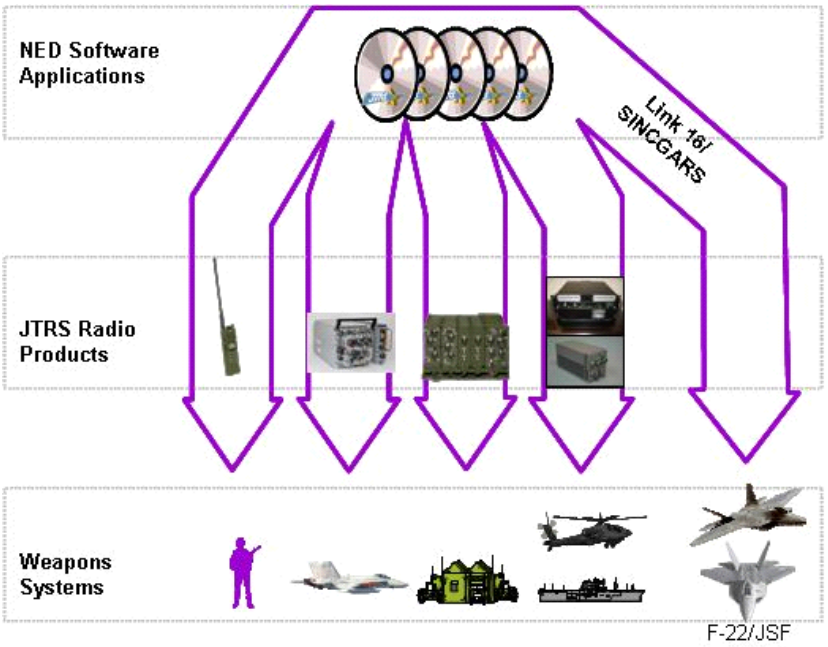
Selected Acquisition Report (SAR)

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



JTRS NED

As of December 31, 2010

Defense Acquisition Management
Information Retrieval
(DAMIR)

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Program Information

Designation And Nomenclature (Popular Name)

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

DoD Component

Joint Participants

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

Responsible Office

Responsible Office

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Date Assigned January 25, 2007

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) 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. An Acquisition Decision Memorandum was issued to NED by the USD Acquisition Technology & Logistics (AT&L) on December 22, 2009 that directed the Deputy ASD (C3, Space & Spectrum) to "lead a working group, to include the Joint Staff, Cost Assessment and Program Evaluation (CAPE), the Services, others in ASD Network and Information Integration (NII), my staff (Director Defense Research and Engineering (DDR&E) and Portfolio Systems Acquisition), and any other stakeholders, to develop a way forward, including the technology maturation needed, for achieving this capability." The Deputy ASD-led working group was directed to report back to the USD (AT&L) by March 30, 2010, and the results were to be briefed to the MDA, summarizing the options examined and proposing a JAN-TE acquisition strategy and funding profile across the (FYDP) be included in 2011-2012 budget discussions. Although an interim Advanced Tactical Data Link (ATDL) study update briefing was provided to the MDA as directed, no proposed JAN-TE acquisition strategy or 2011-2012 budget discussions were included.

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. Specific product updates and accomplishments include the following:

Waveform Development Status:

Wideband Networking Waveform (WNW): WNW successfully completed Formal Qualification Testing in a laboratory environment in December 2009, transitioning to Software In Service Support. Maintenance updates are issued as necessary to address identified software deficiencies during integration, testing and assessments on JTRS Program of Record and Non-Program of Record commercial radio developments utilizing WNW in accordance with the JTRS Enterprise Business Model. The most recent maintenance update (WNW v4.0.3) was delivered to the JTRS Information Repository in December 2010. WNW has performed well in field testing to date conducted by both the Ground Mobile Radio (GMR) and Brigade Combat Team Modernization (BCTM) programs, and it will undergo additional testing in upcoming GMR, BCTM and Brigade Combat Team Integrated Exercise (BCTIE) field testing events.

Soldier Radio Waveform (SRW): SRW successfully completed Formal Qualification Testing in a laboratory environment in January 2009, transitioning to Software In Service Support. Maintenance updates are issued as necessary to address identified software deficiencies during integration, testing and assessments of JTRS Program of Record and Non-Program of Record commercial radio developments utilizing SRW in accordance with the JTRS Enterprise Business Model. The most recent maintenance update (SRW 1.01.1) was delivered to the JTRS Information Repository in April 2010. Development is also underway on an SRW enhancement to add a telemetry operations mode (SRW 1.1). Field testing of SRW 1.1 on Small Unmanned Ground Vehicle (SUGV) platforms was successfully conducted January 12-14 at Aberdeen Proving Ground. Testing demonstrated that the SUGV platform

could be adequately controlled while providing simultaneous video transmission from the SUGV to the controller with enhanced performance as compared to existing SUGV communications links.

Mobile User Objective System (MUOS): The MUOS government and industry team are executing a highly integrated MUOS waveform development schedule that eliminates separate blackside and redside Formal Qualification Test (FQT) and Information Assurance assessment events. Continuing issues with final blackside waveform integration and test efforts managed by Navy (PMW 146) have caused a delay in the planned completion of the MUOS waveform V3.1 (red plus black side waveform) FQT to between October 2011 (Developer Estimate) and December 2011 (NED estimate). APB threshold date for MUOS v3.1 Formal Qualification Test completion is February 2012.

