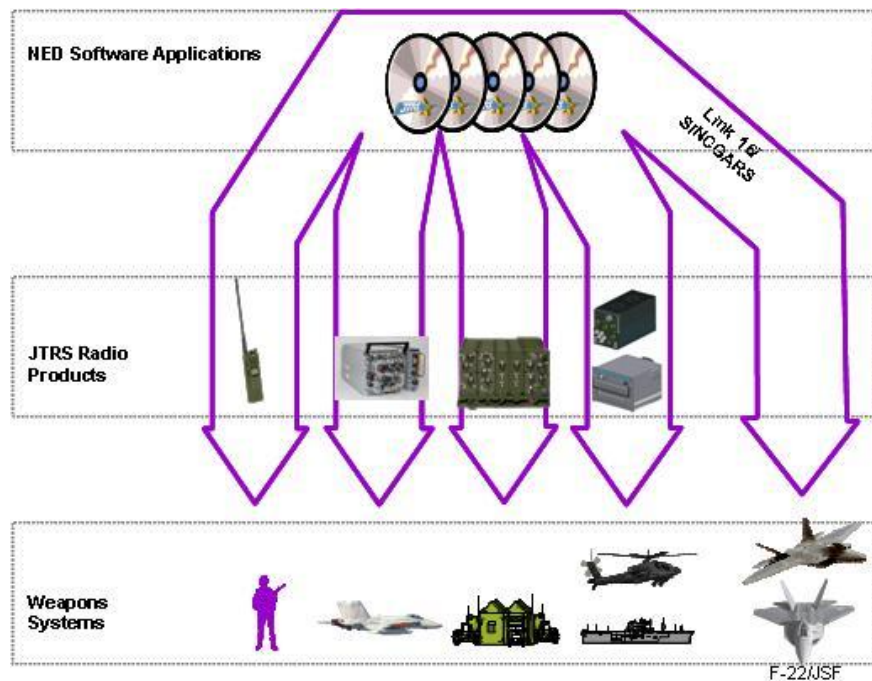




Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-284



Joint Tactical Networks (JTN)

As of FY 2011 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

Joint Tactical Radio System (JTRS) Network Enterprise Domain (NED) (NED)

DoD Component

DOD

Joint Participants

Army, Navy, Air Force, Marine Corps. Army is the lead Component per SECDEF Memo dated 31 AUG 2009.

Responsible Office

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Date Assigned: January 25, 2007

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References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated June 24, 2002

Approved APB

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated December 21, 2009

Mission and Description

The Joint Tactical Radio System (JTRS) Network Enterprise Domain (NED) (formerly Joint Waveform Program) Program Office manages the development and sustainment of three categories of products or software applications: legacy waveforms, networking waveforms, and Network Enterprise Services (NES). These NED software applications are components of JTRS radios and support net-centric operational warfare at sea, in the air, and on the ground. Legacy waveforms, when instantiated on a JTRS radio, produce radio performance qualities consistent and interoperable with corresponding DoD radio systems. Legacy waveform acquisition is based on developing products that mimic legacy radio performance through software as defined by increments by the Joint Capabilities Integration and Development System process, in the JTRS Operational Requirements Document, and follow-on Capability Development Documents. Networking waveforms, when integrated on JTRS radios, provide Internet Protocol (IP) based networked communications that can extend the Global Information Grid (GIG) to the last tactical mile.

Networked radios in the tactical environment will provide the capability to relay and share voice, data, and video transmissions. NES software products are those software applications that are essential to networking waveforms to establish and manage IP networks and achieve IP-based interoperability. Networking waveforms with their NES products are new capabilities that will evolve in terms of functionality, performance, and security throughout their life cycle in response to changing warfighter needs for networked voice, video, and data communications, changing technology and GIG standards, and new security vulnerabilities or threats.

Executive Summary

The Joint Tactical Radio System (JTRS), Network Enterprise Domain (NED), is an Acquisition Category ID program responsible for the development of waveforms and Network Enterprise Services software applications. These products are developed using an evolutionary, incremental strategy and are instantiated as components/software applications on the JTRS radios as developed by the other JTRS ACAT 1D product lines.

NED products are not systems or end items. They are components of JTRS radios. Accordingly, the NED Program has no unit quantities and no stand-alone Milestone C decision points. NED products are altered during integration with the JTRS radios and will not be delivered directly to combat users. Consequently, the fielding decision on each NED product will be made concurrent with the fielding decision for the first JTRS radio containing that product. NED products are delivered when they complete Formal Qualification Testing (FQT) and they are ready to be integrated with JTRS radios.

An updated Acquisition Program Baseline (APB) Agreement was approved by the Milestone Decision Authority (MDA) on December 21, 2009, maintaining the Joint Airborne Networking – Tactical Edge (JAN-TE) waveform as an unfunded requirement and canceling previous MDA direction to develop the Tactical Targeting Networking Technology (TTNT) waveform as the initial increment of JAN-TE. Acquisition Decision Memorandums (ADMs) were issued to both the Network Enterprise Domain (NED / December 22, 2009) and to the Multifunctional Information Distribution System - Joint Tactical Radio System (MIDS JTRS / December 23, 2009). The NED ADM directs accomplishment of an OSD-led Advanced Tactical Data Link (ATDL) waveform assessment, while the MIDS JTRS ADM directed the accomplishment of an assessment of the cost and implementation plan for the integration of Software Communications Architecture/Software Defined Radio (SCA/SDR) using advanced, high performance waveforms on airborne platforms. These assessments were directed to be completed by March 30, 2010 with a brief presented to the MDA summarizing the options examined and proposing a JAN-TE acquisition strategy and funding profile (across the FYDP) to be included in 2011-2012 budget discussions.

Development of the NED products (legacy/networking waveforms and Network Enterprise Services software applications) remains on track to meet APB cost, schedule, and performance thresholds. The NED portion of the JTRS Cluster 1/Ground Mobile Radio (GMR) contract with Boeing is in excess of 90% complete with no additional modifications anticipated, so it is no longer being reported. Significant progress and accomplishments occurring since the previous SAR submission include the following:

Waveform Development Status:

Wideband Networking Waveform (WNW): In June 2009, the WNW successfully demonstrated its validated design and tactical utility during a multi-node demonstration with senior service and Department of Defense officials at the Space and Naval Warfare Systems Center Atlantic in Charleston, S.C. Thirty ground mobile radios were used in the largest demonstration of the capability to date. The event demonstrated how the WNW, operating on JTRS GMR, can effectively network thirty mobile and static nodes, sharing data and video across multiple subnetworks in a challenging, heavily forested suburban environment with significant multi-path propagation effects. During this field demonstration testing, WNW performed as expected, and laboratory performance improvements from recent waveform algorithm enhancements were validated in the field. The ability to integrate waveform enhancements rapidly while testing in the field (3 times in as many weeks) thoroughly demonstrated a significant advantage that JTRS provides - the ability to upgrade warfighter communications and networking capability while deployed through software only updates in fielded radios. This is an important accomplishment, and can be leveraged continuously throughout the WNW product lifecycle. The baseline version of the WNW waveform intended for fielding, WNW v4.0, completed Formal Qualification Testing on GMR Engineering Development Model hardware in December 2009 (within approved APB schedule parameters).

