1			
2007							2.0			
2008							1.2			
2009							4.9			
2010							1.3			
2011							2.0			
2012							1.8			
2013							2.9			
2014							1.0			
Subtotal	209						83.8			

Annual Funding 0300 Procurement Procurement, Defense-Wide									
			TY \$M						
Fiscal Year	Quantity	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		
2015	2	0.5			0.5		0.5		
Subtotal	60	14.6	0.2	4.5	19.3	2.0	21.3		

MIDS	
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Annual Funding 0300 Procurement Procurement, Defense-Wide									
			BY 2003 \$M						
Fiscal Year	Quantity	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		
2015	2	0.4			0.4		0.4		
Subtotal	60	13.9	0.2	4.7	18.8	2.0	20.8		

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

Annual Funding 1506 Procurement Aircraft Procurement, Navy								
		TY \$M						
Fiscal Year	Quantity	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	173	49.0	0.2		49.2	1.3	50.5	
2014	151	41.3	0.2		41.5	3.2	44.7	
2015	82	18.6	0.2		18.8	0.2	19.0	
2016	191	50.1	0.2		50.3	5.2	55.5	
2017	169	60.5	0.2		60.7	6.9	67.6	
2018	231	78.5	0.2		78.7	9.8	88.5	
2019	156	47.2	0.2		47.4	6.6	54.0	
2020	141	49.1	0.2		49.3	1.2	50.5	
Subtotal	3035	761.3	30.9	36.3	828.5	121.4	949.9	

Annual Funding									
	1506 Procurement Aircraft Procurement, Navy								
			BY 2003 \$M						
Fiscal Year	Quantity	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	173	38.9	0.2		39.1	1.0	40.1		
2014	151	32.3	0.2		32.5	2.4	34.9		
2015	82	14.3	0.1		14.4	0.2	14.6		
2016	191	37.8	0.2		38.0	3.9	41.9		
2017	169	44.8	0.1		44.9	5.2	50.1		
2018	231	57.0	0.1		57.1	7.2	64.3		
2019	156	33.6	0.1		33.7	4.7	38.4		
2020	141	34.3	0.1		34.4	0.8	35.2		
Subtotal	3035	621.7	28.5	36.9	687.1	105.2	792.3		

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

Annual Funding 1611 Procurement Shipbuilding and Conversion, Navy								
Fiscal Year	Quantity	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	
Subtotal	53	11.7			11.7		11.7	

Annual Funding 1611 Procurement Shipbuilding and Conversion, Navy								
				BY 2003 \$	М			
Fiscal Year	Quantity	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	1.0			1.0		1.0	
2012	7	0.9			0.9		0.9	
2013	5	0.6			0.6		0.6	
2014	5	0.6			0.6		0.6	
Subtotal	53	9.4			9.4		9.4	

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

MIDS	
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Annual Funding 1810 Procurement Other Procurement, Navy								
	TY \$M							
Fiscal Year	Quantity	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	4	0.8			0.8		0.8	
2014	7	1.4			1.4		1.4	
Subtotal	149	34.3		0.1	34.4	0.7	35.1	

Annual Funding 1810 Procurement Other Procurement, Navy										
		BY 2003 \$M								
Fiscal Year	Quantity	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	4	0.6			0.6		0.6			
2014	7	1.1			1.1		1.1			
Subtotal	149	29.6		0.1	29.7	0.7	30.4			

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

Annual Funding 2035 Procurement Other Procurement, Army								
	TY \$M							
Fiscal Year	Quantity	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		3.3	
2014	1	1.1			1.1		1.1	
2015	1	15.7			15.7		15.7	
2016	1	9.5			9.5		9.5	
2017	1	9.5			9.5		9.5	
2018	1	9.5			9.5		9.5	
2019	1	8.5			8.5		8.5	
2020	1	2.5			2.5		2.5	
Subtotal	425	157.3			157.3	8.1	165.4	