Ultra High Frequency (UHF) SATCOM: UHF SATCOM successfully completed Formal Qualification Testing in a laboratory environment in March 2007, transitioning to Software In Service Support. Maintenance updates are issued as necessary to address identified software deficiencies during integration, testing and assessments on JTRS Program of Record and Non-Program of Record commercial radio developments utilizing UHF SATCOM in accordance with the JTRS Enterprise Business Model. Development is also underway on an UHF SATCOM enhancement to add Full Duplex capability. This waveform enhancement remains on track for delivery to the JTRS Information Repository in March 2011.

Enhanced Position Location Reporting System (EPLRS): EPLRS successfully completed Formal Qualification Testing in a laboratory environment in December 2007, transitioning to Software In Service Support. In December 2010, a Joint Configuration Steering Board endorsed the NED proposal to eliminate planned maintenance and enhancements of the JTRS EPLRS waveform as a requirement for JTRS Increment 1. As a result, no additional EPLRS maintenance or enhancement activities are currently planned.

High Frequency (HF): HF successfully completed Formal Qualification Testing in a laboratory environment in December 2009, transitioning to Software In Service Support. Maintenance updates are issued as necessary to address identified software deficiencies during integration, testing and assessments on JTRS Program of Record and Non-Program of Record commercial radio developments utilizing HF in accordance with the JTRS Enterprise Business Model. The next HF maintenance update (HF v4.0.6) is scheduled for delivery in March 2011.

JTRS BOWMAN Waveform (JBW): JBW successfully completed Formal Qualification Testing in a laboratory environment in July 2007. The JBW Software In-Service Support (SWISS) Contract was awarded on September 16, 2010 with a value of $49.5M. Delivery Order 1 was also awarded to upgrade JTRS Bowman Waveform Software Communications Architecture, Application Program Interfaces and Unified InfoSec Criteria to current standards. Delivery date for the upgraded JBW software is currently under negotiation with the JBW Software In Service Support contractor.

Single Channel Ground and Airborne Radio System (SINCGARS): SINCGARS successfully completed Formal Qualification Testing in a laboratory environment in December 2005, transitioning to Software In Service Support. Maintenance updates are issued as necessary to address identified software deficiencies during integration, testing and assessments on JTRS Program of Record and Non-Program of Record commercial radio developments utilizing WNW in accordance with the JTRS Enterprise Business Model. Development is also underway on a SINCGARS enhancement to add a packet mode in support of ENS Phase 1 (SoftINC) operations. This waveform enhancement is scheduled for delivery to the JTRS Information Repository in March 2011.

Link-16: Link-16 successfully completed Formal Qualification Testing in a laboratory environment in April 2009, transitioning to Software In Service Support. Maintenance updates are issued as necessary to address identified software deficiencies during integration, testing and assessments on JTRS Program of Record and Non-Program of Record commercial radio developments utilizing Link-16 in accordance with the JTRS Enterprise Business Model. Development of a Link-16 enhancement to modernize its cryptographic algorithm is also planned. The Link-16 SWISS contract was awarded in February 2011.

Very High Frequency (VHF)/Ultra High Frequency (UHF) Line of Sight (VULOS): VULOS successfully completed Formal Qualification Testing in a laboratory environment in September 2005. A maintenance upgrade and enhancement are currently underway to affect Software Communications Architecture, Application Program Interface and Unified InfoSec Criteria upgrades, along with adding an Air Traffic Control capability desired by the US Air Force. The VULOS waveform is being upgraded and enhanced by SSC-Atlantic with a scheduled delivery to the JTRS Information Repository in July 2011.

HAVEQUICK II (HQII): HQII successfully completed Formal Qualification Testing in a laboratory environment in August 2006. A maintenance upgrade is currently underway to apply Software Communications Architecture, Application Program Interface and Unified InfoSec Criteria upgrades. The HQII waveform is being upgraded by SSC-Atlantic with a scheduled delivery to the JTRS Information Repository in September 2011.

Network Management and Planning Status:

SRW Network Manager (SRWNM): SRWNM successfully completed Formal Qualification Testing in a laboratory environment in January 2011, transitioning to Software In Service Support. SRWNM provides an NSA-certifiable network planning capability for heterogeneous SRW networks consisting of SRW-capable radios from multiple vendors (GMR/HMS/ITT SRR/Harris AN-PRC 117G). The inclusion of multiple vendors in the SRWNM planning capability demonstrates a significant success of the JTRS Enterprise Business Model to stimulate competition, increase innovation and reduce government costs through software reuse while simultaneously speeding development and fielding of tactical networking capabilities.

JTRS WNW Network Manager (JWNM): JWNM successfully completed Formal Qualification Testing in a laboratory environment in March 2010, transitioning to Software In Service Support. Maintenance updates are issued as necessary to address identified software deficiencies during integration, testing and assessments on JTRS Program of Record and Non-Program of Record commercial radio developments utilizing WNW in accordance with the JTRS Enterprise Business Model. The most recent maintenance update (JWNM v4.1.5) was delivered to the JTRS Information Repository in December 2010. JWNM has performed well in field testing to date conducted by both the GMR and BCTM programs, and it will undergo additional testing in upcoming GMR, BCTM and BCTIE field testing events.

