



# Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-349

## WIN-T Increment 2 - Program Overview



## Warfighter Information Network-Tactical Increment 2 (WIN-T Inc 2)

As of FY 2016 President's Budget

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

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## Common Acronyms and Abbreviations for MDAP Programs

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

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

## Program Information

**Program Name**

Warfighter Information Network-Tactical Increment 2 (WIN-T Inc 2)

**DoD Component**

Army

## Responsible Office

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**Date**

**Assigned:** September 29, 2011

## References

**SAR Baseline (Production Estimate)**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 8, 2010

**Approved APB**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated February 12, 2015

## Mission and Description

Warfighter Information Network - Tactical Increment 2 (WIN-T Inc 2) provides the Army with On-The-Move (OTM) networking capability. The WIN-T Inc 2 network retains capabilities delivered by WIN-T Inc 1 and by leveraging proven Government and commercial technologies, adds greater network throughput and automated network management to optimize planning (including spectrum use), initialization, monitoring and troubleshooting. WIN-T Inc 2 employs Satellite Communications OTM to extend the network in maneuver Brigade Combat Teams to Company-level for the first time. Using equipment mounted on combat platforms, WIN-T Inc 2 delivers a mobile capability that reduces reliance on fixed infrastructure and allows key leaders to move on the battlefield while retaining situational awareness and mission command capabilities. Using the Highband Networking Radio, with the Highband Networking Waveform and high performance antennas, the WIN-T Inc 2 Line-of-Sight network offers an adaptive 30-Megabit per second aggregate throughput to key leaders in their Command Post or in their vehicle. The WIN-T Inc 2 network is self-forming, which means that it automatically creates transmission paths based on terrain and environmental conditions; and is self-healing, meaning that the paths will automatically re-route traffic to complete network transactions and calls even if one or more nodes break down or lose connectivity. This offers greater network reliability and better end-to-end connectivity than traditional point-to-point networks. WIN-T Inc 2 introduces the network management capability needed to keep the mobile and dispersed forces networked through automated planning, initialization, monitoring, and troubleshooting. Finally, WIN-T Inc 2 adopts "Colorless Core" technology that encrypts both classified and unclassified user information in the network and minimizes the number of users on the "core" of the network. The Colorless Core allows commanders to utilize the tactical network without fear of the enemy intercepting information. Colorless Core is a technical insertion in the WIN-T Inc 1b network which enables information sharing between WIN-T Inc 1b and WIN-T Inc 2.

WIN-T Inc 3 developed NetOps software and NetCentric Waveform updates will be inserted into WIN-T Inc 2 equipped units.

## Executive Summary

As directed by the September 27, 2013 ADM the program office is required to complete additional developmental testing and a second Follow-On Operational Test and Evaluation (FOT&E). An initial Developmental Test (DT #1) was successfully held during February 10-28, 2014.

The Product Manager and his team demonstrated improvements made to the Soldier Network Extension (SNE) including: 1) significantly reduced startup task complexity and a 60% reduction in startup time; 2) simplified user interface displays that give users intuitive feedback on the status of the system; 3) troubleshooting help screens that enable the user to solve problems locally; and 4) simplified Combat Net Radio (CNR) Gateway operations.

A second DT #2 was completed on June 26, 2014. This test showed further improvements with Soldiers under high operational tempo. The Point of Presence and SNE showed improvements in critical areas with no reoccurrence of known failure modes.

A second Follow-On Operational Test and Evaluation (FOT&E #2) was conducted at Network Integration Evaluation 15.1, from October 15 to November 2, 2014. The Operational Test Agency Follow-On Evaluation Report from Army Test and Evaluation Command (ATEC) is anticipated in 2nd Quarter FY 2015. On January 7, 2015 ATEC provided an Emerging Results Brief (ERB). The brief outlined initial Army findings. The ERB indicates the WIN-T Inc 2 system was found Effective and Suitable with Survivability analysis ongoing. The Operational Assessment Report from Director, Operational Test and Evaluation is anticipated in late April 2015. The Full Rate Production Decision Review is targeted for May 2015.

Per the ADM of May 30, 2014, the Army will plan for increasing procurement quantities of WIN-T Inc 2 configuration items to complete WIN-T capability set fielding requirements previously slated for WIN-T Inc 3 hardware items.

On September 16, 2014, the Project Manager, Warfighter Information Network - Tactical, briefed the Army Configuration Steering Board (CSB) chaired by the Army Acquisition Executive (AAE). Two de-scoping recommendations were approved: The first is to remove the threshold requirement for the Joint Gateway Node since this service can be provided by the WIN-T Inc 1 assets at Expeditionary Signal Battalions and the Regional Hub Nodes; the second de-scope removed the requirement to interface with the Enhanced Position Locating and Reporting System radio, which is being phased out of the Army. Additional analysis was required to support a third potential de-scope action to adjust the Mean Time Between Essential Functional Failure (MTBEFF) requirements for program Configuration Items. On October 9, 2014 a follow-on CSB was held at which the Training and Doctrine Command Capability Manager for Networks and Services presented analysis supporting the MTBEFF de-scope. The CSB approved changes to MTBEFF for six WIN-T Inc 2 configuration items.

On December 4, 2014 WIN-T Inc 2 completed a demonstration of the Network Centric Waveform (NCW) network scalability testing. The intent of the demonstration was to show the ability of the NCW to support an increased network size for reorganized Stryker Brigade Combat Teams (BCTs). Final results are anticipated at the end of February 2015.