Soldier Radio Waveform (SRW): The baseline version of the SRW waveform intended for fielding, SRW v1.0c, completed Formal Qualification Testing on its Waveform Development Environment in January 2009 (within approved APB schedule parameters), and an Information Assurance enhanced version, SRW v1.01c, completed Formal Qualification Testing on its Waveform Development Environment in May 2009. SRW v1.0c also completed Delta-Formal Qualification Testing on the

JTRS Handheld/Manpack/Small Form Factor (HMS) form factor in December 2009. Additionally, Airborne-Maritime/Fixed (AMF) successfully conducted an Air-to-Ground and Air-to-Air field demonstration of the SRW v1.0c waveform at Redstone Arsenal in June 2009.

Mobile User Objective System (MUOS): JTRS NED is leading the development of the MUOS Red Side Processing capability for the MUOS-JTRS Management Council which consists of the NED, MUOS, AMF, and HMS Program Managers. The MUOS v3.x (Red Side Processing) Waveform Preliminary Design Review was completed in March 2009, and the Critical Design Review is scheduled for February 2010. MUOS v3.x (Red Side Processing) Formal Qualification Testing is scheduled for February 2011 (within approved APB schedule parameters).

Ultra High Frequency (UHF) Demand Assigned Multiple Access (DAMA) Satellite Communications (SATCOM): UHF SATCOM v4.1 completed Delta-Formal Qualification Testing on GMR Engineering Development Model hardware in December 2009. A UHF SATCOM Waveform Software In-Service Support (SwISS) contract was competitively awarded to Rockwell Collins in June 2009. This five year contract (two-year base with three one-year options), provides for waveform maintenance, upgrades and enhancements.

High Frequency (HF): HF v4.0 completed Formal Qualification Testing on GMR Engineering Development Model hardware in December 2009 (within approved APB schedule parameters). A HF Waveform Software In-Service Support (SwISS) contract was competitively awarded to Rockwell Collins in June 2009. This five year contract (two-year base with three one-year options), provides for waveform maintenance, upgrades and enhancements.

Single Channel Ground and Airborne Radio System (SINGARS): SINGARS v1.4.7 completed Delta-Formal Qualification Testing on GMR Engineering Development Model hardware in October 2009. A SINGARS Waveform Software In-Service Support (SwISS) contract was competitively awarded to ITT Corporation in May 2009. This five year contract (two-year base with three one-year options), provides for waveform maintenance, upgrades and enhancements.

Enhanced Position Location Reporting System (EPLRS): EPLRS v3.1 completed Delta-Formal Qualification Testing on the GMR Engineering Development Model hardware in December 2009.

Link 16: Link-16 v1.04 completed Formal Qualification Testing on MIDS JTRS Engineering Development Model hardware in April 2009 (within updated APB schedule parameters). Link-16 v1.04 was approved for limited fielding on MIDS JTRS hardware by the MDA in December 2009.

Network Management and Planning Status:

JTRS WNW Network Manager (JWNM): JWNM v4.0 completed development and entered final testing in late 2009. JWNM v4.0 Formal Qualification Testing was completed in March 2010 (within approved APB schedule parameters).

SRW Network Manager (SRWNM): SRWNM 1.0R Formal Qualification Testing was completed in February 2010, and it will provide a NSA-certifiable network planning capability for the AN/PRC-154 Rifleman Radio. Additionally NED has established a public/private cooperative effort with two defense communications industry vendors. This cooperative effort allows for their participation in SRWNM 1.0+ development, integration and testing using their own internal resources to further expand and enhance competition among SRW-capable radio vendors within the JTRS Enterprise Business Model. SRWNM 1.0+ Critical Design Review is scheduled for April 2010, and it will provide a NSA-certifiable network planning and monitoring capability for all planned SRW-capable program of record and non-program of record radios.

JTRS Enterprise Network Manager (JENM): A JENM SwISS contract to merge the JWNM and SRWNM capabilities under a common user interface and add additional network management capabilities for JTRS INC 1 radio form factors is expected to be awarded during the second quarter of FY10. JENM will be delivered using a phased approach with the final phase scheduled for delivery in the fall of 2012 (within approved APB schedule parameters).

Enterprise Network Services (ENS) Phase 1: ENS Phase 1 acquisition was divided into two planned deliveries to better align with available funding and program schedule requirements. An ENS Phase 1 (Software Internet Controller (SoftINC))

delivery order was executed as part of the SINGARS SwISS contract in May 2009. The SoftINC period of performance (PoP) is anticipated to be 19 months, with CDR scheduled for February 2010 and FQT for November 2010 (within approved APB schedule parameters). An ENS Phase 1 (Tactical Data Controller (TDC)) delivery order was executed as part of the HF/UHF SATCOM SwISS contract in June 2009. The TDC effort is scheduled to have a 24 month PoP with CDR scheduled for May 2010 and FQT in June 2011 (within approved APB schedule parameters).

