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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	-	87.240	74.712	47.471	0.000	47.471	74.680	82.570	18.500	6.121	Continuing	Continuing
672832: <i>MEECN System Improvements</i>	-	0.860	0.894	0.903	0.000	0.903	0.920	0.937	0.955	0.973	Continuing	Continuing
672835: <i>Common VLF/LF Receiver Inc 2</i>	-	0.000	0.000	15.545	0.000	15.545	57.840	64.676	12.488	0.000	Continuing	Continuing
676029: <i>Global Aircrew Strategic Network Terminal</i>	-	86.380	69.447	19.835	0.000	19.835	0.598	0.162	0.045	0.047	Continuing	Continuing
676030: <i>Global ASNT Inc 2</i>	-	0.000	4.371	11.188	0.000	11.188	15.322	16.795	5.012	5.101	Continuing	Continuing

Note

This program, BA 07 PE 0303131F, project 672835, CVR Inc 2, is a new start.

This program, BA 07 PE 0303131F, project 676030, Global ASNT Inc 2 was initially funded in project 676029 as a new start for FY15.

A. Mission Description and Budget Item Justification

Nuclear Deterrence Operations (NDO) is an Air Force Core Function. Within this core function, Nuclear Command and Control (NC2) is the exercise of authority and direction by the President, as Commander in Chief, through established command lines, over nuclear weapon operations of military forces. The President's authority and direction are exercised through the Nuclear Command and Control System (NCCS). The NCCS is the designated combination of flexible and enduring elements including facilities, equipment, communications, procedures, personnel, and the structure in which these elements are integrated, all of which are essential for planning, directing, and controlling nuclear weapon operations.

The Minimum Essential Emergency Communications Network (MEECN) portfolio modernizes the systems necessary to effectively provide assured communications connectivity between the President and the strategic deterrence forces in stressed environments.

MEECN System Improvements (MSI) is a long-range planning process with users (Air Force Global Strike Command (AFGSC), Air Combat Command (ACC), Air Force Space Command (AFSPC), Air Mobility Command (AMC), Air Force Special Operations Command (AFSOC), US Strategic Command (USSTRATCOM), and the Navy) to monitor and assess the performance of Nuclear Command, Control, and Communications (NC3) systems and develop recommendations for current and future strategic and tactical architectures, requirements, and issues based on available and emerging technologies. MSI is used to conduct technology testing; analyze technology strategies; conduct requirement trade space analysis, risk reduction demonstrations, and mission analysis; and build technology roadmaps as proactive support to the NC3 community. MSI performs analysis, integration, and testing activities for the NC3 Weapon System.

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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	
<p>Common Very Low Frequency/Low Frequency (VLF/LF) Receiver (CVR) Increment 2 (CVR Inc 2) will deliver a survivable, beyond-line-of-sight path for Emergency Action Message (EAM) reception. The intent of CVR Inc 2 is to develop and produce a common VLF/LF receiver with an interoperable waveform for future platform integration to include airborne and ground based nodes, improve system performance, and reduce supportability costs through commonality.</p> <p>Global Aircrew Strategic Network Terminal (Global ASNT) replaces inadequate, unsustainable strategic communications equipment at bomber, tanker and reconnaissance Wing Command Posts (WCPs), Nuclear Task Forces, Munitions Support Squadrons (MUNSS), and for Mobile Support Teams (MSTs). Global ASNT is a ground-based system that will provide survivable, secure communication paths to receive Emergency Action Messages (EAMs), Force Management messages, and Force Direction messages and disseminate them to bomber, tanker, and reconnaissance aircrews.</p> <p>Global ASNT is being fielded in separate capability increments. Global ASNT Increment 1 (Inc 1) includes early system engineering support for the planning and development for the future Global ASNT Increments.</p> <p>Global ASNT Inc 1 fields required Extremely High Frequency/Advanced Extremely High Frequency (EHF/AEHF) capabilities and replaces inadequate, unsustainable strategic mobile and fixed-site Single Channel Anti-jam Man-Portable (SCAMP) terminals and Secure, Mobile, Anti-Jam, Reliable, Tactical – Terminal (SMART-T) equipment.</p> <p>Global ASNT Increment 2 delivers a modernized Aircrew Alerting System (AAS) consisting of personal and general alerting equipment, and High Frequency (HF) and Ultra High Frequency (UHF) capabilities. Increment 2 replaces inadequate, unsustainable Electromagnetic Pulse Hardened Dispersal Communication (EHDC) systems and Aircrew Alerting Communications Electromagnetic Pulse (AACE) systems.</p> <p>Global ASNT Increment 3 is planned to deliver a Very Low Frequency (VLF)/Low Frequency (LF) communications receive capability.</p> <p>This program is in Budget Activity 07, Operational System Development, because this budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal years.</p>		