WIN-T Inc 2 New Equipment Training / New Equipment Fielding activities are: 3/2nd SBCT at Fort Lewis (fielding completed); 101st Air Assault Division and Africa Command to integrate the division's WIN-T Inc 2 Tactical Communications Nodes into the overall mission support network; 3/82nd at Fort Bragg (fielding completed); 1st Armored Division Headquarters and 1/1 AD at Fort Bliss (fielding completed); 2/2 BCT at Joint Base Lewis-McCord (training and fielding in progress); 4/10 Mountain Division at Fort Polk (training and fielding in progress).

The Justification and Approval for the follow-on production contract was signed by the AAE on November 18, 2014. A Functional Requirements Authentication Board was conducted on December 5, 2014. The Acquisition Requirements Package was submitted to the Army Contracting Command on December 11, 2014. The contract award is anticipated by March 2016.

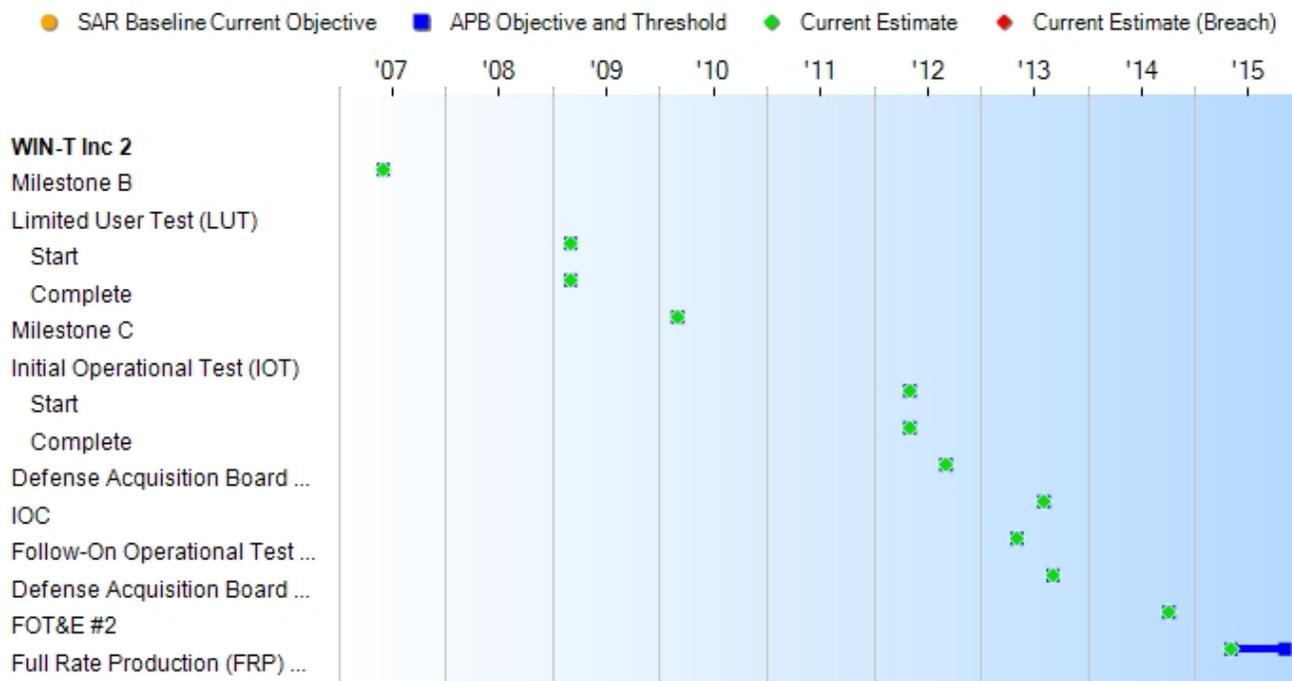
The program received a decrement of \$99M in procurement funding in the FY 2015 PB.

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

## Threshold Breaches

APB Breaches		Explanation of Breach
<b>Schedule</b>	<input type="checkbox"/>	<p>The program experienced a unit cost increase greater than or equal to the significant cost growth threshold, resulting in a significant cost breach to the PAUC and APUC against its original APB. This breach is due to changes made to the Army Cost Position to align WIN-T Increment 2 with the revised Army modernization strategy. Following are the changes in Army strategy reflected in the February 12, 2015 APB: a) Increase in unit cost due to reduction of less expensive nodes based on revised Army modernization strategy; b) Increase in costs caused by eight year extension of the procurement schedule due to Configuration Steering Board direction to transfer total Army requirements from WIN-T Increment 3 to WIN-T Increment 2; and c) Increase in costs caused by two year extension of the procurement schedule due to reduced Long-Range Investment Requirements Analysis funding in FY 2021 to FY 2028.</p>
<b>Performance</b>	<input type="checkbox"/>	
<b>Cost</b>	<input type="checkbox"/>	
RDT&E	<input type="checkbox"/>	
Procurement	<input type="checkbox"/>	
MILCON	<input type="checkbox"/>	
Acq O&M	<input type="checkbox"/>	
<b>O&amp;S Cost</b>	<input type="checkbox"/>	
<b>Unit Cost</b>	<input type="checkbox"/>	
PAUC	<input type="checkbox"/>	
APUC	<input type="checkbox"/>	
Nunn-McCurdy Breaches		
<b>Current UCR Baseline</b>		
PAUC	None	
APUC	None	
<b>Original UCR Baseline</b>		
PAUC	Significant	
APUC	Significant	