JTRS Enterprise Network Manager (JENM): JENM Phase 2 development is underway to integrate JWNM and SRWNM capabilities into a single network management system. JENM Phase 2 Preliminary Design Review (PDR) is scheduled for February 2011. JENM Phase 2 capability will be delivered in two steps: (1) JENM Phase 2 (MUOS) will provide a Federated Service Oriented Architecture with JWNM and SRWNM capabilities hosted on a single laptop, providing WNW and SRW network management capability for GMR, HMS, Harris and ITT radios (including MUOS initial provisioning capability to support MUOS system end-to-end testing) and (2) JENM Phase 2 (Final) will provide a fully integrated Service Oriented Architecture with the same capabilities as JENM Phase 2 (MUOS). JENM Phase 2 (MUOS) is scheduled for delivery in October 2011, and JENM Phase 2 (Final) is scheduled for delivery in April 2012. Availability of suitable JTRS radios (both Program of Record and Non-Program of Record) is a critical path pacing item for both JENM Phase 2 deliveries.

Enterprise Network Services (ENS): ENS Phase 1 (SoftINC) remains on schedule for Formal Qualification Test completion in April 2011, and ENS Phase 1 (TDC) remains on schedule for Formal Qualification Test completion in June 2011. In December 2010, a Joint Configuration Steering Board endorsed the NED proposal to eliminate planned maintenance and enhancements of the JTRS EPLRS waveform as a requirement for JTRS Increment 1. As a result, no route and retransmit capability for the EPLRS waveform as part of ENS Phase 1 are currently planned.

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

Threshold Breaches

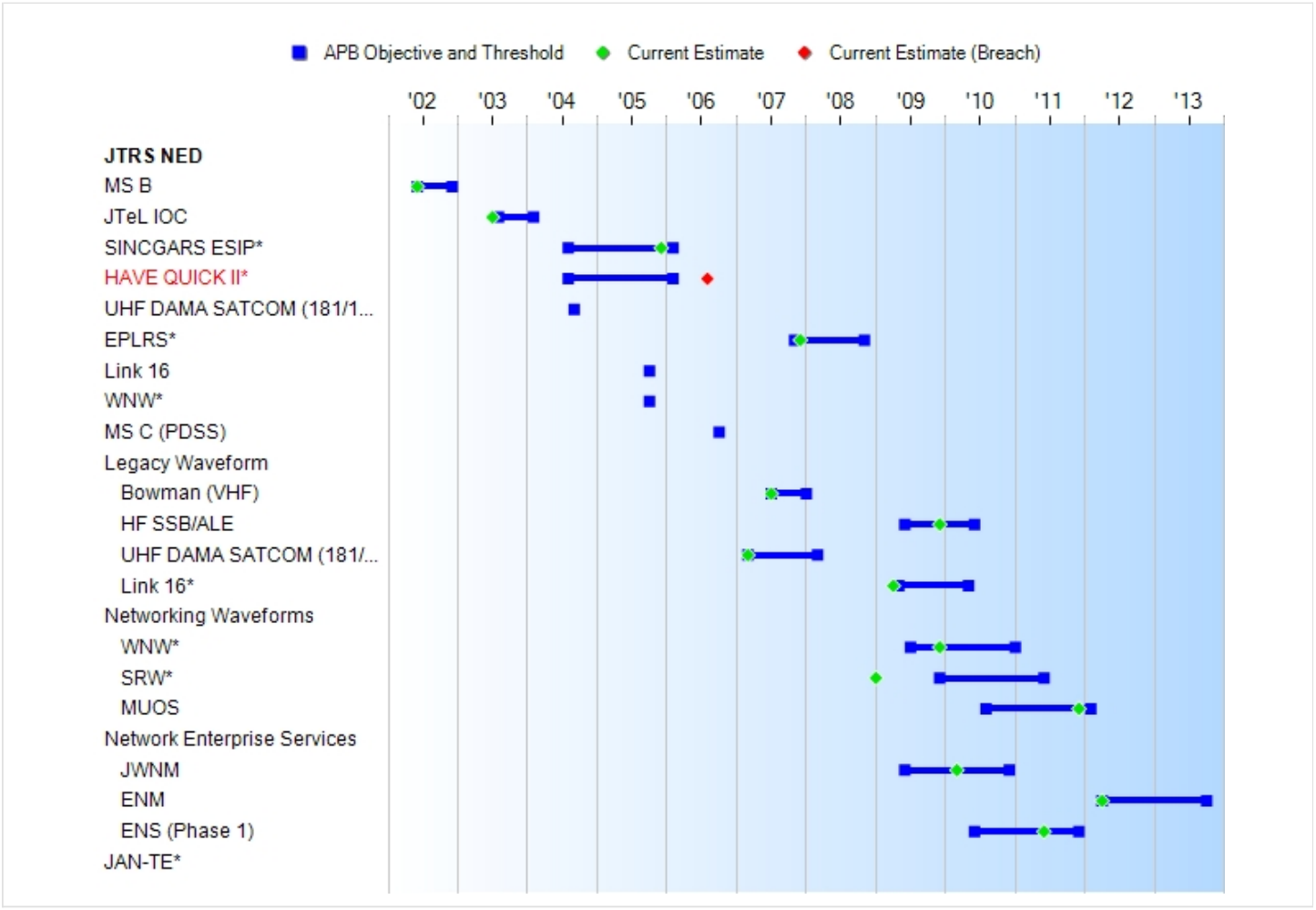
APB Breaches		
Schedule		☑
Performance		☐
Cost	RDT&E	☐
	Procurement	☐
	MILCON	☐
	Acq O&M	☐
Unit Cost	PAUC	☐
	APUC	☐

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

Explanation of Breach

The Have Quick II FQT was completed on August 22, 2006 which was past the APB Threshold. This breach was reported in the DEC 2006 SAR.