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Exhibit R-2, RDT&E Budget Item Justification: PB 2017 Air Force	Date: February 2016
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Appropriation/Budget Activity 3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>
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B. Program Change Summary (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Previous President's Budget	80.882	75.062	32.000	0.000	32.000
Current President's Budget	87.240	74.712	47.471	0.000	47.471
Total Adjustments	6.358	-0.350	15.471	0.000	15.471
• Congressional General Reductions	0.000	-0.350			
• Congressional Directed Reductions	0.000	0.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	9.000	0.000			
• SBIR/STTR Transfer	-2.642	0.000			
• Other Adjustments	0.000	0.000	15.471	0.000	15.471

Change Summary Explanation

FY15 reprogramming for Global ASNT Inc 1 (project 676029) to correct funds alignment due to modified sub-contracts spend plan.

FY15 funding for Global ASNT Inc 2 (project 676030) not reflected due to timing. \$1.9M approved above threshold reprogramming received permitting new start authority.

The FY17 funding request was increased by \$15.545M to begin CVR Inc 2 (project 672835) development.

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force										Date: February 2016		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>				Project (Number/Name) 672832 / <i>MEECN System Improvements</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
672832: <i>MEECN System Improvements</i>	-	0.860	0.894	0.903	0.000	0.903	0.920	0.937	0.955	0.973	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

MEECN System Improvements (MSI) is a long-range planning process with users (Air Force Global Strike Command (AFGSC), Air Combat Command (ACC), Air Force Space Command (AFSPC), Air Mobility Command (AMC), Air Force Special Operations Command (AFSOC), US Strategic Command (USSTRATCOM), and the Navy) to monitor and assess the performance of Nuclear Command, Control, and Communications (NC3) systems and develop recommendations for current and future strategic and tactical architectures, requirements, and issues based on available and emerging technologies. MSI is used to conduct technology testing; analyze technology strategies; conduct requirement trade space analysis, risk reduction demonstrations, and mission analysis; and build technology roadmaps as proactive support to the NC3 community. MSI performs analysis, integration, and testing activities for the NC3 Weapon System.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: MEECN System Improvements	0.860	0.894	0.903	0.000	0.903
Description: Conduct Nuclear Command, Control, and Communication (NC3) technology testing, integrate the NC3 Weapon System, build comprehensive technology strategies and roadmaps. Conduct VLF/LF tradeoff analysis. Deliver results of analytic tasks in an annual NC3 report.					
FY 2015 Accomplishments: Continued to refresh NC3 Architecture Roadmap Performed bomber message reception assessment Continued model improvement efforts					
FY 2016 Plans: Continue to refresh NC3 Architecture Roadmap Conduct integration and test planning for the NC3 Weapon System Perform VLF/LF coverage analysis Test Transverse Electric/Transverse Magnetic (TE/TM) antenna performance verification Perform Electromagnetic Interference (EMI) coverage impact analysis Conduct antenna obsolescence investigation					

