Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Air Force											Date: February 2015	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 5: *System Development & Demonstration (SDD)*					R-1 Program Element (Number/Name) PE 0307581F / *NextGen JSTARS*							
COST ($ in Millions)	**Prior Years**	**FY 2014**	**FY 2015**	**FY 2016 Base**	**FY 2016 OCO**	**FY 2016 Total**	**FY 2017**	**FY 2018**	**FY 2019**	**FY 2020**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	73.088	44.343	-	44.343	298.521	377.827	192.073	313.959	Continuing	Continuing
650003: *JSTARS Recapitalization*	-	-	73.088	44.343	-	44.343	298.521	377.827	192.073	313.959	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

Note

In FY 2015, PE 0604283F, BMC2 Sensor Development, Project 645363, MP-RTIP, and PE 0207581F, Joint Surveillance/Target Attack Radar System (JSTARS), Project 670003, JSTARS, efforts were transferred to PE 0307581F, NextGen JSTARS, Project 650003, JSTARS Recapitalization (Recap) in order to consolidate efforts and continue risk reduction activities.

A. Mission Description and Budget Item Justification

JSTARS Recap is a manned aircraft replacement for the legacy E-8C that provides decision superiority via tactical Battle Management, Command and Control (BMC2) and Battlespace Awareness (BA) across the full Range of Military Operations (ROMO). Armed with an on-board crew, powerful radar, and robust communications and information systems, it enables theater ground and air commanders to make quick decisions with decisive results during complex and rapidly unfolding operations. It is the only Theater Air Control System (TACS) node with a wide-area ground surveillance sensor, and provides commanders with 'fail forward' distributed control of an assigned area at the edge of the battlefield. Capabilities include near-real-time wide-area surveillance (WAS) and targeting information on wheeled and tracked vehicles, slow-moving rotary and fixed wing aircraft, rotating antennas, jammers, dismount targets (personnel on foot), and stationary ground/surface targets (including maritime). SAR imagery enables both terrain imaging and stationary target location. The system is designed for day and night worldwide deployment in all weather conditions.

JSTARS Recap is the most cost-effective and operationally-effective materiel solution derived from the DoD's Joint Capability Integration and Development System (JCIDS)process, which includes a completed Initial Capability Document (ICD), Analysis of Alternatives (AoA), and draft Capability Development Document (CDD).

JSTARS Recap enhances the warfighter's ability to achieve the joint vision of combat operations by integrating current and mature sub-system technologies onto a commercially available business class jet. It delivers advanced battle management aids and information fusion technologies to enable rapid decisions by automating tracking and addressing time-critical targets for surface and land forces. JSTARS Recap addresses the downward sustainment trends with the aging E-8C fleet and focuses on the warfighter's highlighted mission area gaps.

The JSTARS Recap program consists of multiple efforts (reflected in the R-3), culminating in the integration of four major subsystems. The major subsystems include: BMC2 subsystem; Sensor subsystem; Air Vehicle subsystem; Communications subsystem. The USAF has developed and maintained the system's government reference architecture which adheres to an Open Systems Architecture (OSA) and shapes how industry will plan their integration activities towards this materiel solution. The USAF has allocated resources to support internal System Engineering and Integration activities aimed at bolstering competition, improving affordability, and

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reducing overall weapons system life-cycle costs. To instill affordability and strategic agility the government is pursuing an OSA. The net result of this technical/business approach is to ensure the design of the system is adaptable/flexible to meet changing threats, which includes a responsive industrial base.

This program is in Budget Activity 05, System Development and Demonstration (SDD) because it is conducting engineering and manufacturing development (EMD) tasks aimed at meeting validated requirements prior to full-rate production. MDD acquisition decisions are expected to happen in 2QFY15, allowing the program to enter the TMRR phase and then an expected MS B decision in 2017.

Activities also include studies, analyses, and risk reduction activities addressing all subsystems to support both current program planning/execution and future program planning.

B. Program Change Summary ($ in Millions)	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	-	73.088	334.137	-	334.137
Current President's Budget	-	73.088	44.343	-	44.343
Total Adjustments	-	-	-289.794	-	-289.794
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	-289.794	-	-289.794

Change Summary Explanation

The current President's Budget decreased FY16 by $289.794M because the draft acquisition strategy was revised to put more emphasis on the upfront TMRR phase, addressing top integration risks. As a result, the TMRR phase was extended to 14 months, allowing the government adequate time to validate industry's system-level design maturity/readiness.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Technology Maturation and Risk Reduction (TMRR)	-	73.088	44.343
Description: The TMRR effort leverages DoD's prior investments and Industry's Internal Research and Development (IR&D) investments to conduct technical reviews and subsystem prototype demonstrations. The goal of TMRR is to validate industry's system-level design readiness/maturity with respect to top integration risks and use of OSA and Open Mission System (OMS) standards. The TMRR phase better informs the government about the integration complexity and associated lifecycle risks			