Schedule


APB Objective and Threshold
Current Estimate
Current Estimate (Breach)
'02
'03
'04
'05
'06
'07
'08
'09
'10
'11
'12
'13
JTRS NED
MS B
JTeL IOC
SINCGARS ESIP*
HAVE QUICK II*
UHF DAMA SATCOM (181/1...
EPLRS*
Link 16
WNW*
MS C (PDSS)
Legacy Waveform
Bowman (VHF)
HF SSB/ALE
UHF DAMA SATCOM (181/...
Link 16*
Networking Waveforms
WNW*
SRW*
MUOS
Network Enterprise Services
JWNM
ENM
ENS (Phase 1)
JAN-TE*

Milestones	SAR Baseline Dev Est	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	
SINCGARS ESIP*	AUG 2004	AUG 2004	FEB 2006	DEC 2005	
HAVE QUICK II*	AUG 2004	AUG 2004	FEB 2006	**AUG 2006**[1]	
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	
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	
Networking Waveforms					
WNW*	N/A	JUL 2009	JAN 2011	DEC 2009	
SRW*	N/A	DEC 2009	JUN 2011	JAN 2009	
MUOS	N/A	AUG 2010	FEB 2012	DEC 2011	(Ch-2)
Network Enterprise Services					
JWNM	N/A	JUN 2009	DEC 2010	MAR 2010	
ENM	N/A	APR 2012	OCT 2013	APR 2012	(Ch-1)
ENS (Phase 1)	N/A	JUN 2010	DEC 2011	JUN 2011	
JAN-TE*	N/A	TBD	TBD	N/A	

[1] *APB Breach*

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
PDSS - Post Deployment Sustainment Support
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
VHF - Very High Frequency
WNW - Wideband Networking Waveform

Change Explanations

(Ch-1) ENM date changed from October 2012 to April 2012 to match current estimated delivery date.

(Ch-2) Current estimate changed from February 2011 to December 2011 due to revised MUOS development schedule.

Memo

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

Performance

Characteristics	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Demonstrated Performance	Current Estimate
SINCGARS 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 25KH z 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	N/A	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	N/A	N/A
Link 16	(960-121 5MHz) 3 MHz 118/236 Kbps w/FEC	N/A	N/A	N/A	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; 118/1137Kbps, w/FEC	3MHz; 118/1137Kbps, 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	
SRW (Network Throughput)*	N/A	1200Kbps	600Kbps	600Kbps	600Kbps	
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 and MUOS on all Increment 1 form factors	
ENS	N/A	SINCGARS 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	SINCGARS R/R IP data w/WNW, SRW and EPLRS on the GMR; SINCGARS R/R IP data with SRW and EPLRS on the HMS MANPACK; WNW R/R IP data with HF and UHF SATCOM	TBD	SINCGARS R/R IP data w/WNW, SRW on the GMR; SINCGARS R/R IP data with SRW on the HMS MANPACK; WNW R/R IP data with HF and UHF SATCOM DAMA on the GMR	(Ch-1)

		waveforms and form factors	DAMA on the GMR		
JAN-TE (Network Throughput)*	N/A	TBD	TBD	TBD	Deferred

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

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
HMS - Handheld, Manpack and Small Form Fit
IP - Internet Protocol
JAN-TE - Joint Airborne Network - Tactical Edge
JTEL - JTRS Test and Evaluation Laboratory
JWNM - JTRS WNW Network Manager
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

Change Explanations

(Ch-1) In December 2010, a Joint Configuration Steering Board endorsed the NED proposal to eliminate planned maintenance and enhancements of the JTRS EPLRS waveform as a requirement for JTRS Increment 1. As a result, no route and retransmit capability for the EPLRS waveform are currently planned.

Memo

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

Track To Budget

General Memo

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

RDT&E

APPN 1319	BA 05	PE 0604280N	(Navy)
	Project X3076	JTRS Network Enterprise Domain (JNED)	
APPN 2040	BA 05	PE 0604280A	(Army)
	Project D162	Joint Tactical Radio System/JTRS	(Shared)
APPN 3600	BA 05	PE 0604280F	(Air Force)
	Project 655068	Air Force JTRS Waveform System/JTRS	(Shared)

Cost and Funding

Cost Summary

Total Acquisition Cost and Quantity

	BY2002 $M			BY2002 $M	TY $M		
Appropriation	SAR Baseline Dev Est	Current APB Development Objective/Threshold		Current Estimate	SAR Baseline Dev Est	Current APB Development Objective	Current Estimate
RDT&E	812.9	1743.2	1917.5	1718.2	914.4	1961.8	1988.4
Procurement	0.0	0.0	--	0.0	0.0	0.0	0.0
Flyaway	0.0	--	--	0.0	0.0	--	0.0
Recurring	0.0	--	--	0.0	0.0	--	0.0
Non Recurring	0.0	--	--	0.0	0.0	--	0.0
Support	0.0	--	--	0.0	0.0	--	0.0
Other Support	0.0	--	--	0.0	0.0	--	0.0
Initial Spares	0.0	--	--	0.0	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	1718.2	914.4	1961.8	1988.4

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

The NED program has no unit quantities.