Annual Funding 2035 Procurement Other Procurement, Army									
		BY 2003 \$M							
Fiscal Year	Quantity	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		2.6		
2014	1	0.9			0.9		0.9		
2015	1	12.0			12.0		12.0		
2016	1	7.2			7.2		7.2		
2017	1	7.0			7.0		7.0		
2018	1	6.9			6.9		6.9		
2019	1	6.1			6.1		6.1		
2020	1	1.7			1.7		1.7		
Subtotal	425	130.4			130.4	6.9	137.3		

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

Annual Funding 3010 Procurement Aircraft Procurement, Air Force									
	TY \$M								
Fiscal Year	Quantity	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	32.5			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	11.2			11.2	0.1	11.3		
2014	19	6.2		3.0	9.2		9.2		
2015	26	8.1			8.1	1.8	9.9		
2016	11	2.1			2.1		2.1		
2017	6	1.3			1.3		1.3		
Subtotal	1304	290.7		7.5	298.2	61.3	359.5		

Annual Funding 3010 Procurement Aircraft Procurement Air Force								
	BY 2003 \$M							
Fiscal Year	Quantity	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	7.0	19.9	
2002	150	32.2			32.2	10.1	42.3	
2003	180	35.9			35.9	10.2	46.1	
2004	137	23.1			23.1	13.1	36.2	
2005	164	32.8		0.1	32.9	3.9	36.8	
2006	129	22.6			22.6	1.5	24.1	
2007	152	27.2			27.2	3.0	30.2	
2008	52	12.7			12.7	3.8	16.5	
2009	15	4.2			4.2	1.4	5.6	
2010	51	10.8			10.8	2.0	12.8	
2011	34	7.8			7.8	0.1	7.9	
2012	83	20.8			20.8		20.8	
2013	43	8.8			8.8	0.1	8.9	
2014	19	4.8		2.3	7.1		7.1	
2015	26	6.2			6.2	1.4	7.6	
2016	11	1.6			1.6		1.6	
2017	6	1.0			1.0		1.0	
Subtotal	1304	261.0		6.8	267.8	57.6	325.4	

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

Annual Funding 3080 Procurement Other Procurement, Air Force									
Fiscal Year	Quantity	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		
Subtotal	825	150.0	1.6	26.0	177.6	13.2	190.8		

	Annual Funding 3080 Procurement Other Procurement, Air Force												
		BY 2003 \$M											
Fiscal Year	Quantity	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		15.8	35.0	1.0	36.0						
1999	173	33.8	0.3		34.1	2.2	36.3						
2000	294	50.3	0.7	0.5	51.5	3.9	55.4						
2001	148	26.6	0.6	4.3	31.5	1.0	32.5						
2002	97	18.2		5.5	23.7		23.7						
2003	30	0.4			0.4	5.2	5.6						
Subtotal	825	151.7	1.6	26.4	179.7	13.3	193.0						

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

Cost Quantity Information 3080 Procurement Other Procurement, Air Force									
Fiscal Year	Quantity	End Item Recurring Flyaway (Aligned With Quantity) BY 2003 \$M							
1996	6	3.2							
1997									
1998	77	19.3							
1999	173	33.8							
2000	294	50.3							
2001	148	26.5							
2002	97	18.2							
2003	30	0.4							
Subtotal	825	151.7							