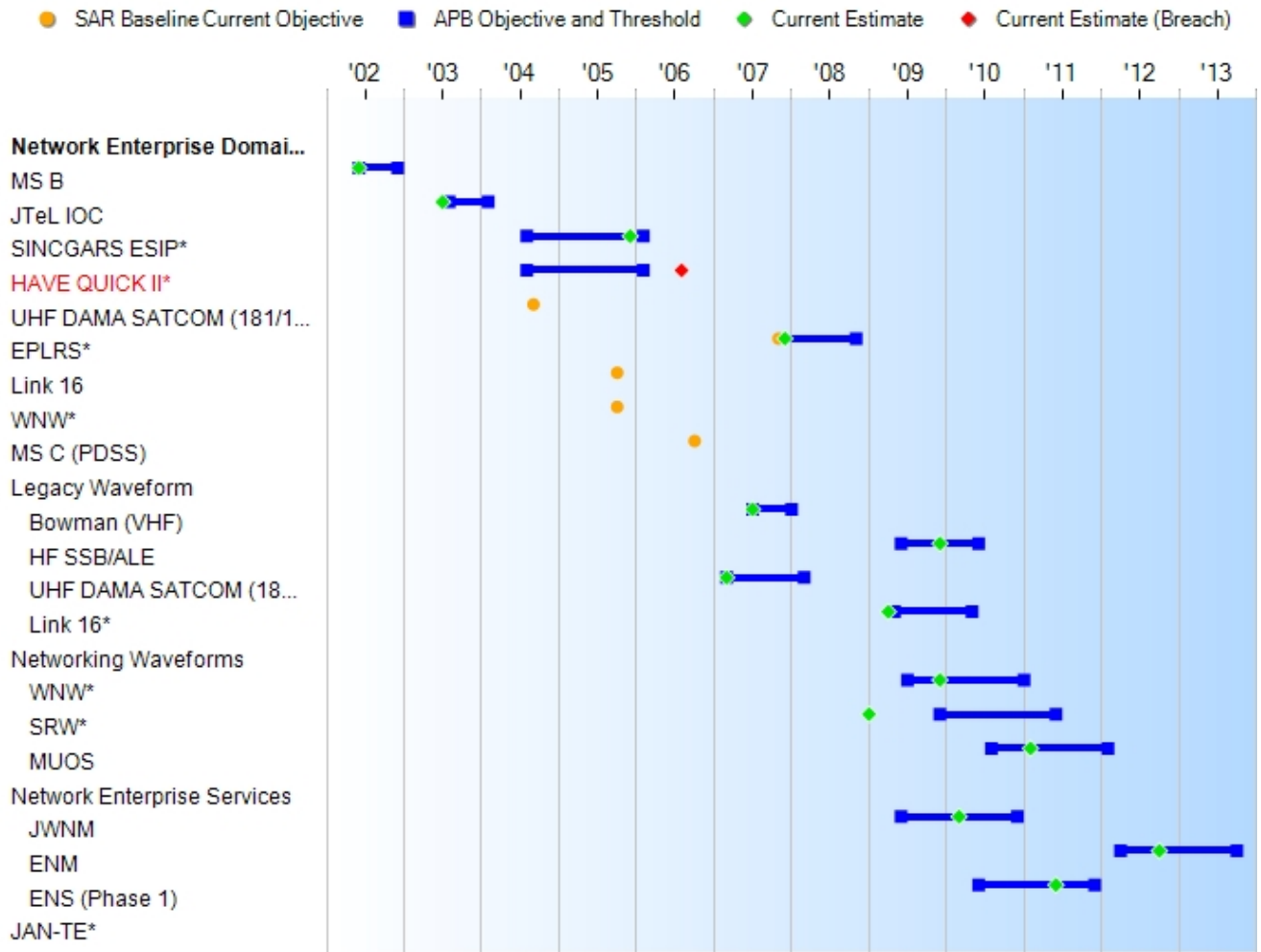
There are no major software-associated issues with this program.

Threshold Breaches

APB Breaches		Explanation of Breach	
Schedule	<input checked="" type="checkbox"/>	The program schedule breach is based on actual elapsed time since the original (2002) program threshold dates for key waveforms. Waveform delivery dates are based on successful completion of formal qualification tests (FQT) the Have Quick (HQ) II schedule milestone completed FQT on August 22, 2006 which was past the APB Threshold. This breach was reported on in the DEC 2006 SAR.	
Performance	<input type="checkbox"/>		
Cost	RDT&E		<input type="checkbox"/>
	Procurement		<input type="checkbox"/>
	MILCON		<input type="checkbox"/>
	Acq O&M		<input type="checkbox"/>
O&S Cost	<input type="checkbox"/>		
Unit Cost	PAUC		<input type="checkbox"/>
	APUC	<input type="checkbox"/>	

Nunn-McCurdy Breaches		
Current UCR Baseline		
	PAUC	None
	APUC	None
Original UCR Baseline		
	PAUC	None
	APUC	None

Schedule



Schedule Events					
Events	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	
MS B	Jun 2002	Jun 2002	Dec 2002	Jun 2002	
JTeL IOC	Aug 2003	Aug 2003	Feb 2004	Jul 2003	
SINGGARS ESIP*	Aug 2004	Aug 2004	Feb 2006	Dec 2005	
HAVE QUICK II*	Aug 2004	Aug 2004	Feb 2006	Aug 2006¹	
UHF DAMA SATCOM (181/182/183)*	Sep 2004	N/A	N/A	N/A	
EPLRS*	Mar 2005	Nov 2007	Nov 2008	Dec 2007	
Link 16	Oct 2005	N/A	N/A	N/A	
WNW*	Oct 2005	N/A	N/A	N/A	
MS C (PDSS)	Oct 2006	N/A	N/A	N/A	
Legacy Waveform					
Bowman (VHF)	N/A	Jul 2007	Jan 2008	Jul 2007	
HF SSB/ALE	N/A	Jun 2009	Jun 2010	Dec 2009	(Ch-3)
UHF DAMA SATCOM (181/182/183/184)*	N/A	Mar 2007	Mar 2008	Mar 2007	
Link 16*	N/A	May 2009	May 2010	Apr 2009	(Ch-1)
Networking Waveforms					
WNW*	N/A	Jul 2009	Jan 2011	Dec 2009	(Ch-4)
SRW*	N/A	Dec 2009	Jun 2011	Jan 2009	(Ch-5)
MUOS	N/A	Aug 2010	Feb 2012	Feb 2011	(Ch-6)
Network Enterprise Services					
JWNM	N/A	Jun 2009	Dec 2010	Mar 2010	(Ch-7)
ENM	N/A	Apr 2012	Oct 2013	Oct 2012	
ENS (Phase 1)	N/A	Jun 2010	Dec 2011	Jun 2011	(Ch-2)
JAN-TE*	N/A	TBD	TBD	N/A	(Ch-8)

¹ APB Breach

Change Explanations

(Ch-1) Current Estimate changed from February 2009 to April 2009 upon completion of Link 16 Formal Qualification Test (FQT).

(Ch-2) Current Estimate changed from June 2010 to June 2011 after an USD(AT&L) approved transfer of NED FY08 funding for Enterprise Networking Services, deferring the start of ENS Phase 1 to 1QtrFY09.

(Ch-3) Current Estimate changed from June 2009 to December 2009 upon completion of HF FQT.

(Ch-4) Current Estimate changed from June 2009 to December 2009 upon completion of WNW FQT.

(Ch-5) Current Estimate changed from December 2009 to January 2009 upon completion of the USG/NLOS/SS FQT.

(Ch-6) Current Estimate changed from August 2010 to February 2011 due to revised MUOS development schedule. The FQT date remains a full year before the APB threshold date.

(Ch-7) Current Estimate changed from June 2009 to March 2010 due to revised JWNM development schedule (within approved APB Schedule parameters).

(Ch-8) Current Estimate changed from December 2009 to TBD (N/A) due to USD(AT&L) directing suspension of TTNT v7.0 waveform development after Critical Design Review. As a result of this decision, the NED APB was updated on December 21, 2009 to defer the development of the JAN-TE waveform.

Notes

A star (*) denotes a Key Performance Parameter (KPP).