# Schedule



Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate
Milestone B	Jun 2007	Jun 2007	Jun 2007	Jun 2007
Limited User Test (LUT)				
Start	Mar 2009	Mar 2009	Mar 2009	Mar 2009
Complete	Mar 2009	Mar 2009	Mar 2009	Mar 2009
Milestone C	Feb 2010	Mar 2010	Mar 2010	Mar 2010
Initial Operational Test (IOT)				
Start	Nov 2011	May 2012	May 2012	May 2012
Complete	Nov 2011	May 2012	May 2012	May 2012
Defense Acquisition Board Review	N/A	Sep 2012	Sep 2012	Sep 2012
IOC	Nov 2012	Aug 2013	Aug 2013	Aug 2013
Follow-On Operational Test and Evaluation (FOT&E) #1	N/A	May 2013	May 2013	May 2013 (Ch-1)
Defense Acquisition Board Review #2	N/A	Sep 2013	Sep 2013	Sep 2013 (Ch-1)
FOT&E #2	N/A	Oct 2014	Oct 2014	Oct 2014 (Ch-1)
Full Rate Production (FRP) Decision Review	Feb 2012	May 2015	Nov 2015	May 2015

**Change Explanations**

(Ch-1) The following schedule events, FOT&E #1, Defense Acquisition Board Review #2, and FOT&E #2 were added since the prior SAR due to approval of a revised APB on February 12, 2015.

## Performance

Performance Characteristics				
SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Demonstrated Performance	Current Estimate
<b>Net Ready</b>				
The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an ATO by the DAA, and 5) Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an ATO by the DAA, and 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	The system must fully support execution of joint critical operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for transition to Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authentication, confidentiality, and non-repudiation, and issuance of an IATO by the DAA, and 5) Operationally effective information exchanges; and mission critical performance and IA attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.	Achieved threshold at IOT.	The system must fully support execution of all operational activities identified in the applicable joint and system integrated architectures and the system must satisfy the technical requirements for Net-Centric military operations to include 1) DISR mandated GIG IT standards and profiles identified in the TV-1, 2) DISR mandated GIG KIPs identified in the KIP declaration table, 3) NCOW RM Enterprise Services 4) IA requirements including availability, integrity, authentication, confidentiality, and nonrepudiation, issuance of an ATO by the DAA, and 5) Operationally effective information exchanges; and mission critical performance and information assurance attributes, data correctness, data availability, and consistent data processing specified in the applicable joint and system integrated architecture views.

system integrated architecture views.				
<b>Network Management</b>				
Increment 2 will enable the BCT S6 NetOps managers to plan, monitor, prioritize, control and visually display (e.g., current network status and connectivity) its WIN-T equipped units (Bde, Bn, Co) that connect: Objective: Top Secret, Secret, and Unclassified users.	Increment 2 will enable the BCT S6 NetOps managers to plan, monitor, prioritize, control and visually display (e.g., current network status and connectivity) its WIN-T equipped units (Bde, Bn, Co) that connect: Objective: Top Secret, Secret, and Unclassified users.	Increment 2 will enable the BCT S6 NetOps managers to plan, monitor, prioritize, control and visually display (e.g., current network status and connectivity) its WIN-T equipped units (Bde, Bn, Co) that connect: Threshold: Secret and Unclassified users.	Achieved threshold at IOT.	Inc 2 will enable the BCT S6 NetOps managers to plan, monitor, prioritize, control and visually display (e.g., current network status and connectivity) its WIN-T equipped units (Bde, Bn, Co) that connect: Objective: Top Secret, Secret, and Unclassified users.
<b>Information Dissemination</b>				
Increment 2 will provide a transport capability that enables battle command and situational awareness data message information to be exchanged within a BCT's WIN-T Increment 2 enabled ATH platforms and to its WIN-T enabled ATH Divisional HQ: Objective: Critical survival information (Category 1) delivery in <0.5 seconds (95% of completed messages) and time sensitive information (Category 2) in <1 seconds (92% of completed messages).	Increment 2 will provide a transport capability that enables battle command and situational awareness data message information to be exchanged within a BCT's WIN-T Increment 2 enabled ATH platforms and to its WIN-T enabled ATH Divisional HQ: Objective: Critical survival information (Category 1) delivery in <0.5 seconds (95% of completed messages) and time sensitive information (Category 2) in <1 seconds (92% of completed messages).	Increment 2 will provide a transport capability that enables battle command and situational awareness data message information to be exchanged within a BCT's WIN-T Increment 2 enabled ATH platforms and to its WIN-T enabled ATH Divisional HQ: Objective: Critical survival information (Category 1) delivery in < or = to 5 seconds (95% of completed messages) and time sensitive information (Category 2) in <8 seconds (92% of completed messages).	Achieved threshold at IOT.	Inc 2 will provide a transport capability that enables battle command and situational awareness data message information to be exchanged within a BCT's WIN-T Inc 2 enabled ATH platforms and to its WIN-T enabled ATH Divisional HQ: Objective: Critical survival information (Category 1) delivery in <0.5 seconds (95% of completed messages) and time sensitive information (Category 2) in <1 seconds (92% of completed messages).
<b>Force Protection Armor required for protection of passengers inside the vehicle cab from small arms fire, mines, and other anti-vehicle/personnel threats</b>				
Increment 2 unique vehicles require	N/A	N/A	Achieved threshold at IOT.	Increment 2 unique vehicles require armor