Low Rate Initial Production

ltem	Initial LRIP Decision	Current Total LRIP
Approval Date	5/11/2000	12/8/2003
Approved Quantity	70	544
Reference	Milestone II ADM	Milestone C ADM
Start Year	2000	2000
End Year	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
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.
Japan	11/25/2014	145	32.0	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). Date of sale listed is the most current buy.
Saudi Arabia	11/25/2014	236	17.7	Total Costs are cumulative over multiple years and FMS cases (SR-D-QAB; SR-D-SAI, SR-P-LCO). Date of sale listed is the most current buy. *Not all cost data is available. 165 terminals without pricing.*
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).
Romania	9/30/2014	13	2.3	Date of sale listed is the most current buy on FMS case RO-D-QAH.
Singapore	9/30/2014	59	6.9	Total Costs are cumulative over multiple years and FMS cases (SN-D-SAA; SN-D-SAC; SN-D-BAA). Date of sale listed is the most current buy.
Australia	9/11/2014	249	55.5	Total Costs are cumulative over multiple years and FMS cases (AT-D-QCI; AT-P-GOV; AT-P-LAB; AT- P-LCE; AT-P-LCK; AT-P-LCQ; AT-P-LDN; AT-P- LER; AT-P-LET; AT-P-SAF; AT-P-SCF; AT-P-SCI). Date of sale listed is the most current buy.
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.
Oman	8/7/2014	66	12.5	Date of sale listed is the most current buy on FMS case MU-D-SAB.
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.
United Kingdom	8/7/2014	8	2.5	Date of sale listed is the most current buy on FMS case UK-D-SAO.
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.
Thailand	8/5/2013	17	3.2	Date of sale listed is the most current buy on FMS case TH-D-QCZ.
United Arab Emirates	8/5/2013	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
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).
1 hourses	0/40/0040	00		Date of sale listed is the most current buy.
Hungary	9/16/2010	22	4.1	case HU-P-LAD.
Pakistan	9/16/2010	68	16.1	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.
Netherlands	12/19/2007	5	4.2	Total Costs are cumulative over multiple years and FMS cases (NE-P-LFT; NE-P-LGT). Date of sale listed is the most current buy.
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

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

Direct Commercial Sales (DCS) totaling 849 MIDS-LVT terminals have been implemented to date with Australia (2), Belgium (2), Denmark (68), Greece (4), Iceland (3), Japan (2), Korea (129), North Atlantic Treaty Organization (NATO) Air Command and Control System (ACCS) Management Agency (NACMA) (50), Netherlands (149), NATO EuroFighter 2000 and Tornado Management Agency (36), Norway (31), Sweden (140), Turkey (6) and United Kingdom (227). (Cost information for direct commercial sales is not available nor is date of sale). 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 41 MIDS-LVT terminals at a cost of 12.1\$M were implemented through February 2014 with the European Participating Air Force (3) and German competitive buys (38).

Nuclear Costs

None

Unit Cost

	BY 2003 \$M	BY 2003 \$M		
ltem	Current UCR Baseline (Nov 2013 APB)	Current Estimate (Dec 2014 SAR)	% Change	
Program Acquisition Unit Cost				
Cost	3031.0	3196.7		
Quantity	6233	6399		
Item	0.486	0.500	+2.88	
Average Procurement Unit Cost				
Cost	1393.5	1508.6		
Quantity	5745	5851		
Unit Cost	0.243	0.258	+6.17	
	BY 2003 \$M	BY 2003 \$M		
Item	Original UCR Baseline	Current Estimate	% Change	
	(Mar 1994 APB)	(Dec 2014 SAR)		
Program Acquisition Unit Cost	(Mar 1994 APB)	(Dec 2014 SAR)		
Program Acquisition Unit Cost Cost	(Mar 1994 APB) 1091.4	(Dec 2014 SAR) 3196.7		
Program Acquisition Unit Cost Cost Quantity	(Mar 1994 APB) 1091.4 672	(Dec 2014 SAR) 3196.7 6399		
Program Acquisition Unit Cost Cost Quantity Unit Cost	(Mar 1994 APB) 1091.4 672 1.624	(Dec 2014 SAR) 3196.7 6399 0.500	-69.21	
Program Acquisition Unit Cost Cost Quantity Unit Cost Average Procurement Unit Cost	(Mar 1994 APB) 1091.4 672 1.624	(Dec 2014 SAR) 3196.7 6399 0.500	-69.21	
Program Acquisition Unit Cost Cost Quantity Unit Cost Average Procurement Unit Cost Cost	(Mar 1994 APB) 1091.4 672 1.624 523.7	(Dec 2014 SAR) 3196.7 6399 0.500 1508.6	-69.21	
Program Acquisition Unit Cost Cost Quantity Unit Cost Average Procurement Unit Cost Cost Quantity	(Mar 1994 APB) 1091.4 672 1.624 523.7 630	(Dec 2014 SAR) 3196.7 6399 0.500 1508.6 5851	-69.21	