Acronyms and Abbreviations

ALE - Automatic Link Establishment

CE - Current Estimate

DAMA - Demand Assigned Multiple Access

ENM - Enterprise Network Manager

ENS - Enterprise Networking Services

EPLRS - Enhanced Position Location Reporting System

ESIP - Enhanced System Improvement Program

HF - High Frequency

HQ - HAVE QUICK

JAN-TE - Joint Airborne Network - Tactical Edge

JTeL IOC - JTRS Technology Lab Initial Operational Capability

JTR - Joint Tactical Radio

JTRS - Joint Tactical Radio System

JWNM - JTRS WNW Network Manager

KPP - Key Performance Parameter

MUOS - Mobile User Objective System

ORD - Operational Requirements Document

PCE - Previous Current Estimate

SATCOM - Satellite Communications

SINGARS - Single Channel Ground and Airborne Radio System

SRW - Soldier Radio Waveform

SSB - Single Side Band

TTNT - Tactical Targeting Network Technology

UHF - Ultra High Frequency

VHF - Very High Frequency

WNW - Wideband Networking Waveform

Performance

Performance Characteristics				
SAR Baseline Development Estimate	Current APB Development Objective/Threshold	Demonstrated Performance	Current Estimate	
SINGARS ESIP*				
30-88MHz 25KHz 1 6Kbps	30-88MHz 25KHz 16Kbps	30-88MHz 25KHz 16Kbps	30-88MHz 25KHz 16Kbps	30-88MHz 25KHz 16Kbps
HAVE QUICK II*				
225-400 MHz 25KHz 16Kbps	225-400 MHz 25KHz 16Kbps	225-400 MHz 25KHz 16Kbps	225-400 MHz 25KHz 16Kbps	225-400 MHz 25KHz 16Kbps
UHF DAMA SATCOM (181/182/183)*				
225-400 MHz 5 and 25KHz 64Kbps	N/A	N/A	TBD	N/A
EPLRS*				
420-450 MHz 3MHz (57Kbps VHSIC SIP 114Kbps VECP)	420MHz - 450MHz; 3MHz; (57Kbps, VHSIC SIP 228Kbps VECP)	420MHz - 450MHz; 3MHz; (57Kbps, VHSIC SIP 228Kbps VECP)	420MHz-450MHz; 3MHz; (57Kbps, VHSIC SIP 228Kbps VECP)	420MHz-450MHz; 3MHz; (57Kbps, VHSIC SIP 228Kbps VECP)
WNW*				
2M-2GHz Scalable BW,BPS	N/A	N/A	TBD	N/A
Link 16				
(960-121 5MHz) 3 MHz 118/236 Kbps w/FEC	N/A	N/A	TBD	N/A
Legacy Waveforms				
Bowman (VHF)				
N/A	30MHz - 80MHz; 25KHz; 156Kbps	30MHz - 80MHz; 25KHz; 156Kbps	30MHz- 80MHz; 25KHz; 156Kbps	30MHz- 80MHz; 25KHz; 156Kbps
HF SSB/ALE				
N/A	1.5MHz - 30MHz; 3KHz; VOICE: (A&D) DATA: 75, 150, 300, 600, 1200, 2400, 3200, 4800, 6400, 8000, 9600 bps per SSB channel	2.0MHz - 30MHz; 3KHz; VOICE: (A&D) DATA: 75, 150, 300, 600, 1200, 2400, 3200, 4800, 6400, 8000, 9600 bps per SSB channel	2.0MHz- 30MHz; 3KHz; VOICE: (A&D) DATA: 75, 150, 300, 600, 1200, 2400, 3200, 4800, 6400, 8000, 9600 bps per SSB channel	2.0MHz- 30MHz; 3KHz; VOICE: (A&D) DATA: 75, 150, 300, 600, 1200, 2400, 3200, 4800, 6400, 8000, 9600 bps per SSB channel
Link 16*				
N/A	960MHz - 1215MHz;	960MHz - 1215MHz;	960MHz- 1215MHz ;	960MHz- 1215MHz ;

	3MHz; 118/1137 Kbps, w/FEC	3MHz; 118/1137 Kbps, w/FEC	3MHz; 118/ 1137K bps, w/FEC	3MHz; 118/ 1137K bps, w/FEC	
UHF DAMA SATCOM (181/182/183/184)*					
N/A	225MHz - 400MHz; 5KHz & 25KHz; 75bps - 64Kbps	225MHz - 400MHz; 5KHz & 25KHz; 75bps - 56Kbps	225MHz- 400MHz; 5KHz & 25KHz; 75bps- 56Kbps	225MHz- 400MHz; 5KHz & 25KHz; 75bps- 56Kbps	
Networking Waveforms					
WNW (Throughput) *					
N/A	5Mbps	2Mbps	7Mbps	7Mbps	(Ch-2)
SRW (Network Throughput)*					
N/A	1200Kbps	600Kbps	600Kbps	600Kbps	
JAN-TE (TTNT) (Network Throughput)*					
N/A	N/A	N/A	TBD	N/A	(Ch-1)
MUOS					
N/A	240MHz - 320MHz; 5KHz & 25KHz; 2.4, 9.6, 16, 32, 64 Kbps	240MHz - 320MHz; 5KHz & 25KHz; 2.4, 9.6, 16, 32, 64 Kbps	TBD	240MHz- 320MHz; 5KHz & 25KHz; 2.4, 9.6, 16, 32, 64 Kbps	
Network Enterprise Services					
JWNM					
N/A	Reconfigure 150 sets operating WNW in 5 min	Reconfigure 35 sets operating WNW in 10 min	TBD	Reconfigure 35 sets operating WNW in 10 minutes	
ENM					
N/A	Provide network planning, management and control of WNW, SRW, and MUOS on all Increment 1 form factors	Provide network planning, management and control of WNW, SRW, and MUOS on all Increment 1 form factors	TBD	Provide network planning, management, and control of WNW, SRW, JAN-TE, and MUOS on all Increment 1 form factors	
ENS					
N/A	SINGARS R/R IP data w/WNW, SRW and EPLRS on all applicable Increment 1 form factors (HF and UHF) SATCOM DAMA R/R IP data w/all applicable Increment 1 waveforms and form factors	SINGARS R/R IP data w/WNW, SRW and EPLRS on the GMR; SINGARS R/R IP data with SRW and EPLRS on the HMS MANPACK; WNW R/R IP data with HF and UHF SATCOM DAMA on the GMR	TBD	SINGARS R/R IP data w/WNW, SRW and EPLRS on the GMR; SINGARS R/R IP data with SRW and EPLRS on the HMS MANPACK; WNW R/R IP data with HF and UHF SATCOM DAMA on the GMR	
JAN-TE (Network Throughput)*					
N/A	TBD	TBD	TBD	Deferred	(Ch-1)

Requirements Reference

Operational Requirements Document (ORD) 3.2/3.2.1 (Increment 1) dated August 28, 2006

Change Explanations

(Ch-1) USD(AT&L) directed suspension of TTNT v7.0 waveform development after Critical Design Review. As a result of this decision, the NED APB was updated on December 21, 2009 to defer the development of the JAN-TE waveform.
 (Ch-2) WNW demonstrated 7Mbps in a lab environment.

Notes

Note: Asterisk (*) Denotes Key Performance Parameter (KPP). The JTRS Increment 1 now focuses on initial near-term waveform software capability development of the KPP waveforms.