Cost and Funding

Funding Summary

Appropriation and Quantity Summary
FY2012 President's Budget / December 2010 SAR (TY$ M)

Appropriation	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	To Complete	Total
RDT&E	1501.5	117.6	94.2	56.0	29.4	15.6	8.1	166.0	1988.4
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 2012 Total	1501.5	117.6	94.2	56.0	29.4	15.6	8.1	166.0	1988.4
PB 2011 Total	1501.5	117.6	80.7	33.6	15.9	15.3	8.4	166.0	1939.0
Delta	0.0	0.0	13.5	22.4	13.5	0.3	-0.3	0.0	49.4

Quantity	Undistributed	Prior	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	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 2012 Total	0	0	0	0	0	0	0	0	0	0
PB 2011 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 TY$
1319 | RDT&E | Research, Development, Test, and Evaluation, Navy

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2007	--	--	--	--	--	--	221.5
2008	--	--	--	--	--	--	241.5
2009	--	--	--	--	--	--	207.5
2010	--	--	--	--	--	--	198.1
2011	--	--	--	--	--	--	117.6
2012	--	--	--	--	--	--	94.2
2013	--	--	--	--	--	--	18.6
2014	--	--	--	--	--	--	9.8
2015	--	--	--	--	--	--	5.2
2016	--	--	--	--	--	--	2.7
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	**--**	**--**	**--**	**--**	**--**	**--**	**1172.1**

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

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
2007	--	--	--	--	--	--	194.4
2008	--	--	--	--	--	--	208.2
2009	--	--	--	--	--	--	176.7
2010	--	--	--	--	--	--	166.8
2011	--	--	--	--	--	--	97.7
2012	--	--	--	--	--	--	77.0
2013	--	--	--	--	--	--	15.0
2014	--	--	--	--	--	--	7.8
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	--	--	--	--	--	--	2.2
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**986.1**

The total JTRS developmental funding is managed out of three Military Department (MILDEP) Program Elements (PEs) [0604289A (shared), 0604280F (shared), and 0604280N] across the Future Years Defense Program (FYDP), but realigned in the budget year for execution under the Navy RDT&E PE [0604280N].

Annual Funding TY$
2040 | RDT&E | Research, Development, Test, and Evaluation, Army

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
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	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	18.7
2014	--	--	--	--	--	--	9.8
2015	--	--	--	--	--	--	5.2
2016	--	--	--	--	--	--	2.7
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	**--**	**--**	**--**	**--**	**--**	**--**	**724.6**

Annual Funding BY$
2040 | RDT&E | Research, Development, Test, and Evaluation, Army

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
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	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	15.0
2014	--	--	--	--	--	--	7.7
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	--	--	--	--	--	--	2.1
Subtotal	**--**	**--**	**--**	**--**	**--**	**--**	**666.6**

The total JTRS developmental funding is managed out of three Military Department (MILDEP) Program Elements (PEs) [0604289A (shared), 0604280F (shared), and 0604280N] across the Future Years Defense Program

(FYDP), but realigned in the budget year for execution under the Navy RDT&E PE [0604280N].

Annual Funding TY$
3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway TY $M	Non End Item Recurring Flyaway TY $M	Non Recurring Flyaway TY $M	Total Flyaway TY $M	Total Support TY $M	Total Program TY $M
2013	--	--	--	--	--	--	18.7
2014	--	--	--	--	--	--	9.8
2015	--	--	--	--	--	--	5.2
2016	--	--	--	--	--	--	2.7
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	**--**	**--**	**--**	**--**	**--**	**--**	**91.7**

Annual Funding BY$
3600 | RDT&E | Research, Development, Test, and Evaluation, Air Force

Fiscal Year	Quantity	End Item Recurring Flyaway BY 2002 $M	Non End Item Recurring Flyaway BY 2002 $M	Non Recurring Flyaway BY 2002 $M	Total Flyaway BY 2002 $M	Total Support BY 2002 $M	Total Program BY 2002 $M
2013	--	--	--	--	--	--	15.1
2014	--	--	--	--	--	--	7.8
2015	--	--	--	--	--	--	4.1
2016	--	--	--	--	--	--	2.1
2017	--	--	--	--	--	--	2.1
2018	--	--	--	--	--	--	2.2
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	**--**	**--**	**--**	**--**	**--**	**--**	**65.5**

The total JTRS developmental funding is managed out of three Military Department (MILDEP) Program Elements (PEs) [0604289A (shared), 0604280F (shared), and 0604280N] across the Future Years Defense Program (FYDP), but realigned in the budget year for execution under the Navy RDT&E PE [0604280N].

Low Rate Initial Production

There is no Low Rate Initial Production (LRIP) for the JTRS Network Enterprise Domain (NED) program.