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 672832 / <i>MEECN System Improvements</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Continue model improvement efforts					
<i>FY 2017 Base Plans:</i> Continue to refresh NC3 Architecture Roadmap Conduct integration and test tasks for the NC3 Weapon System Perform VLF/LF loss of timing analysis Perform analysis of VLF/LF coverage with FSBS S-Flex					
<i>FY 2017 OCO Plans:</i> N/A					
Accomplishments/Planned Programs Subtotals	0.860	0.894	0.903	0.000	0.903

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• None: <i>None</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-

Remarks

D. Acquisition Strategy

MSI will continue to evaluate the performance of the NC3 Weapon System, by assessing performance and technology areas for improvement with the assistance of expert technical support from FFRDCs, UARCs, and may include competitively awarded technical support contracts with industry. Johns Hopkins University/Applied Physics Laboratory will support NC3 Weapon System Architecture Roadmap updates.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 672832 / <i>MEECN System Improvements</i>
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Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MSI - NC3 Roadmap	MIPR	JHU APL : Laurel, MD	-	0.415	Mar 2015	0.411	Mar 2016	0.417	Mar 2017	0.000		0.417	Continuing	Continuing	TBD
Subtotal			-	0.415		0.411		0.417		0.000		0.417	-	-	-

Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-		-	-	-	-

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	-		-		-		-		-	-	-	-

Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
MSI PMA (Eng/Acq Spt/ MITRE/Travel/IMPAC)	Various	Various : Various	-	0.445	Dec 2014	0.483	Dec 2015	0.486	Dec 2016	0.000		0.486	Continuing	Continuing	TBD
Subtotal			-	0.445		0.483		0.486		0.000		0.486	-	-	-

			Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	0.860	0.894	0.903	0.000	0.903	-	-	-

Remarks

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 672832 / <i>MEECN System Improvements</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
MEECN System Improvement	1	2015	4	2021
NC3 Annual Report - FY15	4	2015	4	2015
NC3 Annual Report - FY16	4	2016	4	2016
NC3 Annual Report - FY17	4	2017	4	2017
NC3 Annual Report - FY18	4	2018	4	2018
NC3 Annual Report - FY19	4	2019	4	2019
NC3 Annual Report - FY20	4	2020	4	2020
NC3 Annual Report - FY21	4	2021	4	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force										Date: February 2016		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>					Project (Number/Name) 672835 / <i>Common VLF/LF Receiver Inc 2</i>		
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
672835: <i>Common VLF/LF Receiver Inc 2</i>	-	0.000	0.000	15.545	0.000	15.545	57.840	64.676	12.488	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program, BA 07 PE 0303131F, project 672835, CVR Inc 2, is a new start.

A. Mission Description and Budget Item Justification

Common Very Low Frequency/Low Frequency (VLF/LF) Receiver (CVR) Increment 2 (CVR Inc 2) will deliver a survivable, beyond-line-of-sight path for Emergency Action Message (EAM) reception. The intent of CVR Inc 2 is to develop and produce a common VLF/LF receiver with an interoperable waveform for future platform integration to include airborne and ground based nodes, improve system performance, and reduce supportability costs through commonality.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: CVR Inc 2	0.000	0.000	15.545	0.000	15.545
Description: Pre-Milestone B Activities					
FY 2015 Accomplishments: N/A					
FY 2016 Plans: N/A					
FY 2017 Base Plans: Initiate pre-development and upfront system engineering activities Perform requirements and technology analysis and trade studies Conduct market research and program risk analysis Develop acquisition strategy in preparation for Milestone B Draft system requirements documentation and validate requirements Develop new VLF/LF waveform standard					
FY 2017 OCO Plans:					

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 672835 / <i>Common VLF/LF Receiver Inc 2</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
N/A					
Accomplishments/Planned Programs Subtotals	0.000	0.000	15.545	0.000	15.545