Acronyms and Abbreviations

A&D - Analog & Digital
 ALE - Automatic Link Establishment
 BPS - Bits Per Second
 BW - Bandwidth
 DAMA - Demand Assigned Multiple Access
 ENM - Enterprise Network Manager
 ENS - Enterprise Networking Services
 EPLRS - Enhanced Position Location Reporting System
 ESIP - Enhanced System Improvement Program
 FEC - Forward Error Correction
 GHz - Gigahertz
 GMR - Ground Mobile Radio
 HF - High Frequency
 IP - Internet Protocol
 JAN-TE - Joint Airborne Network - Tactical Edge
 JTEL - JTRS Test and Evaluation Laboratory
 Kbps - Kilo Bits Per Second
 KHz - Kilohertz
 MHz - Megahertz
 MUOS - Mobile User Objective System
 R/R - Routing/Retransmit
 SATCOM - Satellite Communications
 SINCGARS - Single Channel Ground and Airborne Radio System
 SRW - Soldier Radio Waveform
 SSB - Single Side Band
 TTNT - Tactical Targeting Network Technology
 UHF - Ultra High Frequency
 VECP - Value Engineering Change Proposal
 VHF - Very High Frequency
 VHSIC - Very High Speed Integrated Circuit
 WNW - Wideband Networking Waveform

Track to Budget

RDT&E			
Appn	BA	PE	
Army	2040	05	0604280A
	Project	Name	
	D162	Joint Tactical Radio System/JTRS (Shared)	
Air Force	3600	05	0604280F
	Project	Name	
	5068	Air Force JTRS Waveform System/JTRS (Shared)	
Navy	1319	05	0604280N
	Project	Name	
	X3076	JTRS Network Enterprise Domain (JNED)	

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2002 \$M			BY 2002 \$M	TY \$M		
	SAR Baseline Development Estimate	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Development Objective	Current Estimate
RDT&E	812.9	1743.2	1917.5	1677.8	914.4	1961.8	1939.0
Procurement	0.0	0.0	--	0.0	0.0	0.0	0.0
Flyaway	--	--	--	0.0	--	--	0.0
Recurring	--	--	--	0.0	--	--	0.0
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	0.0	--	--	0.0
Other Support	--	--	--	0.0	--	--	0.0
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	0.0	0.0	--	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	--	0.0	0.0	0.0	0.0
Total	812.9	1743.2	N/A	1677.8	914.4	1961.8	1939.0

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Development	Current Estimate
RDT&E		0	0
Procurement		0	0
Total		0	0

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2011 President's Budget / December 2009 SAR (TY\$ M)									
Appropriation	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
RDT&E	1300.4	201.1	117.6	80.7	33.6	15.9	15.3	174.4	1939.0
Procurement	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
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 2011 Total	1300.4	201.1	117.6	80.7	33.6	15.9	15.3	174.4	1939.0
PB 2009 Total	1397.3	197.7	95.1	58.2	21.0	8.4	7.5	176.6	1961.8
Delta	-96.9	3.4	22.5	22.5	12.6	7.5	7.8	-2.2	-22.8

Quantity Summary										
FY 2011 President's Budget / December 2009 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	To Complete	Total
Development	0	0	0	0	0	0	0	0	0	0
Production	0	0	0	0	0	0	0	0	0	0
PB 2011 Total	0	0	0	0	0	0	0	0	0	0
PB 2009 Total	0	0	0	0	0	0	0	0	0	0
Delta	0	0	0	0	0	0	0	0	0	0

Cost and Funding

Annual Funding By Appropriation

Annual Funding							
1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	--	--	--	--	--	--	221.5
2008	--	--	--	--	--	--	241.5
2009	--	--	--	--	--	--	204.5
2010	--	--	--	--	--	--	201.1
2011	--	--	--	--	--	--	117.6
2012	--	--	--	--	--	--	26.9
2013	--	--	--	--	--	--	11.2
2014	--	--	--	--	--	--	5.3
2015	--	--	--	--	--	--	5.1
2016	--	--	--	--	--	--	2.8
2017	--	--	--	--	--	--	2.8
2018	--	--	--	--	--	--	2.9
2019	--	--	--	--	--	--	2.9
2020	--	--	--	--	--	--	2.9
2021	--	--	--	--	--	--	3.0
2022	--	--	--	--	--	--	3.0
2023	--	--	--	--	--	--	3.1
2024	--	--	--	--	--	--	3.1
2025	--	--	--	--	--	--	3.3
2026	--	--	--	--	--	--	3.3
2027	--	--	--	--	--	--	3.4
2028	--	--	--	--	--	--	3.5
2029	--	--	--	--	--	--	3.5
2030	--	--	--	--	--	--	3.6
2031	--	--	--	--	--	--	3.6
2032	--	--	--	--	--	--	3.7
2033	--	--	--	--	--	--	3.8
Subtotal	--	--	--	--	--	--	1092.9

Annual Funding							
1319 RDT&E Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2002 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	--	--	--	--	--	--	194.4
2008	--	--	--	--	--	--	208.1
2009	--	--	--	--	--	--	174.2
2010	--	--	--	--	--	--	169.5
2011	--	--	--	--	--	--	97.7
2012	--	--	--	--	--	--	22.0
2013	--	--	--	--	--	--	9.0
2014	--	--	--	--	--	--	4.2
2015	--	--	--	--	--	--	4.0
2016	--	--	--	--	--	--	2.1
2017	--	--	--	--	--	--	2.1
2018	--	--	--	--	--	--	2.1
2019	--	--	--	--	--	--	2.1
2020	--	--	--	--	--	--	2.1
2021	--	--	--	--	--	--	2.1
2022	--	--	--	--	--	--	2.1
2023	--	--	--	--	--	--	2.1
2024	--	--	--	--	--	--	2.1
2025	--	--	--	--	--	--	2.2
2026	--	--	--	--	--	--	2.1
2027	--	--	--	--	--	--	2.2
2028	--	--	--	--	--	--	2.2
2029	--	--	--	--	--	--	2.1
2030	--	--	--	--	--	--	2.2
2031	--	--	--	--	--	--	2.1
2032	--	--	--	--	--	--	2.2
2033	--	--	--	--	--	--	2.2
Subtotal	--	--	--	--	--	--	921.5

The total JTRS development funding is managed out of three MILDEP Program Elements (PEs) [0604280A (shared), 0604280F (shared), and 0604280N] across the FYDP but realigned in the budget year for execution under the Navy RDT&E PE [0604280N].

Current estimate is based on JTRS ORD 3.2.1 Requirements.