armor kits for protection of passengers inside the vehicle cab from small arms fire, mines, and other anti-vehicle/personnel				kits for protection of passengers inside the vehicle cab from small arms fire, mines, and other anti-vehicle/personnel threats (IAW JROCM 120-05).
<b>Mobile Throughput For Brigade/Battalion maneuver commanders and their CPs</b>				
Increment 2 will enable selected warfighters (Bde/Bn maneuver commanders and their CPs) to conduct decisive operations while moving "cross-country" utilizing satellite communications: Objective: Ground vehicles: from 0 to 45 mph with 4 Mbps per link available for user data.	Increment 2 will enable selected warfighters (Bde/Bn maneuver commanders and their CPs) to conduct decisive operations while moving "cross-country" utilizing satellite communications: Objective: Ground vehicles: from 0 to 45 mph with 4 Mbps per link available for user data.	Increment 2 will enable selected warfighters (Bde/Bn maneuver commanders and their CPs) to conduct decisive operations while moving "cross-country" utilizing satellite communications: Threshold: Ground vehicles: from 0 to 25 mph with 256 Kbps per link available for user data.	Achieved threshold at PQT -G (DT) in 2011. User feedback from IOT indicated potential mobility and connectivity issues. Mobility and connectivity issues demonstrated significant improvement at the FOT in May 2013.	Inc 2 will enable selected warfighters (Bde/Bn maneuver commanders and their CPs) to conduct decisive operations while moving "cross-country" utilizing satellite communications: Objective: Ground vehicles: from 0 to 45 mph with 4 Mbps per link available for user data.

### Requirements Reference

Capability Production Document (CPD) Revision 1 dated February 14, 2012 as modified by Revision 3 approved October 17, 2014

### Change Explanations

None

### Notes

A WIN-T Inc 2 CPD was approved by the Joint Requirements Oversight Council on November 25, 2008. Revision 1 to the approved CPD was approved on February 14, 2012. The JROCM 118-13 approved changes as of June 17, 2013. The JROCM 143-13 approved additional changes as of August 13, 2013. Revision 2 to the approved CPD was approved on September 10, 2013. Revision 3 to the approved CPD was approved on October 17, 2014.

Demonstrated performance is as demonstrated at the PQT-G of 2011 and the IOT of May 2012 and documented in the Operational Test Agency Evaluation Report for the WIN-T Inc 2 dated July 2012.

## Acronyms and Abbreviations

ATH - At The Halt  
ATO - Authority to Operate  
BCT - Brigade Combat Team  
Bde - Brigade  
Bn - Battalion  
Co - Company  
CP - Command Post  
DAA - Designated Approving Authority  
DISR - Department of Defense Information Technology Standards and Profile Registry  
DT - Development Test  
FOT - Follow-On Test  
GIG - Global Information Grid  
HQ - Headquarters  
IA - Information Assurance  
IATO - Interim Authority to Operate  
IAW - In Accordance With  
IOT - Initial Operational Test  
IT - Information Technology  
JROCM - Joint Requirements Oversight Council Memorandum  
Kbps - Kilobits Per Second  
KIPs - Key Interface Profiles  
Mbps - Megabits Per Second  
mph - miles per hour  
NCOW - Network Centric Operations and Warfare  
NetOps - Network Operations  
PQT-G - Production Qualification Testing - Government  
RM - Reference Model  
S6 - Battalion or Brigade Communications Cell  
TV - Technical View

## Track to Budget

### RDT&E

Appn	BA	PE
Army	2040 07	0310349A
	<b>Project</b>	<b>Name</b>
	EE7	WIN-T Inc 2 Initial Networking
	<b>Notes:</b>	This is not a new start in FY 2015. This effort is funded under 0603782A Project 367 through FY 2014. It is funded under PE 0310349A, Project EE7 in the out years.

Army	2040 04	0603782A
	<b>Project</b>	<b>Name</b>
	355	WIN-T DEM/VAL/Warfighter (Shared) (Sunk) Information Network Tactical - DEM/VAL
	367	WIN-T DEM/VAL/Warfighter (Sunk) Information Network Tactical - DEM/VAL
	<b>Notes:</b>	Project 367 began in FY 2009 for WIN-T Inc 2 exclusively. Prior to FY 2009 Project 355 was a shared line for both WIN-T Inc 2 and WIN-T Inc 3.

### Procurement

Appn	BA	PE
Army	2035 04	0310706A
	<b>Line Item</b>	<b>Name</b>
	BS9741	WIN-T INCREMENT 2 Spares
Army	2035 02	0310706A
	<b>Line Item</b>	<b>Name</b>
	BW7115	Increment 2 Initial Networking On The Move

### Notes

The parent Line Item for the WIN-T Inc 2 Spares (BS9741) is BS9100. The parent Line Item for the WIN-T Inc 2 procurement (BW7115) is BW7100.

## Cost and Funding

### Cost Summary

Total Acquisition Cost							
Appropriation	BY 2010 \$M			BY 2010 \$M	TY \$M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	264.7	260.7	286.8	260.8	266.5	262.4	262.3
Procurement	4421.3	9113.8	10025.2	9206.5	4730.4	11196.2	11193.9
Flyaway	--	--	--	6114.3	--	--	7311.5
Recurring	--	--	--	5732.6	--	--	6881.0
Non Recurring	--	--	--	381.7	--	--	430.5
Support	--	--	--	3092.2	--	--	3882.4
Other Support	--	--	--	2799.2	--	--	3530.5
Initial Spares	--	--	--	293.0	--	--	351.9
MILCON	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
Total	4686.0	9374.5	N/A	9467.3	4996.9	11458.6	11456.2

#### Current APB Cost Estimate Reference

Army Cost Position (ACP) dated January 14, 2015

#### Confidence Level

Confidence Level of cost estimate for current APB: 50%

The ACP is considered low risk due to the Increment 2 phase of its life cycle. The variability of funding and corresponding changes in procurement quantities are the only identifiable risks.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	56	56	56
Procurement	2160	3583	3583
Total	2216	3639	3639

#### Quantity Notes

The unit of measure is a combination of communications nodes which vary in capability depending upon the increment of WIN-T being executed. The WIN-T Inc 2 unit of measure is comprised of Tactical Communications Nodes, Points of Presence, and Soldier Network Extensions.