Unit Cost History



ltom	Dete	BY 200	3 \$M	TY \$M			
Iteln	Date	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 2013	0.494	0.257	0.547	0.295		
Current Estimate	Dec 2014	0.500	0.258	0.554	0.296		

SAR Unit Cost History

Initial SAR Baseline to Current SAR Baseline (TY \$M)											
Initial PAUC		Changes									
Estimate	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Estimate		
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		Changes									
Estimate Econ Qty Sch Eng Est Oth Spt Total								Estimate			
0.614	0.003	-0.144	-0.005	0.099	-0.022	0.000	0.009	-0.060	0.554		

Initial SAR Baseline to Current SAR Baseline (TY \$M)												
Initial APUC		Changes										
Estimate	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	Estimate			
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 Broduction		Changes									
Estimate	Estimate Econ Qty Sch Eng Est Oth Spt Total										
0.352	0.002	0.004	-0.005	-0.012	-0.055	0.000	0.010	-0.056	0.296		

SAR Baseline History				
ltem	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	May 2003	Jan 2001
Total Cost (TY \$M)	N/A	1119.5	1818.9	3546.1
Total Quantity	N/A	672	2964	6399
PAUC	N/A	1.666	0.614	0.554

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							
ltem	RDT&E	Procurement	MILCON	Total			
SAR Baseline (Production Estimate)	825.8	993.1		1818.9			
Previous Changes							
Economic	+10.5	+20.4		+30.9			
Quantity	+88.7	+1048.3		+1137.0			
Schedule	-0.2	-29.3		-29.5			
Engineering	+705.5	-67.0		+638.5			
Estimating	+109.3	-341.2		-231.9			
Other							
Support	+3.7	+72.2		+75.9			
Subtotal	+917.5	+703.4		+1620.9			
Current Changes							
Economic	-3.4	-5.9		-9.3			
Quantity	+3.7	+40.9		+44.6			
Schedule		-2.2		-2.2			
Engineering	+0.1	-2.2		-2.1			
Estimating	+68.7	+22.2		+90.9			
Other							
Support		-15.6		-15.6			
Subtotal	+69.1	+37.2		+106.3			
Total Changes	+986.6	+740.6		+1727.2			
CE - Cost Variance	1812.4	1733.7		3546.1			
CE - Cost & Funding	1812.4	1733.7		3546.1			

Summary BY 2003 \$M							
ltem	RDT&E	Procurement	MILCON	Total			
SAR Baseline (Production Estimate)	869.4	955.4		1824.8			
Previous Changes							
Economic							
Quantity	+81.3	+822.4		+903.7			
Schedule	-0.4	-8.6		-9.0			
Engineering	+592.8	-52.4		+540.4			
Estimating	+88.1	-296.9		-208.8			
Other							
Support	+3.2	+57.1		+60.3			
Subtotal	+765.0	+521.6		+1286.6			
Current Changes							
Economic							
Quantity	+3.0	+28.0		+31.0			
Schedule		-0.4		-0.4			
Engineering	+0.1	-1.5		-1.4			
Estimating	+50.6	+18.3		+68.9			
Other							
Support		-12.8		-12.8			
Subtotal	+53.7	+31.6		+85.3			
Total Changes	+818.7	+553.2		+1371.9			
CE - Cost Variance	1688.1	1508.6		3196.7			
CE - Cost & Funding	1688.1	1508.6		3196.7			