Annual Funding							
2040 RDT&E Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1998	--	--	--	--	--	--	11.0
1999	--	--	--	--	--	--	13.4
2000	--	--	--	--	--	--	35.5
2001	--	--	--	--	--	--	59.8
2002	--	--	--	--	--	--	72.7
2003	--	--	--	--	--	--	62.9
2004	--	--	--	--	--	--	105.6
2005	--	--	--	--	--	--	140.3
2006	--	--	--	--	--	--	131.7
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	26.9
2013	--	--	--	--	--	--	11.2
2014	--	--	--	--	--	--	5.3
2015	--	--	--	--	--	--	5.1
2016	--	--	--	--	--	--	2.8
2017	--	--	--	--	--	--	2.8
2018	--	--	--	--	--	--	2.9
2019	--	--	--	--	--	--	2.9
2020	--	--	--	--	--	--	2.9
2021	--	--	--	--	--	--	3.0
2022	--	--	--	--	--	--	3.0
2023	--	--	--	--	--	--	3.1
2024	--	--	--	--	--	--	3.1
2025	--	--	--	--	--	--	3.3
2026	--	--	--	--	--	--	3.3
2027	--	--	--	--	--	--	3.4
2028	--	--	--	--	--	--	3.5
2029	--	--	--	--	--	--	3.5
2030	--	--	--	--	--	--	3.6
2031	--	--	--	--	--	--	3.6
2032	--	--	--	--	--	--	3.7
2033	--	--	--	--	--	--	3.7
Subtotal	--	--	--	--	--	--	739.5

Annual Funding 2040 RDT&E Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	BY 2002 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1998	--	--	--	--	--	--	11.4
1999	--	--	--	--	--	--	13.8
2000	--	--	--	--	--	--	36.0
2001	--	--	--	--	--	--	59.8
2002	--	--	--	--	--	--	71.9
2003	--	--	--	--	--	--	61.1
2004	--	--	--	--	--	--	100.2
2005	--	--	--	--	--	--	129.3
2006	--	--	--	--	--	--	118.1
2007	--	--	--	--	--	--	--
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	21.9
2013	--	--	--	--	--	--	9.0
2014	--	--	--	--	--	--	4.2
2015	--	--	--	--	--	--	3.9
2016	--	--	--	--	--	--	2.1
2017	--	--	--	--	--	--	2.1
2018	--	--	--	--	--	--	2.1
2019	--	--	--	--	--	--	2.1
2020	--	--	--	--	--	--	2.1
2021	--	--	--	--	--	--	2.1
2022	--	--	--	--	--	--	2.1
2023	--	--	--	--	--	--	2.1
2024	--	--	--	--	--	--	2.1
2025	--	--	--	--	--	--	2.2
2026	--	--	--	--	--	--	2.1
2027	--	--	--	--	--	--	2.1
2028	--	--	--	--	--	--	2.2
2029	--	--	--	--	--	--	2.1
2030	--	--	--	--	--	--	2.2
2031	--	--	--	--	--	--	2.1
2032	--	--	--	--	--	--	2.1
2033	--	--	--	--	--	--	2.1
Subtotal	--	--	--	--	--	--	678.7

The total JTRS development funding is managed out of three MILDEP Program Elements (PEs) [0604280A (shared), 0604280F (shared), and 0604280N] across the FYDP but realigned in the budget year for execution under the Navy RDT&E PE [0604280N].

Current estimate is based on JTRS ORD 3.2.1 Requirements.

Annual Funding							
3600 RDT&E Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2012	--	--	--	--	--	--	26.9
2013	--	--	--	--	--	--	11.2
2014	--	--	--	--	--	--	5.3
2015	--	--	--	--	--	--	5.1
2016	--	--	--	--	--	--	2.8
2017	--	--	--	--	--	--	2.8
2018	--	--	--	--	--	--	2.9
2019	--	--	--	--	--	--	2.9
2020	--	--	--	--	--	--	2.9
2021	--	--	--	--	--	--	3.0
2022	--	--	--	--	--	--	3.0
2023	--	--	--	--	--	--	3.1
2024	--	--	--	--	--	--	3.1
2025	--	--	--	--	--	--	3.3
2026	--	--	--	--	--	--	3.3
2027	--	--	--	--	--	--	3.4
2028	--	--	--	--	--	--	3.5
2029	--	--	--	--	--	--	3.5
2030	--	--	--	--	--	--	3.6
2031	--	--	--	--	--	--	3.6
2032	--	--	--	--	--	--	3.7
2033	--	--	--	--	--	--	3.7
Subtotal	--	--	--	--	--	--	106.6

Annual Funding							
3600 RDT&E Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 2002 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2012	--	--	--	--	--	--	22.0
2013	--	--	--	--	--	--	9.0
2014	--	--	--	--	--	--	4.2
2015	--	--	--	--	--	--	4.0
2016	--	--	--	--	--	--	2.1
2017	--	--	--	--	--	--	2.1
2018	--	--	--	--	--	--	2.1
2019	--	--	--	--	--	--	2.1
2020	--	--	--	--	--	--	2.1
2021	--	--	--	--	--	--	2.1
2022	--	--	--	--	--	--	2.1
2023	--	--	--	--	--	--	2.1
2024	--	--	--	--	--	--	2.1
2025	--	--	--	--	--	--	2.2
2026	--	--	--	--	--	--	2.1
2027	--	--	--	--	--	--	2.2
2028	--	--	--	--	--	--	2.2
2029	--	--	--	--	--	--	2.2
2030	--	--	--	--	--	--	2.2
2031	--	--	--	--	--	--	2.1
2032	--	--	--	--	--	--	2.2
2033	--	--	--	--	--	--	2.1
Subtotal	--	--	--	--	--	--	77.6

The total JTRS development funding is managed out of three MILDEP Program Elements (PEs) [0604280A (shared), 0604280F (shared), and 0604280N] across the FYDP but realigned in the budget year for execution under the Navy RDT&E PE [0604280N].

Current estimate is based on JTRS ORD 3.2.1 Requirements.

Low Rate Initial Production

There is no production or deployment directly associated with the NED Program. All production and deployment will be functions of military service purchases of JTRS radios and their intended usage. Consequently, there will be no Low Rate Initial Production or Full Rate Production decisions associated with this program. (Para 3.4.2.1 of the NED Acquisition Strategy of February 08, 2008).

Foreign Military Sales

None

Nuclear Costs

None

Unit Cost

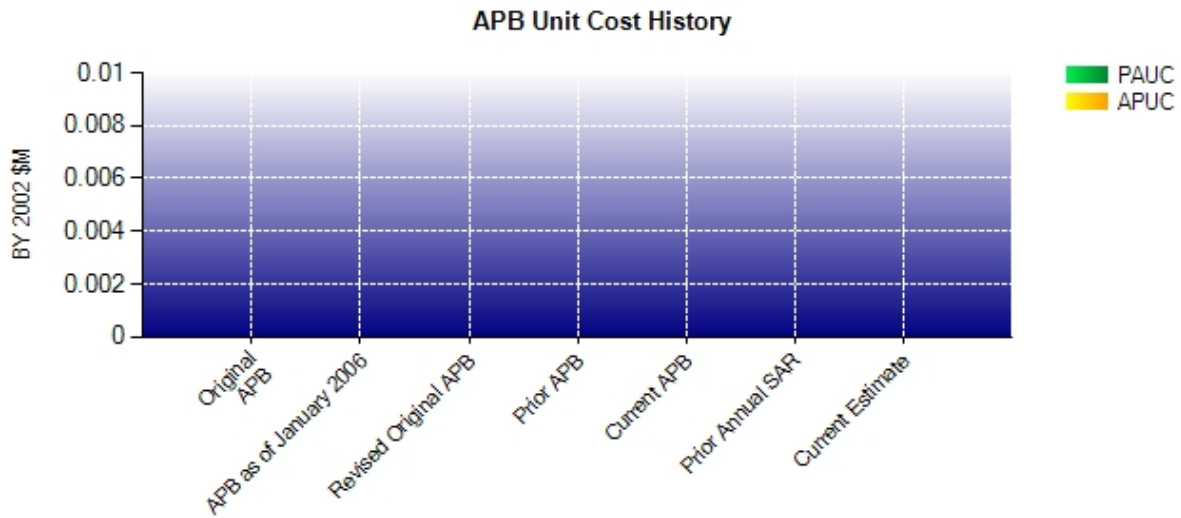
Unit Cost Report

Item	BY 2002 \$M	BY 2002 \$M	% Change
	Current UCR Baseline (Dec 2009 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	1743.2	1677.8	
Quantity	0	0	
Unit Cost	--	--	--
Average Procurement Unit Cost			
Cost	0.0	0.0	
Quantity	0	0	
Unit Cost	--	--	--