## Cost and Funding

### Funding Summary

Appropriation Summary									
FY 2016 President's Budget / December 2014 SAR (TY\$ M)									
Appropriation	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
RDT&E	255.3	3.2	3.8	0.0	0.0	0.0	0.0	0.0	262.3
Procurement	2419.9	387.9	544.0	545.6	666.9	678.4	755.3	5195.9	11193.9
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2016 Total	2675.2	391.1	547.8	545.6	666.9	678.4	755.3	5195.9	11456.2
PB 2015 Total	2806.4	504.0	690.7	657.5	696.1	361.9	890.8	7499.9	14107.3
Delta	-131.2	-112.9	-142.9	-111.9	-29.2	316.5	-135.5	-2304.0	-2651.1

Quantity Summary										
FY 2016 President's Budget / December 2014 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
Development	56	0	0	0	0	0	0	0	0	56
Production	0	1183	120	248	201	129	135	266	1301	3583
PB 2016 Total	56	1183	120	248	201	129	135	266	1301	3639
PB 2015 Total	56	1254	156	266	250	249	15	375	2702	5323
Delta	0	-71	-36	-18	-49	-120	120	-109	-1401	-1684

## Cost and Funding

### Annual Funding By Appropriation

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
2007	--	--	--	--	--	--	8.2
2008	--	--	--	--	--	--	107.6
2009	--	--	--	--	--	--	91.3
2010	--	--	--	--	--	--	18.3
2011	--	--	--	--	--	--	16.8
2012	--	--	--	--	--	--	9.3
2013	--	--	--	--	--	--	2.7
2014	--	--	--	--	--	--	1.1
2015	--	--	--	--	--	--	3.2
2016	--	--	--	--	--	--	3.8
Subtotal	56	--	--	--	--	--	262.3

Annual Funding 2040   RDT&E   Research, Development, Test, and Evaluation, Army							
Fiscal Year	Quantity	BY 2010 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2007	--	--	--	--	--	--	8.4
2008	--	--	--	--	--	--	108.6
2009	--	--	--	--	--	--	91.0
2010	--	--	--	--	--	--	18.0
2011	--	--	--	--	--	--	16.2
2012	--	--	--	--	--	--	8.8
2013	--	--	--	--	--	--	2.5
2014	--	--	--	--	--	--	1.0
2015	--	--	--	--	--	--	2.9
2016	--	--	--	--	--	--	3.4
Subtotal	56	--	--	--	--	--	260.8

Annual Funding 2035   Procurement   Other Procurement, Army							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2009	56	135.8	--	--	135.8	0.1	135.9
2010	248	333.1	--	71.9	405.0	62.2	467.2
2011	96	185.1	--	74.4	259.5	80.7	340.2
2012	532	543.1	--	44.5	587.6	105.9	693.5
2013	176	289.0	--	19.8	308.8	107.5	416.3
2014	75	190.2	--	20.2	210.4	156.4	366.8
2015	120	197.5	--	53.3	250.8	137.1	387.9
2016	248	435.6	--	10.0	445.6	98.4	544.0
2017	201	347.3	--	10.2	357.5	188.1	545.6
2018	129	424.8	--	10.4	435.2	231.7	666.9
2019	135	446.5	--	10.6	457.1	221.3	678.4
2020	266	520.7	--	10.8	531.5	223.8	755.3
2021	254	467.8	--	11.0	478.8	235.9	714.7
2022	141	319.0	--	11.3	330.3	281.3	611.6
2023	211	425.5	--	11.5	437.0	235.8	672.8
2024	208	425.9	--	11.7	437.6	247.9	685.5
2025	184	407.1	--	11.9	419.0	279.8	698.8
2026	166	401.7	--	12.2	413.9	298.0	711.9
2027	137	385.3	--	12.4	397.7	334.5	732.2
2028	--	--	--	12.4	12.4	356.0	368.4
Subtotal	3583	6881.0	--	430.5	7311.5	3882.4	11193.9

Annual Funding 2035   Procurement   Other Procurement, Army							
Fiscal Year	Quantity	BY 2010 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2009	56	134.9	--	--	134.9	0.1	135.0
2010	248	325.0	--	70.1	395.1	60.7	455.8
2011	96	177.4	--	71.3	248.7	77.4	326.1
2012	532	512.6	--	42.0	554.6	100.0	654.6
2013	176	266.8	--	18.3	285.1	99.3	384.4
2014	75	172.3	--	18.3	190.6	141.7	332.3
2015	120	176.1	--	47.5	223.6	122.3	345.9
2016	248	383.2	--	8.8	392.0	86.5	478.5
2017	201	299.7	--	8.8	308.5	162.3	470.8
2018	129	359.4	--	8.8	368.2	196.1	564.3
2019	135	370.4	--	8.8	379.2	183.6	562.8
2020	266	423.5	--	8.8	432.3	182.0	614.3
2021	254	373.0	--	8.8	381.8	188.1	569.9
2022	141	249.4	--	8.8	258.2	219.9	478.1
2023	211	326.1	--	8.8	334.9	180.7	515.6
2024	208	320.0	--	8.8	328.8	186.3	515.1
2025	184	299.9	--	8.8	308.7	206.1	514.8
2026	166	290.1	--	8.8	298.9	215.2	514.1
2027	137	272.8	--	8.8	281.6	236.8	518.4
2028	--	--	--	8.6	8.6	247.1	255.7
Subtotal	3583	5732.6	--	381.7	6114.3	3092.2	9206.5

## Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
<b>Approval Date</b>	6/5/2007	9/27/2013
<b>Approved Quantity</b>	408	1030
<b>Reference</b>	Restructure ADM	WIN-T Inc 2 Additional LRIP ADM
<b>Start Year</b>	2009	2009
<b>End Year</b>	2010	2015

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the following:

The WIN-T Inc 2 LRIP program is consistent with DAE direction contained in the WIN-T ADM dated June 5, 2007 and corresponding Office of the Secretary of Defense Cost Analysis Improvement Group (CAIG) estimate. The ADM states "The Army will fund to the Chairman of the Cost Analysis Improvement Group's (CAIG) estimate for Increments 1 and 2; procure Increment 1 equipment to complete fielding to about 199 Army units; and procure Increment 2 equipment for about 37 Army units, based on affordability through FY 2013." The current WIN-T Inc 2 program only procured 25 Army units through FY 2013.

The original LRIP quantity was reported to Congress in the initial September 2007 SAR and again in the December 2007 SAR. This initial LRIP plan consisted of a two-year LRIP phase with quantities totaling 408 communications nodes, or approximately 22-percent, of the total Army Procurement Objective (APO) of 1,837. These LRIP units were to be procured over two years, with the first year providing units to support Production Qualification Test and Initial Operational Test (IOT) and the second year supporting production ramp up and fielding.

The LRIP start year changed from 2009 to 2010 as a result of program schedule changes. The Milestone C meeting was held on February 3, 2010 after which the program entered into LRIP. The initial LRIP quantities and costs were funded with FY 2009 dollars.

The September 26, 2012 ADM approved an additional LRIP Lot 3 of 538 communications nodes to bring the total LRIP quantities to 938 communications nodes. The current WIN-T Inc 2 LRIP plan consists of a three-year LRIP phase with quantities totaling 932 communications nodes, or approximately 44-percent, of the total APO of 2,100. The program received approval to exceed the 10% limit. The first year of LRIP provided units to support IOT and the second and third years permit an orderly increase in the production rate for the system sufficient to lead to full-rate production upon the successful completion of operational testing.

The September 27, 2013 ADM approved an additional LRIP Lot 4, excluding 119 Soldier Network Extension configuration item, and approved Lot 5 Training Base articles. An additional 105 communications nodes will be procured upon successful completion of a FRP Decision Review. This brings the total LRIP quantity to 1,030 communications nodes, approximately 29-percent of the total 3,583 communications nodes required. The fourth and fifth years of LRIP continue production sufficient to lead to FRP. FRP requires a successful Follow-on Operational Test and Evaluation.

## **Foreign Military Sales**

None

## **Nuclear Costs**

None

## Unit Cost

### Unit Cost Report

Item	BY 2010 \$M	BY 2010 \$M	% Change
	Current UCR Baseline (Feb 2015 APB)	Current Estimate (Dec 2014 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	9374.5	9467.3	
Quantity	3639	3639	
Item	2.576	2.602	+1.01
<b>Average Procurement Unit Cost</b>			
Cost	9113.8	9206.5	
Quantity	3583	3583	
Unit Cost	2.544	2.569	+0.98

Item	BY 2010 \$M	BY 2010 \$M	% Change
	Original UCR Baseline (Oct 2007 APB)	Current Estimate (Dec 2014 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	3617.2	9467.3	
Quantity	1893	3639	
Unit Cost	1.911	2.602	<b>+36.16<sup>1</sup></b>
<b>Average Procurement Unit Cost</b>			
Cost	3384.5	9206.5	
Quantity	1837	3583	
Unit Cost	1.842	2.569	<b>+39.47<sup>1</sup></b>

Unit Cost	TY \$M		TY % Change
	Current UCR Baseline (Feb 2015 APB)	Current Estimate (Dec 2014 SAR)	
<b>Program Acquisition Unit Cost (PAUC)</b>			
Cost	11458.6	11456.2	
Unit Cost	3.149	3.148	-0.03
<b>Average Procurement Unit Cost (APUC)</b>			
Cost	11196.2	11193.9	
Unit Cost	3.125	3.124	-0.03

Unit Cost	TY \$M		TY % Change
	Original UCR Baseline (Oct 2007 APB)	Current Estimate (Dec 2014 SAR)	
<b>Program Acquisition Unit Cost (PAUC)</b>			
Cost	3907.0	11456.2	
Unit Cost	2.064	3.148	+52.52
<b>Average Procurement Unit Cost (APUC)</b>			
Cost	3672.0	11193.9	
Unit Cost	1.999	3.124	+56.28

<sup>1</sup> Nunn-McCurdy Breach

Unit Cost Breach Data		
Changes From Previous SAR	\$M/Qty.	Percent
PAUC (BY \$M)	0.440	+20.35
APUC (BY \$M)	0.435	+20.38
PAUC Quantity	-1684	0.00
PAUC (TY \$M)	0.498	+18.79
APUC (TY \$M)	0.498	+18.96

Initial SAR Information - Sep 2007	BY2007 \$M	TY \$M
Program Acquisition Cost	1.8	2.1

### Unit Cost PAUC Changes

The PAUC increased from the December 2013 SAR to the December 2014 SAR due to an increase in costs caused by an eight year extension of the procurement schedule due to Configuration Steering Board (CSB) direction to transfer total Army requirements from WIN-T Inc 3 to WIN-T Inc 2 in conjunction with a reduction of less expensive nodes attributed to the revised Army modernization strategy. Additionally, there was an increase in costs caused by a two year extension of the procurement schedule due to reduced Long-Range Investment Requirements Analysis (LIRA) funding in FY 2021 to FY 2028.