C. Other Program Funding Summary (\$ in Millions)											
Line Item	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
• 834210: CVR Inc 2	0.000	0.000	0.000	0.000	0.000	0.000	0.000	37.805	51.001	-	-

Remarks

D. Acquisition Strategy

CVR Inc 2 will use a full and open competitive source selection to award an EMD contract for Increment 2. CVR Inc 2 will use a competitive approach to fulfill the overall requirements of the program.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force												Date: February 2016				
Appropriation/Budget Activity				R-1 Program Element (Number/Name)					Project (Number/Name)							
3600 / 7				PE 0303131F / Minimum Essential Emergency Communications Network (MEECN)					672835 / Common VLF/LF Receiver Inc 2							
Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
CVR Inc 2 - Early Development	TBD	TBD : TBD	-	0.000		0.000		8.127	Jan 2017	0.000		8.127	Continuing	Continuing	-	
Subtotal			-	0.000		0.000		8.127		0.000		8.127	-	-	-	
Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
GFE	Various	Not specified : TBD	-	0.000		0.000		2.292	Jun 2017	0.000		2.292	Continuing	Continuing	-	
Subtotal			-	0.000		0.000		2.292		0.000		2.292	-	-	-	
Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
Government Test Planning	TBD	Not Specified : TBD	-	0.000		0.000		0.207	Feb 2017	0.000		0.207	Continuing	Continuing	-	
NSA Certification Planning	TBD	Not Specified : TBD	-	0.000		0.000		0.115	Oct 2016	0.000		0.115	Continuing	Continuing	-	
Subtotal			-	0.000		0.000		0.322		0.000		0.322	-	-	-	
Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract	
PMA (Eng/Acq Spt/Travel/IMPAC)	Various	Various : TBD	-	0.000		0.000		4.804	Oct 2016	0.000		4.804	Continuing	Continuing	-	
Subtotal			-	0.000		0.000		4.804		0.000		4.804	-	-	-	

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 672835 / <i>Common VLF/LF Receiver Inc 2</i>

	FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020				FY 2021			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Requirements Development									■	■	■	■																
Early Systems Engineering									■	■	■	■																
Materiel Development Decision (MDD)									■																			
RFP Release										■																		
Milestone B Decision													■															
Contract Award													■															
Engineering and Manufacturing Development (EMD)													■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
Preliminary Design Review (PDR)																	■											
Critical Design Review (CDR)																					■							
Milestone C Decision																									■			
Production and Fielding																									■	■	■	■

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 672835 / <i>Common VLF/LF Receiver Inc 2</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Requirements Development	1	2017	3	2017
Early Systems Engineering	1	2017	4	2017
Materiel Development Decision (MDD)	2	2017	2	2017
RFP Release	3	2017	3	2017
Milestone B Decision	1	2018	1	2018
Contract Award	2	2018	2	2018
Engineering and Manufacturing Development (EMD)	2	2018	1	2021
Preliminary Design Review (PDR)	2	2019	2	2019
Critical Design Review (CDR)	1	2020	1	2020
Milestone C Decision	1	2021	1	2021
Production and Fielding	1	2021	4	2021

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force										Date: February 2016		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>				Project (Number/Name) 676029 / <i>Global Aircrew Strategic Network Terminal</i>			
COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
676029: <i>Global Aircrew Strategic Network Terminal</i>	-	86.380	69.447	19.835	0.000	19.835	0.598	0.162	0.045	0.047	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Global ASNT replaces inadequate, unsustainable strategic communications equipment at bomber, tanker and reconnaissance Wing Command Posts (WCPs), Nuclear Task Forces, Munitions Support Squadrons (MUNSS), and for Mobile Support Teams (MSTs). Global ASNT is a ground-based system that will provide survivable, secure communication paths to receive Emergency Action Messages (EAMs), Force Management messages, and Force Direction messages and disseminate them to bomber, tanker, and reconnaissance aircrews.