Item	BY 2002 \$M	BY 2002 \$M	% Change
	Original UCR Baseline (Jun 2002 APB)	Current Estimate (Dec 2009 SAR)	
Program Acquisition Unit Cost			
Cost	812.9	1677.8	
Quantity	0	0	
Unit Cost	--	--	--
Average Procurement Unit Cost			
Cost	--	0.0	
Quantity	--	0	
Unit Cost	--	--	--

Note: The JTRS NED Program contains Research, Development, Test and Evaluation (RDT&E), and Operations and Maintenance (O&M) funding only. NED products are not systems or end items. They are components of JTRS radios. Accordingly, the NED Program has no unit quantities.

Unit Cost History



Item	Date	BY 2002 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Jun 2002	N/A	N/A	N/A	N/A
APB as of January 2006	Jun 2002	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Jan 2008	N/A	N/A	N/A	N/A
Current APB	Dec 2009	N/A	N/A	N/A	N/A
Prior Annual SAR	Dec 2007	N/A	N/A	N/A	N/A
Current Estimate	Dec 2009	N/A	N/A	N/A	N/A

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.000	--	--	--	--	--	--	--	--	0.000

A PAUC Unit Cost History is not available, since no Initial PAUC Estimate had been calculated due to a lack of defined quantities.

Current SAR Baseline to Current Estimate (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.000	--	--	--	--	--	--	--	--	0.000

An APUC Unit Cost History is not available, since no Initial APUC Estimate had been calculated due to a lack of defined quantities.

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	Jun 2002	N/A	Jun 2002
Milestone C	N/A	Oct 2006	N/A	N/A
IOC	N/A	N/A	N/A	Jul 2003
Total Cost (TY \$M)	N/A	914.4	N/A	1939.0
Total Quantity	N/A	N/A	N/A	0
PAUC	N/A	N/A	N/A	N/A

The JTRS NED Program contains Research, Development, Test and Evaluation (RDT&E), and Operations and Maintenance (O&M) funding only. NED products are not systems or end items. They are components of JTRS radios. Accordingly, the NED Program has no unit quantities. Milestone C was deleted in the January 16, 2008 APB.

Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	914.4	--	--	914.4
Previous Changes				
Economic	-42.1	--	--	-42.1
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	+725.3	--	--	+725.3
Estimating	+364.2	--	--	+364.2
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+1047.4	--	--	+1047.4
Current Changes				
Economic	+58.6	--	--	+58.6
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-81.4	--	--	-81.4
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-22.8	--	--	-22.8
Total Changes	+1024.6	--	--	+1024.6
Current Estimate	1939.0	--	--	1939.0

Summary BY 2002 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	812.9	--	--	812.9
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	+648.1	--	--	+648.1
Estimating	+282.2	--	--	+282.2
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+930.3	--	--	+930.3
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-65.4	--	--	-65.4
Other	--	--	--	--
Support	--	--	--	--
Subtotal	-65.4	--	--	-65.4
Total Changes	+864.9	--	--	+864.9
Current Estimate	1677.8	--	--	1677.8

Previous Estimate: December 2007

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+58.6
Decrease reflects adjustment for current and prior escalation. (Estimating)	-3.5	-3.5
Decrease reflects TTNT Descope and removal from NED APB [Navy] (Estimating)	-35.5	-42.5
Increase reflects POM-10 Plus-Up for waveform enhancements to the EPLRS, VHF/UHF/HQ, and Bowman Legacy waveforms [Army] (Estimating)	+14.8	+19.7
Increase reflects POM-10 Plus-Up for waveform enhancements to Link-16 Legacy waveform [Air Force] (Estimating)	+12.5	+8.4
Increase reflects POM-10 Plus-Up for waveform enhancements to Link-16 Legacy waveform [Navy] (Estimating)	+14.3	+17.2
Increase reflects POM-10 plus-ups for waveform enhancements to the EPLRS, VHF/UHF/HQ, and Bowman Legacy waveforms [Air Force] (Estimating)	+14.5	+19.7
Increase reflects POM-10 plus-ups for waveform enhancements to the EPLRS, VHF/UHF/HQ, and Bowman Legacy waveforms [Navy] (Estimating)	+100.7	+119.7
Increase reflects PR-11 Plus-Up for JENM MUOS Enhancement [Army] (Estimating)	+5.3	+6.6
Increase reflects PR-11 Plus-Up for JENM MUOS Enhancement [Navy] (Estimating)	+14.1	+17.3
Increase reflects PR-11 Plus-Up for JENM MUOS Enhancement [Air Force] (Estimating)	+5.6	+6.6
Decrease reflects PR-11 ISO MIDS' OMN and ATDLS reduction by the DAWG [Air Force] (Estimating)	-9.5	-11.2
Decrease reflects PR-11 ISO MIDS' OMN and ATDLS reduction by the DAWG [Navy] (Estimating)	-9.5	-11.1
Decrease reflects correction of Prior Year Budget Control error [Army] (Estimating)	-43.9	-52.0
Increase reflects annual budget year realignment from RDT&E to O&M,N [Navy] (Estimating)	+46.0	+54.5
Decrease reflects annual budget year realignment from RDT&E to O&M,N [Army] (Estimating)	-13.6	-16.5
Decrease reflects various budget adjustments [Army] (Estimating)	-139.2	-165.4
Increase reflects various budget adjustments [Navy] (Estimating)	+64.1	+73.2
Decrease reflects annual budget year realignment from RDT&E to O&M,N [Air Force] (Estimating)	-74.5	-88.3
Decrease reflects various budget adjustments [Air Force] (Estimating)	-28.1	-33.8
RDT&E Subtotal	-65.4	-22.8

Contracts

Contract Identification

Appropriation: RDT&E
Contract Name: JTRS Cluster 1
Contractor: The Boeing Company
Contractor Location: Anaheim, CA 92806
Contract Number: DAAB07-02-C-C403
Contract Type: Cost Plus Award Fee (CPAF)
Award Date: June 24, 2002
Definitization Date: June 24, 2002

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
156.8	N/A	0	527.3	N/A	0	599.2	599.2

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/25/2009)	-46.9	-6.0
Previous Cumulative Variances	-3.5	-2.5
Net Change	-43.4	-3.5

Cost and Schedule Variance Explanations

General Contract Variance Explanation

The unfavorable cost and schedule variances are a result of the contractor's underestimation of the cost and schedule required to accomplish authorized work, particularly the Information Assurance activities required to meet NSA's security requirements. In addition, the contractor also utilized additional resources to maintain schedule.