Previous Estimate: December 2013

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-3.4
Quantity variance resulting from an increase of 1 MIDS-LVT terminal (Army). (Quantity)	+0.2	+0.2
Quantity variance resulting from an increase of 3 MIDS-LVT and MIDS JTRS terminals (Air Force). (Quantity)	+0.9	+1.1
Quantity variance resulting from an increase of 7 MIDS-LVT and MIDS JTRS terminals (Navy). (Quantity)	+1.9	+2.4
Air Force purchased 2 MIDS JTRS Block Cycle 1 Retrofits for Air Force RDTE assets. (Engineering)	+0.1	+0.1
Adjustment for current and prior escalation. (Estimating)	+1.5	+1.8
Additional CMN-4 (Four Net Concurrent Multi-Netting with Concurrent Contention Receive) development funds were received to complete the effort (Navy). (Estimating)	+2.8	+3.5
MIDS JTRS TTNT (Tactical Targeting Network Technology) HPA (High Powered Amplifier) technical development funding (Navy). (Estimating)	+3.3	+4.1
MIDS JTRS Block Cycle 2 Funding received (Navy). (Estimating)	+1.3	+1.7
FY 2014 Execution Realignment to MIDS RDTE Funding (Navy). (Estimating)	-2.9	-3.6
FY 2015 Congressional reduction (Navy). (Estimating)	-10.4	-13.3
FY 2016-FY 2018 Realignment of funds to match requirements (Navy). (Estimating)	-0.4	0.0
FY 2016-FY 2020 New funding for the development efforts related to the Link 16 waveform (Navy). (Estimating)	+7.3	+10.0
FY 2018-FY 2020 New funding for the development efforts related to the TTNT Waveform (Navy). (Estimating)	+11.7	+16.0
FY 2016-FY 2018 Funding changes/realignment of funds for MIDS JTRS TTNT to fit the requirements profile better (Navy). (Estimating)	+4.3	+5.5
FY 2016-FY 2017 New funding for the completion of MIDS JTRS TTNT (Navy). (Estimating)	+9.5	+12.5
FY 2016-FY 2017 New funding for the development efforts related to MIDS Modernization (Navy) (Estimating)	+4.7	+6.2
FY 2016-FY 2018 New funding for the development efforts related to Air Dominance Assured Communications (Navy). (Estimating)	+10.6	+14.0
Revised estimate aligns with the FY 2016 PB (Navy). (Estimating)	+7.7	+10.9
Revised estimate for various rate adjustments (Navy). (Estimating)	-0.6	-0.9
Revised estimate for the purchase of 4 MIDS JTRS Block Cycle 1 retrofit kits (Air Force). (Estimating)	+0.2	+0.3
RDT&E Subtotal	+53.7	+69.1

Procurement	\$1	\$M	
Current Change Explanations	Base Year	Then Year	
Revised escalation indices. (Economic)	N/A	-5.9	
Acceleration of procurement buy profile to better fit the fleet's need and latest production schedule over FY 2015-FY 2020 (Navy). (Schedule)	0.0	-1.8	
Stretch-out of procurement buy profile from FY 2019 to FY 2020 (Army) (Other Procurement Army-OPA). (Schedule)	0.0	+0.2	
Acceleration of procurement buy profile from 35 terminals in FY 2013 to 43 terminals in FY 2013 and decrease FY 2014 from 26 to 19 terminals (Air Force) (Aircraft Procurement Air	0.0	-0.1	