Foreign Military Sales

None

Nuclear Cost

None

Unit Cost

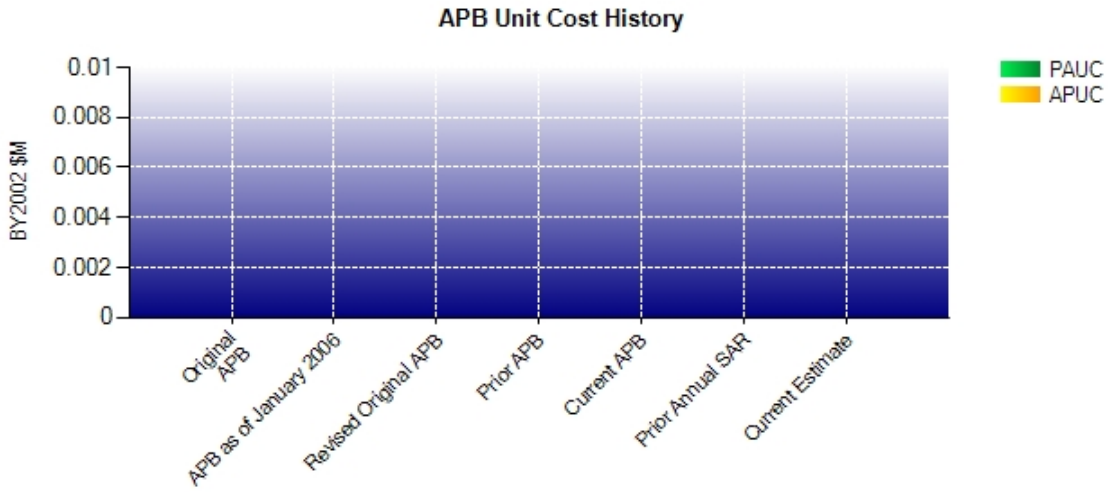
Unit Cost Report

Unit Cost	BY2002 $M Current UCR Baseline (DEC 2009 APB)	BY2002 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	1743.2	1718.2	
Quantity	0	0	
Unit Cost	--	--	--
Average Procurement Unit Cost (APUC)			
Cost	0.0	0.0	
Quantity	0	0	
Unit Cost	--	--	--

Unit Cost	BY2002 $M Original UCR Baseline (JUN 2002 APB)	BY2002 $M Current Estimate (DEC 2010 SAR)	BY % Change
Program Acquisition Unit Cost (PAUC)			
Cost	812.9	1718.2	
Quantity	0	0	
Unit Cost	--	--	--
Average Procurement Unit Cost (APUC)			
Cost	--	0.0	
Quantity	--	0	
Unit Cost	--	--	--

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



		BY2002 $M		TY $M	
	Date	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 2009	N/A	N/A	N/A	N/A
Current Estimate	DEC 2010	N/A	N/A	N/A	N/A

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)

Initial PAUC Dev Est	Changes								PAUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

Current SAR Baseline to Current Estimate (TY $M)

Initial APUC Dev Est	Changes								APUC Current Est
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

SAR Baseline History

Item/Event	SAR Planning Estimate (PE)	SAR Development Estimate (DE)	SAR Production Estimate (PdE)	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	N/A
Total Cost (TY $M)	N/A	914.4	N/A	1988.4
Total Quantity	N/A	0	N/A	0
Prog. Acq. Unit Cost (PAUC)	N/A	N/A	N/A	N/A

Cost Variance

Cost Variance Summary

Summary Then Year $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	914.4	--	--	914.4
Previous Changes				
Economic	+16.5	--	--	+16.5
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	+725.3	--	--	+725.3
Estimating	+282.8	--	--	+282.8
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+1024.6	--	--	+1024.6
Current Changes				
Economic	-0.6	--	--	-0.6
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+50.0	--	--	+50.0
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+49.4	--	--	+49.4
Total Changes	+1074.0	--	--	+1074.0
CE - Cost Variance	1988.4	--	--	1988.4
CE - Cost & Funding	1988.4	--	--	1988.4

Summary Base Year 2002 $M				
	RDT&E	Proc	MILCON	Total
SAR Baseline (Dev Est)	812.9	--	--	812.9
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	+648.1	--	--	+648.1
Estimating	+216.8	--	--	+216.8
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+864.9	--	--	+864.9
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+40.4	--	--	+40.4
Other	--	--	--	--
Support	--	--	--	--
Subtotal	+40.4	--	--	+40.4
Total Changes	+905.3	--	--	+905.3
CE - Cost Variance	1718.2	--	--	1718.2
CE - Cost & Funding	1718.2	--	--	1718.2

Previous Estimate: December 2009

RDT&E	$M	
Current Change Explanations	**Base Year**	**Then Year**
Revised escalation indices. (Economic)	N/A	-0.6
Adjustment for current and prior escalation. (Estimating)	-0.1	-0.1
Plus-up for Soldier Radio Waveform (SRW) Network Manager waveform enhancements Over-the Air Re-keying (OTAR) /Over-the Air Zeroizing (OTAZ), Air Traffic Control, Tactical Targeting Network Technology (TTNT) Development (Army) (Estimating)	+13.6	+17.0
Plus-up for Soldier Radio Waveform (SRW) Network Manager waveform enhancements Over-the Air Re-keying (OTAR) /Over-the Air Zeroizing (OTAZ), Air Traffic Control, Tactical Targeting Network Technology (TTNT) Development (Navy) (Estimating)	+18.4	+22.9
Plus-up for Soldier Radio Waveform (SRW) Network Manager waveform enhancements Over-the Air Re-keying (OTAR) /Over-the Air Zeroizing (OTAZ), Air Traffic Control, Tactical Targeting Network Technology (TTNT) Development (Air Force) (Estimating)	+13.6	+16.9
Decrease reflects miscellaneous budget adjustments (Army) (Estimating)	+0.1	-0.3
Decrease reflects miscellaneous budget adjustments (Navy) (Estimating)	+1.9	+2.3
Decrease reflects miscellaneous budget adjustments (Air Force) (Estimating)	-0.1	-0.1
Decrease reflects annual budget year realignment from Army RDT&E to Navy RDT&E (Army) (Estimating)	-25.6	-31.4
Decrease reflects annual budget year realignment from Air Force RDT&E to Navy RDT&E (Air Force) (Estimating)	-25.8	-31.4
Increase reflects annual budget year realignment from Air Force and Army RDT&E (Navy) (Estimating)	+51.5	+62.8
Increase reflects restoration of FY12 funds for waveform software maintenance (Navy) (Estimating)	+6.5	+8.0
Decrease reflects annual budget year realignment for waveform software maintenance (Navy) (Estimating)	-13.6	-16.6
RDT&E Subtotal	+40.4	+49.4