Global ASNT is being fielded in separate capability increments. Global ASNT Increment 1 (Inc 1) includes early system engineering support for the planning and development for the future Global ASNT Increments.

Global ASNT Inc 1 fields required Extremely High Frequency/Advanced Extremely High Frequency (EHF/AEHF) capabilities and replaces inadequate, unsustainable strategic mobile and fixed-site Single Channel Anti-jam Man-Portable (SCAMP) terminals and Secure, Mobile, Anti-Jam, Reliable, Tactical – Terminal (SMART-T) equipment.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Global ASNT Inc 1	86.380	69.447	19.835	0.000	19.835
Description: Engineering & Manufacturing Development (EMD)					
FY 2015 Accomplishments:					
Conducted Preliminary Design Review (PDR) and Critical Design Review (CDR)					
Continued development of EHF and AEHF integration of modem design, cryptographic upgrade, software development, and antenna integration					
Conducted test planning and conducted preliminary testing of developed hardware and software					
Initiated Global ASNT Inc 2 as FY15 new start via ATR request					
FY 2016 Plans:					
Continue development of EHF and AEHF integration of modem design, cryptographic upgrade, software development, antenna integration					

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 676029 / <i>Global Aircrew Strategic Network Terminal</i>

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Contractor test developed hardware and software Prepare for Government Developmental Testing/Operational Testing (DT/OT) in preparation for Milestone C Begin MS C documentation and Engineering Change Orders (ECOs) Conduct satellite network simulations and associated MITRE Lab analytic activities through Direct Mission Support (DMS)/Program Management Administration (PMA)					
FY 2017 Base Plans: Complete Government Developmental Testing/Operational Testing (DT/OT) in preparation for Milestone C Resolve any Deficiency Reports (DRs) identified in DT/OT testing Complete MS C documentation and Engineering Change Orders (ECOs) Complete satellite network simulations and associated MITRE lab analytic activities through DMS/PMA					
FY 2017 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	86.380	69.447	19.835	0.000	19.835

C. Other Program Funding Summary (\$ in Millions)

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPAF: BA03: Line item # 834210: <i>Global ASNT Inc 1</i>	1.457	5.232	198.925	0.000	198.925	130.188	40.486	11.796	12.009	Continuing	Continuing

Remarks

D. Acquisition Strategy

Global ASNT used a full and open competitive approach to award an EMD contract for Increment 1. Global ASNT will continue to use a competitive incremental approach to fulfill the overall requirements for Increments 2 and 3.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force											Date: February 2016				
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>					Project (Number/Name) 676029 / <i>Global Aircrew Strategic Network Terminal</i>						

Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Global ASNT Inc 1 - Engineering & Manufacturing Development	C/FPIF	Raytheon : Marlborough, MA	-	76.537	Oct 2014	52.930	Oct 2015	12.888	Oct 2016	0.000		12.888	Continuing	Continuing	TBD
Global ASNT Inc 1 - Satellite Simulations	SS/FFP	MIT/Lincoln Laboratory : Lexington, MA	-	0.835	Jan 2015	1.380	Jan 2016	0.044	Oct 2016	0.000		0.044	Continuing	Continuing	TBD
Subtotal			-	77.372		54.310		12.932		0.000		12.932	-	-	-

Remarks
 - Raytheon Global ASNT Inc 1 EMD contract for FY15 and FY16 is an incrementally funded continuing effort on the existing contract. Incremental funding is projected for October FY15 and October FY16, as appropriated funds become available to obligate on this FPIF type contract.

Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Global ASNT Inc 1 - MITRE Lab	SS/CPFF	MITRE : Bedford, MA	-	1.276	Oct 2014	0.354	Oct 2015	0.330	Oct 2016	0.000		0.330	Continuing	Continuing	-
Global ASNT Inc 1 - Software Support	Various	Various : TBD	-	1.123	Feb 2015	4.375	Oct 2015	0.000		0.000		0.000	Continuing	Continuing	-
Global ASNT Inc 1 - GFE	Various	Various : TBD	-	0.046	Apr 2015	0.002	Feb 2016	0.000		0.000		0.000	Continuing	Continuing	-
Subtotal			-	2.445		4.731		0.330		0.000		0.330	-	-	-

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Global ASNT Inc 1 - Government Test and Evaluation	Various	Various : TBD	-	0.471	Nov 2014	1.003	Nov 2015	0.791	Nov 2016	0.000		0.791	Continuing	Continuing	TBD

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 676029 / <i>Global Aircrew Strategic Network Terminal</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Global ASNT Inc 1 - Engineering and Manufacturing Development	1	2015	2	2017
Global ASNT Inc 1 - Preliminary Design Review (PDR)	1	2015	1	2015
Global ASNT Inc 1 - Critical Design Review (CDR)	3	2015	3	2015
Global ASNT Inc 1 - Test	2	2016	2	2017
Global ASNT Inc 1 - Milestone C Decision	2	2017	2	2017
Global ASNT Inc 1 - Production and Deployment	2	2017	1	2020
Global ASNT Inc 1 - IOC	3	2018	3	2018
Global ASNT Inc 1 - Interim Contractor Support	4	2018	3	2020
Global ASNT Inc 1 - FOC	1	2020	1	2020

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 676030 / <i>Global ASNT Inc 2</i>
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COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
676030: <i>Global ASNT Inc 2</i>	-	0.000	4.371	11.188	0.000	11.188	15.322	16.795	5.012	5.101	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

This program, BA 07 PE 0303131F, project 676030, Global ASNT Inc 2 was initially funded in project 676029 (Global ASNT Inc 1) as a new start for FY15. Approved FY15 new start funding of \$1.9M is not yet reflected.

A. Mission Description and Budget Item Justification

Global ASNT replaces inadequate, unsustainable strategic communications equipment at bomber, tanker and reconnaissance Wing Command Posts (WCPs), Nuclear Task Forces, Munitions Support Squadrons (MUNSS), and for Mobile Support Teams (MSTs). Global ASNT is a ground-based system that will provide survivable, secure communication paths to receive Emergency Action Messages (EAMs), Force Management messages, and Force Direction messages and disseminate them to bomber, tanker, and reconnaissance aircrews.

Global ASNT is being fielded in separate capability increments.

Global ASNT Increment 2 delivers a modernized Aircrew Alerting System (AAS) consisting of personal and general alerting equipment, and High Frequency (HF) and Ultra High Frequency (UHF) capabilities. Increment 2 replaces inadequate, unsustainable Electromagnetic Pulse Hardened Dispersal Communication (EHDC) systems and Aircrew Alerting Communications Electromagnetic Pulse (AACE) systems.

B. Accomplishments/Planned Programs (\$ in Millions)

	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Title: Global ASNT Inc 2	0.000	4.371	11.188	0.000	11.188
Description: Pre-Milestone B Activites					
FY 2015 Accomplishments: Transferred from project 676029 (Global ASNT Inc 1)					
FY 2016 Plans: Initiate pre-development and upfront system engineering activities Perform requirements and technology analysis and trade studies Conduct market research and program risk analysis Develop acquisition strategy in preparation for Milestone B					

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Exhibit R-2A, RDT&E Project Justification: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 676030 / <i>Global ASNT Inc 2</i>

B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total
Draft system requirements documentation and validate requirements					
<i>FY 2017 Base Plans:</i> Continue pre-development, system engineering & request for proposal activities in preparation for Milestone B Continue to draft system requirements documentation Develop EMD Phase request for proposal (RFP)					
<i>FY 2017 OCO Plans:</i> N/A					
Accomplishments/Planned Programs Subtotals	0.000	4.371	11.188	0.000	11.188

C. Other Program Funding Summary (\$ in Millions)											
<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To Complete</u>	<u>Total Cost</u>
• OPAF: BA03: Line item # 834210: <i>Global ASNT Inc 2</i>	0.000	0.000	0.000	0.000	0.000	0.000	0.000	12.983	13.217	-	-

Remarks

D. Acquisition Strategy

Global ASNT used a full and open competitive approach to award an EMD contract for Increment 1. Global ASNT will continue to use a competitive incremental approach to fulfill the overall requirements for Increments 2 and 3.