Notes

The JTRS GMR System Development and Demonstration contract includes the Ground Mobile Radio (GMR) Hardware Development Program and Network Enterprise Domain (NED) Program. As a result of this contract structure, the data reported herein is only for the NED portion of the GMR contract and is based on an allocation of the contract data between the NED and GMR Program Offices. The remaining Joint Tactical Radio System (JTRS) Waveforms procured directly by the NED Program Office do not meet the dollar threshold for reporting (with the exception of the SRW contract, which follows). Contract values have been updated to reflect NED's share of the Boeing contract, vice the entire Boeing contract. A November 2005 Defense Acquisition Board revised the structure of the JTRS program. The decision was formalized in an Acquisition Decision Memorandum (ADM) signed on March 31, 2006 that authorized implementation of the Increment 1 restructured JTRS GMR program effort. As part of the implementation of the Increment 1 restructured plan into the contractor's Performance Measurement Baseline (PMB), the GMR Procuring Contracting Officer (PCO) authorized Boeing to establish a revised PMB and eliminate all schedule and cost variances. This was accomplished in the January 2007 Contract Performance Report (CPR) where the contractor set BCWS (Planned) = BCWP (Earned) = ACWP (Expended). The contractor's revised Increment 1 Earned Value Management System (EVMS) baseline was effective in the February 2007 reporting period. The first CPR reporting against the revised baseline was submitted in March 2007. The basis of this report is the December 2009 CPR.

The NED Program Manager's (PM's) allocation of the total GMR contract's costs established an estimated price of \$599.2M. Since the GMR contract was re-planned in the past year, the NED and GMR PMs decided that the full amount of NED's portion of the GMR contract is 'Negotiated'. Therefore, the Contract Target Price has been revised from last quarter's report to reflect this proportional allocation agreement [approximately 30% NED; 70% GMR]. Management Reserve for the NED portion of the GMR contract was changed from last Quarter's DAES report to \$2.5M from \$8.76M to reflect the NED portion of the Management Reserve. Current EVMS performance data through December 2009 shows a (\$46.9M) Cumulative Cost Variance and a (\$6.0M) Cumulative Schedule Variance. While analysis of the latest CPR data shows no major schedule drivers, these areas will continue to be monitored closely. The Contractor's EAC of \$576.3M is based on the CPR under current performance data. The NED PM's 'Best Case' EAC is \$561.1M; 'Worst Case' EAC is \$596.8M; and the 'Most Likely Case' EAC is \$566.2M. The Best Case, Worst Case, and Most Likely Case are factored from the CPR at about 30% of the total found listed under Estimated Cost at Completion without GMR and completed project EACs.

This contract is more than 90% complete and will no longer be reported.

Contract Identification

Appropriation: RDT&E
Contract Name: Soldier Radio Waveform
Contractor: ITT CORPORATION
Contractor Location: FORT WAYNE, IN 46818
Contract Number: N65236-07-C-5876
Contract Type: Cost Plus Incentive Fee (CPIF)
Award Date: November 17, 2006
Definitization Date: November 17, 2006

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
44.9	N/A	0	108.6	N/A	0	112.4	112.4

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/25/2009)	-31.0	-3.2
Previous Cumulative Variances	-6.1	-4.2
Net Change	-24.9	+1.0

Cost and Schedule Variance Explanations**General Contract Variance Explanation**

The unfavorable Cost Variance is a result of the Contractor underestimating the complexity of the work, particularly, resolution of Software Discrepancy Reports, the complexity of concurrent development, and the Information Assurance activities required to meet NSA's security requirements.

Notes

The NED PM's allocation of the total SRW contract cost established an estimated Contract Target Price of \$103.7M and a Contract Target Price of \$108.6M through Contract Modification P00037. Of the (\$63.7M) price increase since the last SAR report in December 2007, (\$36.8M) is for additional scope such as the addition of the SRW Network Management capability (\$20.8M), additional HMS Porting (\$8.5M), 1.1C Requirements Study (\$1.5M), CEA Modifications (\$1.3M), 1.01.1C Updates (\$1.2M), SAFENET change (\$.9M) and several miscellaneous ECP's (\$2.9M). The price has also been impacted by cost overruns of approximately (\$26.9M).

The Contractor's Most Likely EAC of \$106.8M is based on the Contractor's reported CPR EAC. For the Waveform, it also includes a possible 2-week delay to HMS Porting as a result of additional regression testing during UGS/CDT, and minimal impact of late GFI to the Network Manager. The Best Case EAC is \$106.1M and assumes the total cost will be comprised of the current BAC, with no opportunity to recover any portion of the VAC. The Worst Case EAC of \$108.5M is based on the current reported EAC plus additional program risk relative to HMS Integration on the Waveform and continued impact of late GFI to the Network Manager.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	0	0	0	--
Total Program Quantity Delivered	0	0	0	--

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	1939.0	Years Appropriated	13
Expended to Date	1272.3	Percent Years Appropriated	36.11%
Percent Expended	65.62%	Appropriated to Date	1501.5
Total Funding Years	36	Percent Appropriated	77.44%

Operating and Support Cost

Assumptions and Ground Rules

The JTRS NED Program contains Research, Development, Test and Evaluation (RDT&E), and Operations and Maintenance (O&M) funding only. NED products are not systems or end items. They are components of JTRS radios. The NED O&M funding is for software in-service support of NED products and is based on a cost estimate of January 2008. This cost estimate defines software in-service support from FY09 through FY33 (25 years).

Cost Estimate Reference:

None

Sustainment Strategy:

None

Antecedent Information:

None

Unitized O&S Costs BY2002 \$M			
Cost Element	Network Enterprise Domain (NED)		No Antecedent (Antecedent)
	Average Annual Cost (All Waveforms)		
Mission Pay & Allowance	0.000		--
Unit Level Consumption	0.000		--
Intermediate Maintenance	0.000		--
Depot Maintenance	0.000		--
Contractor Support	0.000		--
Sustaining Support	29.560		--
Indirect	0.000		--
Other	0.000		--
Total	29.560		--

Unitized Cost Comments:

None

Item	Total O&S Cost \$M			
	Network Enterprise Domain (NED)			No Antecedent (Antecedent)
	Current Development APB Objective/Threshold		Current Estimate	
Base Year	739.0	812.9	728.4	N/A
Then Year	1221.0	N/A	1179.6	N/A

Total O&S Cost Comment

None

Disposal Estimate Details

Date of Estimate:

Source of Estimate:

Disposal/Demilitarization Total Cost (BY 2002 \$M):