Contracts

Appropriation: RDT&E

Contract Name	**MUOS RRDD**
Contractor	Lockheed Martin Space Systems
Contractor Location	Sunnyvale, CA 94089
Contract Number, Type	N00039-04-C-2009/1, CPAF/CPIF
Award Date	December 05, 2008
Definitization Date	December 28, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
87.3	N/A	N/A	117.6	N/A	N/A	118.0	118.0

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-0.9	-0.2
Previous Cumulative Variances	--	--
Net Change	-0.9	-0.2

Cost And Schedule Variance Explanations

The Mobile User Objective System (MUOS) contract was undefinitized with an initial contract price price of $87.3M in December 2008. The contract was definitized at $117.6M in December 2010.

The net unfavorable cost variance is due to the High Assurance Internet Protocol Encryption (HAIPE) software development wherein there was unplanned development of the Radio Security Services Application Program Interface (API) Supplement, and underestimated activity in the software design, inefficient unit testing, and inefficiencies associated with V1.3 being the first Waveform (WF) software component to go through the development life cycle. Contract Data Requirements List (CDRL) activities were also underestimated, particularly for the Software Design Description (SDD), Waveform Design Specification (WDS), and Software Requirement and Specification (SRS). These inefficiencies were offset somewhat by positive performance in the Level of Effort (LOE) areas, particularly Systems Engineering, as well as Program/Business Management. The net unfavorable schedule variance is due to staffing issues where personnel were still being retained on the MUOS Waveform v1.3 effort.

Contract Comments

The Contractor's Most Likely and Worst Case Estimate at Complete (EAC) of $118.9M is based on the Contractor's estimate based on the proposal definitized in December 2010 as well as anticipated modifications based on the User Entry (UE) replan. The Best Case EAC is $117.2M and reflects possible opportunities at Lockheed Martin's subcontractor, General Dynamics for possible reduction opportunities towards constructive cost model (COCOMO) productivity factors, schedule reductions, combined system and test engineering teams, requirements leveling, as well as program management.

This is the first SAR report on this contract.

Appropriation: RDT&E

Contract Name	**SINCGARS SwISS**
Contractor	ITT Corp.
Contractor Location	FORT WAYNE, IN 46818
Contract Number, Type	N00039-09-D-0020/1, IDIQ/CPFF/CPIF
Award Date	May 15, 2009
Definitization Date	May 15, 2009

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
16.4	N/A	N/A	21.8	N/A	N/A	0.0	0.0

Cost And Schedule Variance Explanations

Cost and Schedule variance reporting is not required on this IDIQ/CPFF/CPIF contract.

Contract Comments

This is a hybrid Indefinite Delivery Indefinite Quantity (IDIQ) contract. This contract provides technical support (CPFF) as well as software enhancements, upgrades and maintenance (CPIF) of the SINCGARS waveform, e.g., post-production software support (also known as Software In-Service Support (SWISS)). The contract value is $62.0M. There are currently four delivery orders on the contract, one of which is for Enterprise Network Services (ENS) Phase 1 Software Internet Controller (SoftINC), valued at $21.8M. The ENS Phase 1 SoftINC effort requires the vendor's Cost Performance Report (CPR) be uploaded to the Defense Cost and Resource Center (DCARC) Earned Value Metrics (EVM) repository monthly.

This is the first SAR report on this contract.

Appropriation: RDT&E

Contract Name	**UHF/HF SwISS**
Contractor	Rockwell Collins, Inc.
Contractor Location	CEDAR RAPIDS, IA 52406
Contract Number, Type	N00039-09-D-0021, IDIQ/CPFF/CPIF
Award Date	June 19, 2009
Definitization Date	June 19, 2009

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
23.9	N/A	N/A	23.9	N/A	N/A	0.0	0.0

Cost And Schedule Variance Explanations

Cost and Schedule variance reporting is not required on this IDIQ/CPFF/CPIF contract.

Contract Comments

This is a hybrid Indefinite Delivery Indefinite Quantity (IDIQ) contract. This contract provides technical support (CPFF) as well as software enhancements, upgrades and maintenance of the UHF/HF SATCOM waveform (CPIF), e.g., post-production software support (also known as Software In-Service Support (SwISS)). The contract value is $45.4M. There are currently four delivery orders on this contract, one of which is Enterprise Network Services (ENS) Phase 1 Tactical Data Controller(TDC), valued at $23.9M. The ENS Phase 1 TDC effort requires the vendor's Cost Performance Report (CPR) be uploaded to the Defense Cost and Resource Center (DCARC) Earned Value Metrics (EVM) repository monthly.