### Unit Cost APUC Changes

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### Impact of Performance or Schedule Changes

Schedule negatively impacts the PAUC and APUC through the addition of ten years to the program. WIN-T Inc 2 now incurs additional fixed costs associated with Program Management, Hardware Refresh, and Software Licenses spread over fewer Nodes being procured under the Army's modernization strategy.

**Program Management or Control**

The PM strives to control unit cost growth on the program. As a result, since the Original APB, the cost of the individual Configuration Items have, on the average, shown overall cost reductions. Additionally, the Army modernization strategy resulted in significant overall cost savings to the program. However, the PAUC and APUC were negatively impacted by the reduction of less expensive nodes.

**Cost Control Actions**

The PM employs the best practices contained within Better Buying Power to control future costs. In particular, WIN-T Inc 2 plans to use incentive type contracts on the Follow-On Production Contract, gain efficiencies in the hardware refresh cycle, as well as explore ways to promote competition for subsystem components. These initiatives have the potential to yield significant savings throughout the life cycle.

**Nunn-McCurdy Comments**

A Program Deviation Report and the revised APB were signed by the Army Acquisition Executive on January 23, 2015. The DAE was informed of the program deviation on February 9, 2015. The revised APB was approved by the DAE on February 12, 2015.

**Unit Cost History**



Item	Date	BY 2010 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Oct 2007	1.911	1.842	2.064	1.999
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	May 2013	2.301	2.223	2.534	2.460
Current APB	Feb 2015	2.576	2.544	3.149	3.125
Prior Annual SAR	Dec 2013	2.162	2.134	2.650	2.626
Current Estimate	Dec 2014	2.602	2.569	3.148	3.124

**SAR Unit Cost History**

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
2.064	-0.055	-0.063	0.016	0.000	0.093	0.000	0.200	0.191	2.255

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
2.255	-0.007	0.200	0.064	-0.145	0.006	0.000	0.775	0.893	3.148

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
1.999	-0.055	-0.055	0.017	0.000	0.079	0.000	0.205	0.191	2.190

Current SAR Baseline to Current Estimate (TY \$M)									
APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
2.190	-0.008	0.229	0.065	-0.147	0.007	0.000	0.788	0.934	3.124

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	N/A
Milestone B	N/A	Jun 2007	N/A	N/A	Jun 2007
Milestone C	N/A	Apr 2009	N/A	N/A	Mar 2010
IOC	N/A	Aug 2011	N/A	N/A	Aug 2013
Total Cost (TY \$M)	N/A	3907.0	N/A	N/A	11456.2
Total Quantity	N/A	1893	N/A	N/A	3639
PAUC	N/A	2.064	N/A	N/A	3.148

## Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	266.5	4730.4	--	4996.9
Previous Changes				
Economic	+1.6	+125.6	--	+127.2
Quantity	--	+6073.9	--	+6073.9
Schedule	--	+59.0	--	+59.0
Engineering	--	-492.7	--	-492.7
Estimating	+8.6	+21.8	--	+30.4
Other	--	--	--	--
Support	--	+3312.6	--	+3312.6
Subtotal	+10.2	+9100.2	--	+9110.4
Current Changes				
Economic	-0.4	-153.2	--	-153.6
Quantity	--	-2136.8	--	-2136.8
Schedule	--	+173.5	--	+173.5
Engineering	--	-34.1	--	-34.1
Estimating	-14.0	+4.8	--	-9.2
Other	--	--	--	--
Support	--	-490.9	--	-490.9
Subtotal	-14.4	-2636.7	--	-2651.1
Total Changes	-4.2	+6463.5	--	+6459.3
CE - Cost Variance	262.3	11193.9	--	11456.2
CE - Cost & Funding	262.3	11193.9	--	11456.2

Summary BY 2010 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	264.7	4421.3	--	4686.0
Previous Changes				
Economic	--	--	--	--
Quantity	--	+4708.2	--	+4708.2
Schedule	--	+3.5	--	+3.5
Engineering	--	-417.7	--	-417.7
Estimating	+8.4	+11.3	--	+19.7
Other	--	--	--	--
Support	--	+2511.1	--	+2511.1
Subtotal	+8.4	+6816.4	--	+6824.8
Current Changes				
Economic	--	--	--	--
Quantity	--	-1594.4	--	-1594.4
Schedule	--	--	--	--
Engineering	--	-28.0	--	-28.0
Estimating	-12.3	+4.5	--	-7.8
Other	--	--	--	--
Support	--	-413.3	--	-413.3
Subtotal	-12.3	-2031.2	--	-2043.5
Total Changes	-3.9	+4785.2	--	+4781.3
CE - Cost Variance	260.8	9206.5	--	9467.3
CE - Cost & Funding	260.8	9206.5	--	9467.3

Previous Estimate: December 2013

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.4
Revised estimate to reflect refinement of the platform operational testing estimate. (Estimating)	-12.4	-14.1
Adjustment for current and prior escalation. (Estimating)	+0.1	+0.1
<b>RDT&amp;E Subtotal</b>	<b>-12.3</b>	<b>-14.4</b>