E. Performance Metrics

Please refer to the Performance Base Budget Overview Book for information on how Air Force resources are applied and how those resources are contributing to Air Force performance goals and most importantly, how they contribute to our mission.

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 676030 / <i>Global ASNT Inc 2</i>
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Product Development (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Global ASNT Inc 2 - Pre Milestone B Activities	TBD	Not specified. : TBD	-	0.000		0.000		7.406	Nov 2016	0.000		7.406	Continuing	Continuing	-
Subtotal			-	0.000		0.000		7.406		0.000		7.406	-	-	-

Support (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Global ASNT Inc 2 - MITRE Lab	Various	MITRE : Bedford, MA	-	0.000		0.537	Feb 2016	0.236	Oct 2016	0.000		0.236	Continuing	Continuing	-
Global ASNT Inc 2 - GFE	Various	Various : TBD	-	0.000		0.420	Jun 2016	0.000		0.000		0.000	Continuing	Continuing	-
Subtotal			-	0.000		0.957		0.236		0.000		0.236	-	-	-

Test and Evaluation (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Global ASNT Inc 2 - Test Planning	Various	Various : TBD	-	0.000		0.155	Jul 2016	0.160	Nov 2016	0.000		0.160	Continuing	Continuing	-
Subtotal			-	0.000		0.155		0.160		0.000		0.160	-	-	-

Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Global ASNT Inc 2 - PMA (Eng/Acq Support, Travel)	Various	Various : TBD	-	0.000		1.959	Jan 2016	2.047	Nov 2016	0.000		2.047	Continuing	Continuing	-
Global ASNT Inc 2 - PMA (MITRE)	SS/CPFF	MITRE : Bedford, MA	-	0.000		1.300	Feb 2016	1.339	Oct 2016	0.000		1.339	Continuing	Continuing	-

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2017 Air Force **Date:** February 2016

Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 676030 / <i>Global ASNT Inc 2</i>
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Management Services (\$ in Millions)				FY 2015		FY 2016		FY 2017 Base		FY 2017 OCO		FY 2017 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Subtotal			-	0.000		3.259		3.386		0.000		3.386	-	-	-
Project Cost Totals			-	0.000		4.371		11.188		0.000		11.188	-	-	-

Remarks
 \$1.9M FY15 ATR (New Start) approved in September 2015; funding received in October 2015. \$1.9M allocated to early system engineering activities and program stand-up.

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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force		Date: February 2016
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0303131F / <i>Minimum Essential Emergency Communications Network (MEECN)</i>	Project (Number/Name) 676030 / <i>Global ASNT Inc 2</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Global ASNT Inc 2 Pre-Milestone B Activities	1	2016	3	2018
Global ASNT Inc 2 - Release Request for Proposal	4	2017	4	2017
Global ASNT Inc 2 - Milestone B Decision	3	2018	3	2018
Global ASNT Inc 2 - Contract Award	4	2018	4	2018
Global ASNT Inc 2 - Engineering and Manufacturing Development	4	2018	1	2021
Global ASNT Inc 2 - Preliminary Design Review (PDR)	2	2019	2	2019
Global ASNT Inc 2 - Critical Design Review (CDR)	4	2019	4	2019
Global ASNT Inc 2 - Test	4	2019	1	2021
Global ASNT Inc 2 - Milestone C Decision	1	2021	1	2021
Global ASNT Inc 2 - Production & Deployment	1	2021	4	2021