This is the first SAR report on this contract.

Appropriation: RDT&E

Contract Name	**Bowman VHF WF**
Contractor	ITT Corp.
Contractor Location	FORT WAYNE, IN 46818
Contract Number, Type	N00039-10-D-0047, IDIQ/CPFF/CPIF
Award Date	September 16, 2010
Definitization Date	September 16, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
49.5	N/A	N/A	49.5	N/A	N/A	0.0	0.0

Cost And Schedule Variance Explanations

Cost and Schedule variance reporting is not required on this IDIQ/CPFF/CPIF contract.

Contract Comments

This is a hybrid Indefinite Delivery Indefinite Quantity (IDIQ) contract. This contract provides technical support (CPFF) as well as software enhancements, upgrades and maintenance of the BOWMAN waveform (CPIF), e.g., post-production software support (also known as Software In-Service Support (SwISS)). The contract value is $49.5M. There is one undefinitized delivery order on the contract, valued at $5.4M. This effort does not require Earned Value Metrics (EVMS) data be uploaded to the Defense Cost and Resource Center (DCARC) Central Repository monthly.

This is the first SAR report on this contract.

Appropriation: RDT&E

Contract Name	**Soldier Radio Waveform**
Contractor	ITT Corp.
Contractor Location	FORT WAYNE, IN 46818
Contract Number, Type	N65236-07-C-5876, CPIF
Award Date	November 17, 2006
Definitization Date	March 25, 2010

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	138.1	N/A	0	130.0	130.0

Variance	Cost Variance	Schedule Variance
Cumulative Variances To Date	-25.2	-1.0
Previous Cumulative Variances	-31.0	-3.2
Net Change	+5.8	+2.2

Cost And Schedule Variance Explanations

The net favorable cost variance is due to the request for equitable adjustment (REA) settlement on government furnished equipment/government furnished information (GFE/GFI) impacts. The net favorable schedule variance is due to the completion of the Soldier Radio Waveform (SRW) positive performance on the SRW Network Manager 1.0+, and incorporation of the Teleops product into the contract during 2010.

Contract Comments

The NED PM's allocation of the total SRW contract cost established an estimated Contract Negotiated Cost of $44.9M and a Contract Target Price of $138.1M through Contract Modification P00066.

Of the $29.5M price increase since December 2009, $13.2M is for additional scope for the SRW TeleOperations (TeleOps) 1.1 update to the waveform. The remaining change is related to several modifications on the SRW Network Manager (SRWNM) product concerning REA settlement and exercised Options.

Of the $63.7M price increase since inception through the December 2009 SAR , $36.8M was for additional scope such as the addition of the SRW Network Management capability ($20.8M), additional HMS Porting ($8.5M), SRW TeleOps 1.1C Requirements Study ($1.5M), CEA Modifications ($1.3M), SRW 1.01.1C Updates ($1.2M), SAFENET change ($.9M) and several miscellaneous ECP's ($2.6M). The price has also been impacted by cost overruns of $26.9M.

The contract is over 90% complete and will not be reported in the next SAR.

Appropriation: RDT&E

Contract Name	**JENM**
Contractor	Boeing
Contractor Location	Huntington Beach, CA 92806
Contract Number, Type	N66001-10-D-0069, IDIQ/CPFF/CPIF
Award Date	April 16, 2010
Definitization Date	April 16, 2010

Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
21.5	N/A	N/A	21.5	N/A	N/A	0.0	0.0

Cost And Schedule Variance Explanations

Cost and Schedule variance reporting is not required on this IDIQ/CPFF/CPIF contract.

Contract Comments

This is a hybrid Indefinite Delivery Indefinite Quantity (IDIQ) contract. This contract provides technical support (CPFF) as well as software enhancements, upgrades and maintenance (CPIF) of the JTRS Enterprise Network Manager (JENM), e.g., post-production software support (also known as Software In-Service Support (SwISS)).The contract value is $54.9M. There are three delivery orders on the contract, one of which is JENM Phase 2, valued at $21.5M. This effort requires Earned Value Metrics (EVMS) data be uploaded to the Defense Cost and Resource Center (DCARC) EVM Central Repository monthly.

This is the first SAR report on this contract.

Deliveries and Expenditures

Deliveries To Date	Plan To Date	Actual To Date	Total Quantity	Percent Delivered
Development	0	0	0	--
Production	0	0	0	--
Total Program Quantities Delivered	0	0	0	--

Expenditures and Appropriations (TY $M)			
Total Acquisition Cost	1988.4	Years Appropriated	14
Expenditures To Date	1445.0	Percent Years Appropriated	38.89%
Percent Expended	72.67%	Appropriated to Date	1619.1
Total Funding Years	36	Percent Appropriated	81.43%

Operating and Support Cost

Assumptions And Ground Rules
There is no antecedent for the JTRS NED program. 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 (SwISS) 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).

Costs BY2002 $M		
Cost Element	**JTRS NED Average Annual Cost (All Waveforms)**	**No Antecedent**
Unit-Level Manpower	--	--
Unit Operations	--	--
Maintenance	--	--
Sustaining Support	28.73	--
Continuing System Improvements	--	--
Indirect Support	--	--
Other	--	--
Total Unitized Cost (Base Year 2002 $)	28.73	--

Total O&S Costs $M	JTRS NED	No Antecedent
Base Year	718.2	--
Then Year	1195.1	--