Force-APAF). (Schedule)		
Quantity variance resulting from an increase of 23 MIDS-LVT and MIDS JTRS terminals from 1,281 to 1,304 (Air Force). (Subtotal)	+4.6	+6.1
Quantity variance resulting from an increase of 23 MIDS-LVT and MIDS JTRS terminals from 1,281 to 1,304 (Air Force) (APAF). (Quantity)	(+6.7)	(+8.9)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-0.1)	(-0.1)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-0.4)	(-0.5)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-1.6)	(-2.2)
Quantity variance resulting from a decrease of 66 MIDS-LVT terminals from 491 to 425 (Army) (OPA). (Subtotal)	-13.0	-17.3
Quantity variance resulting from a decrease of 66 MIDS-LVT terminals from 491 to 425 (Army) (OPA). (Quantity)	(-19.2)	(-25.5)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(+0.5)	(+0.7)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(+1.0)	(+1.3)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+4.7)	(+6.2)
Quantity variance resulting from an increase of 11 MIDS-LVT terminals from 138 to 149 (Navy) (Other Procurement Navy-OPN). (Subtotal)	+2.2	+2.8
Quantity variance resulting from an increase of 11 MIDS-LVT from 138 to 149 (Navy) (OPN). (Quantity)	(+3.2)	(+4.0)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-0.2)	(-0.2)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-0.8)	(-1.0)
Quantity variance resulting from an increase of 6 MIDS-LVT terminals from 47 to 53 (Navy) (Shipbuilding and Conversion Navy-SCN). (Subtotal)	+1.2	+1.9
Quantity variance resulting from an increase of 6 MIDS-LVT terminals from 47 to 53 (Navy) (SCN). (Quantity)	(+1.8)	(+2.8)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-0.1)	(-0.2)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-0.5)	(-0.7)
Quantity variance resulting from an increase of 117 MIDS-LVT and MIDS JTRS terminals from 2,918 to 3,035 (Navy) (Aircraft Procurement Navy-APN). (Subtotal)	+22.7	+32.5
Quantity variance resulting from an increase of 117 MIDS-LVT and MIDS JTRS terminals from 2,918 to 3,035 (Navy) (APN). (Quantity)	(+34.3)	(+49.1)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-0.8)	(-1.1)
Allocation to Engineering resulting from Quantity change. (Engineering) (QR)	(-1.8)	(-2.6)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-9.0)	(-12.9)
Quantity variance resulting from an increase of 4 MIDS-LVT terminals from 56 to 60 (DoD) (Procurement Defense Agency-PDA). (Subtotal)	+0.8	+1.0
Quantity variance resulting from an increase of 4 MIDS-LVT terminals from 56 to 60 (DoD) (PDA). (Quantity)	(+1.2)	(+1.6)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(-0.4)	(-0.6)
Adjustment for current and prior escalation. (Estimating)	+0.7	+0.8
Decrease in funding needed for the Army requirements (OPA). (Estimating)	-3.9	-4.9
Increase in funding for conversion kits for Army MIDS-LVT variant 11 to variant 2 (OPA). (Estimating)	+13.8	+18.5
Revised estimating assumptions for Cost Model for terminal price (SCN) (Estimating)	-0.5	-0.8
Revised estimating assumptions for Cost Model for terminal price (OPN). (Estimating)	-0.5	-0.6
Increased funding for MIDS JTRS terminal Repair and Retrofit to Block Cycle 1 configuration (APAF). (Estimating)	+5.8	+7.7
Revised estimating assumptions for Cost Model for terminal price (APAF). (Estimating)	-0.8	-1.1
Revised estimating assumptions to fix erroneous reporting of 2012 and 2013 (APN). (Estimating)	+20.9	+26.3

Increased funding for MIDS JTRS terminal repair and retrofit to CMN-4 configuration (APN). (Estimating)	+2.7	+3.4
Revised estimating assumptions for Cost Model for terminal price (APN). (Estimating)	-19.3	-26.0
Revised estimate aligns with FY 2016 PB (APN). (Estimating)	+7.0	+10.1
Adjustment for current and prior escalation. (Support)	+0.2	+0.3
Increase in Other Support for MIDS JTRS and MIDS-LVT Retrofit kits and repairs (Navy). (Support)	+2.3	+2.9
Decrease in Initial Spares due to updated Naval Inventory Control Point actuals and change in their estimations for future buys (Navy). (Support)	-15.0	-18.3
Decrease in Other Support due to training efforts no longer required due to decrease in terminals (Army). (Support)	-0.3	-0.4
Increase in Other Support for MIDS JTRS and MIDS-LVT Retrofit kits and repairs (Air Force). (Support)	+0.7	+0.8
Decrease in Initial Spares due to updated Air Force supply chain actuals and change in their estimations for future buys (Air Force). (Support)	-0.7	-0.9
Procurement Subtotal	+31.6	+37.2