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-153.2
Quantity variance resulting from a decrease of 1,684 Nodes from 5,267 to 3,583 due to alignment with the revised Army modernization strategy. (Quantity)	-2592.3	-3414.1
Additional quantity variance to account for Non-Node Configuration Items. (Quantity)	+997.9	+1277.3
Stretch out of procurement buy profile by two years from FY 2009 - FY 2026 to FY 2009 - FY 2028 to meet Long-Range Investment Requirements Analysis funding in FY 2021 - FY 2028. (Schedule)	0.0	+173.5
Decrease due to the de-scope of the Joint Gateway Node requirement. (Engineering)	-28.0	-34.1
Adjustment for current and prior escalation. (Estimating)	+4.5	+4.8
Adjustment for current and prior escalation. (Support)	+1.9	+2.3
Decrease in other support due to lower Fielding, New Equipment Training, and Software Maintenance costs resulting from a decrease of 1,684 nodes. (Support) (QR)	-363.8	-425.6
Decrease in Initial Spares resulting from a decrease of 1,684 Nodes. (Support) (QR)	-51.4	-67.6
<b>Procurement Subtotal</b>	<b>-2031.2</b>	<b>-2636.7</b>

(QR) Quantity Related

## Contracts

### Contract Identification

**Appropriation:** Procurement  
**Contract Name:** WIN-T Increment 2 Production  
**Contractor:** General Dynamics C4 Systems, Inc.  
**Contractor Location:** 400 John Quincy Adams Rd  
 Taunton, MA 02780  
**Contract Number:** W15P7T-10-D-C007  
**Contract Type:** Fixed Price Incentive(Firm Target) (FPIF), Firm Fixed Price (FFP)  
**Award Date:** March 24, 2010  
**Definitization Date:** December 30, 2010

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
299.7	299.7	160	1729.0	1729.0	1030	1729.0	1729.0

### Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the procurement of Lots 1B, 2, 3 and 4 which equate to an additional 870 nodes LRIP. In addition, production support efforts were added to the contract price.

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

### Cost and Schedule Variance Explanations

None

### General Contract Variance Explanation

Cost and schedule variances are not reported for this contract, because no active task orders exceed the threshold requirements for EVM reporting.

## Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	56	56	56	100.00%
Production	587	587	3583	16.38%
Total Program Quantity Delivered	643	643	3639	17.67%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	11456.2	Years Appropriated	9
Expended to Date	2524.8	Percent Years Appropriated	40.91%
Percent Expended	22.04%	Appropriated to Date	3066.3
Total Funding Years	22	Percent Appropriated	26.77%

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

## Operating and Support Cost

### Cost Estimate Details

<b>Date of Estimate:</b>	January 14, 2015
<b>Source of Estimate:</b>	SCP
<b>Quantity to Sustain:</b>	3583
<b>Unit of Measure:</b>	Node
<b>Service Life per Unit:</b>	20.00 Years
<b>Fiscal Years in Service:</b>	FY 2012 - FY 2048

1. A Node is defined as Tactical Communications Node, Point of Presence, and Soldier Network Extension Configuration Item.
2. Quantity of 3,583 Nodes to sustain does not include 56 Nodes procured in RDT&E.
3. Costs are estimated in accordance with Department of the Army Cost Analysis Manual, Deputy Assistant Secretary of the Army, US Army Cost and Economic Analysis Center, May 2002.
4. O&S cost factors taken from the Army Operating and Support Management Information System.
5. Military Personnel costs are taken from the Army Military Cost System.
6. Mission Pay and Allowance estimates based on the WIN-T manpower estimates included in the WIN-T Inc 2 Cost Analysis Requirements Description dated November 21, 2014.
7. Estimated costs are based on the operating tempo approved by the Army's Training and Doctrine Command as well as individual Configuration Item component reliability.

### Sustainment Strategy

Costs are based on two level maintenance concept. WIN-T Inc 2 employs the Army's Two-Level Maintenance concept focusing on organic field level operations and a combination of contractor and Government services for sustainment / depot-level operations. All maintenance planning will comply with applicable Title 10 USC 2460-series Core Depot statutes.

### Antecedent Information

No Antecedent. WIN-T Inc 2 provides a different (on the move) capability from WIN-T Inc 1 (at the halt) communications and is not descended from the WIN-T Inc 1 system. Both programs are being fielded simultaneously to separate users, one is not replacing the other.

Cost Element	Annual O&S Costs BY2010 \$K	
	WIN-T Inc 2 Average Annual Cost Per Node	N/A (Antecedent) N/A
Unit-Level Manpower	84.764	0.000
Unit Operations	2.202	0.000
Maintenance	33.794	0.000
Sustaining Support	17.079	0.000
Continuing System Improvements	18.410	0.000
Indirect Support	0.000	0.000
Other	0.000	0.000
<b>Total</b>	<b>156.249</b>	<b>--</b>

Item	Total O&S Cost \$M			
	WIN-T Inc 2			N/A (Antecedent)
	Current Production APB Objective/Threshold		Current Estimate	
Base Year	11196.8	12316.5	11196.8	N/A
Then Year	16121.0	N/A	16121.0	N/A

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

Multiplying the total average annual unitized cost by 20 years and by 3,583 communications nodes will achieve the total costs.

$$\$156.249K \times 20 \times 3,583 = \$11,196,803K$$

O&S Cost Variance		
Category	BY 2010 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2013 SAR	15810.7	
Programmatic/Planning Factors	-4546.7	Decrease of 1,684 Nodes from 5,267 to 3,583 due to alignment with the revised Army modernization strategy.
Cost Estimating Methodology	0.0	
Cost Data Update	-60.6	Updated software subscription costs.
Labor Rate	-5.5	Updated contractor labor rates.
Energy Rate	0.0	
Technical Input	-1.1	Decrease resulting from a de-scope of the Joint Gateway Node.
Other	0.0	
Total Changes	-4613.9	
Current Estimate	11196.8	

#### Disposal Estimate Details

Date of Estimate:	January 14, 2015
Source of Estimate:	SCP
Disposal/Demilitarization Total Cost (BY 2010 \$M):	Total costs for disposal of all Node are 18.8