(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 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 Co	Initial Contract Price (\$M) Current Contract Price (\$M) Estimated Price At Completion (\$M)					rice At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
134.8	N/A	59	222.0	N/A	609	485.6	485.6

Target Price Change Explanation

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

Contract Variance						
ltem	Cost Variance	Schedule Variance				
Cumulative Variances To Date	0.0	0.0				
Previous Cumulative Variances						
Net Change	+0.0	+0.0				

Cost and Schedule Variance Explanations

None

General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because all of the CPFF delivery orders on contract are below the threshold requirements for EVM reporting and are not included in the contract value. The contract includes only the production portion, which is FFP and level of effort.

Notes

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

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

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

Contract Identification	
Appropriation:	Procurement
Contract Name:	MIDS Production Contract
Contractor:	ViaSat, INC
Contractor Location: Contract Number:	6155 El Camino Real Carlsbad, CA 92009 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 Co	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	772	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.

Contract Variance					
Item	Cost Variance	Schedule Variance			
Cumulative Variances To Date	0.0	0.0			
Previous Cumulative Variances					
Net Change	+0.0	+0.0			

Cost and Schedule Variance Explanations

None

General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because all of the CPFF delivery orders on contract are below the threshold requirements for EVM reporting and are not included in the contract value. The contract includes only the production portion, which is FFP and level of effort.

Notes

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

This production contract includes nonrecurring engineering, supportability, and the manufacture of MIDS-Low Volume Terminals (MIDS-LVT), MIDS Joint Tactical Radio System (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.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	505	505	548	92.15%
Production	3953	4402	5851	75.24%
Total Program Quantity Delivered	4458	4907	6399	76.68%

Expended and Appropriated (TY \$M)				
Total Acquisition Cost	3546.1	Years Appropriated	26	
Expended to Date	2998.7	Percent Years Appropriated	83.87%	
Percent Expended	84.56%	Appropriated to Date	2999.2	
Total Funding Years	31	Percent Appropriated	84.58%	

The above data is current as of January 31, 2015.

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

Operating and Support Cost

Cost Estimate Details		
Date of Estimate:	February 29, 2012	
Source of Estimate:	POE	
Quantity to Sustain:	5851	
Unit of Measure:	Terminal	
Service Life per Unit:	20.00 Years	
Fiscal Years in Service:	FY 1996 - FY 2040	

The O&S costs are based on the POE (dated February 29, 2012), which was evaluated by the Air Force Cost Analysis Agency and Naval Center for Cost Analysis in support of the MIDS Joint Tactical Radio System (MIDS JTRS) Full Production & Fielding (FP&F) decision. The quantity of 5,851 includes U. S. only terminals currently fielded and on contract plus known requirements for FY 2015 through FY 2020. This period includes a phase-in, steady state, and phase -down profile for a total 33-year support period. Development units have no sustainment costs.

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		
Total	10.240		

ltem	Total O&S Cost \$M			
	MIDS			
	Current Production APB Objective/Threshold		Current Estimate	N/A (Antecedent)
Base Year	1176.6	1294.3	1198.3	N/A
Then Year	1573.7	N/A	1602.8	N/A

Equation to Translate Annual Cost to Total Cost

The calculation of total O&S costs is based on total quantities of 5,851 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 2013 SAR	1178.8		
Programmatic/Planning Factors	19.5	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		
Total Changes	19.5		
Current Estimate	1198.3		

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

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

Disposal costs are not identified at this time.