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
involved with different system-level design solutions. Activities also include studies, analyses, and risk reduction activities addressing all subsystems to support current program planning/execution and future program planning. ***FY 2015 Plans:*** Pending a Defense Acquisition Board (DAB) decision, contracts will be awarded in FY15, tasking industry to conduct system-level technical reviews. FY15 activities include, but are not limited to, multiple system-level System Requirements Reviews (SRRs), program planning, program documentation, and test planning. Additional program office/independent studies and analyses will be done to better inform the government about integration risks, use of OSA/OMS, and subsystem performance, continuing the business goal of "owning the technical baseline." ***FY 2016 Plans:*** The Industry Teams awarded contracts in FY15 will complete their system level designs, conduct multiple system-level technical reviews (to inlcude System Functional Reviews (SFRs) and Preliminary Design Reviews (PDRs)), and conduct subsystem prototype demonstrations. Additional FY16 activities may include but are not limited to program planning for EMD, defining test objectives/data analysis requirements, defining long lead test assets/ranges/instrumentation, setting up the test management infrastructure required to execute the EMD test program, and studies/analyses activities addressing subsystems to support current program planning/ execution and future program planning.			
Accomplishments/Planned Programs Subtotals	-	73.088	44.343

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• APAF: BA05: Line Item # E0800: *JSTARS Recap Production*	-	-	-	-	-	-	0.214	268.277	537.000	4,039.259	4,844.750

Remarks

E. Acquisition Strategy

The Acquisition Strategy intends to competitively acquire a system comprised of a business-class commercial derivative aircraft with integrated BMC2, radar, and communication subsystems. The intent is to integrate available systems and mature technologies using OSA to minimize the risks for the EMD phase and lower lifecycle costs. The program plans to enter the Defense Acquisition System at MDD and conduct a TMRR phase. Following TMRR, there will be a separate full and open competition for EMD. The implementation of OSA and OMS are fundamental to the business goals of the program. The JSTARS Recap program is a pre-Major Defense Acquisition Program (MDAP) that will conduct a Milestone A in 3QFY15 and Milestone B in 4QFY17. EMD is planned for 4QFY17 to achieve system affordability goals

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and support the warfighter's Initial Operational Capability (IOC) date. The program will determine if the use of incentives for the EMD contract are appropriate for both the delivery of test aircraft and modified/certified test aircraft. Post Milestone C, the program will follow-up with a Low Rate Initial Production (LRIP) contract award, procuring 3 aircraft aimed at achieving IOC 4QFY23. The remaining 12 aircraft will be procured in full rate production (FRP) to support a Full Operational Capability (FOC) in 4QFY26.

F. 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.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	R-1 Program Element (Number/Name) PE 0307581F / *NextGen JSTARS*	Project (Number/Name) 650003 / *JSTARS Recapitalization*

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TMRR 1	C/FFP	TBD : TBD,	-	-		17.695	Jun 2015	7.193	Jun 2015	-		7.193	-	24.888	24.888
TMRR 2	C/FFP	TBD : TBD,	-	-		17.695	Jun 2015	7.193	Jun 2015	-		7.193	-	24.888	24.888
TMRR 3	C/FFP	TBD : TBD,	-	-		17.695	Jun 2015	7.193	Jun 2015	-		7.193	-	24.888	24.888
		Subtotal	-	-		53.085		21.579		-		21.579	-	74.664	74.664

Remarks

TMRR contracts will be awarded in June 2015 and will be incrementally funded in FY15 and FY16.

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	-	-		-		-		-		-	-	-	-

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test Activities	Various	Various : Various,	-	-		-		2.054	Oct 2015	-		2.054	Continuing	Continuing	3.233
		Subtotal	-	-		-		2.054		-		2.054	-	-	3.233

Remarks

Test Activities in FY16 will include, but are not limited to, detailed test planning and provisioning activities to include the writing of a detailed test plan and safety plan, setting up the test execution data and documentation management infrastructure, developing data analysis tools, provisioning for test assets, instrumentation and ranges. These activities will be done utilizing the DoD Major Ranges & Test Facilities which include, but are not limited to, the AFTC (412TW and 96TW), Joint Interoperability Test Center (JITC), the 346th TS, Live Fire Test Organizations (AFLCMC/EZJA and 96th TG Det 1), and Operational Test Agencies (AFOTEC).

Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Air Force		Date: February 2015
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Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
TMRR	Various	Various : Bedford, MA	-	-		20.003	Oct 2014	20.710	Oct 2015	-		20.710	Continuing	Continuing	54.948
		Subtotal	-	-		20.003		20.710		-		20.710	-	-	54.948

Remarks

High percentage of management services is a result of FFRDC and other contractor support required to conduct studies and analysis to better inform the government about the integration risks, use of OSA/OMS, and subsystem performance towards "owning the technical baseline". Specific activities include modeling and analysis to better understand/ anticipate performance, establishment of SILs for development/integration, and OMS compliance testing. In addition, contractor support is necessary for all the required acquisition documentation.

	Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	-		73.088		44.343		-		44.343	-	-	132.845

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	**R-1 Program Element (Number/Name)** PE 0307581F / *NextGen JSTARS*	**Project (Number/Name)** 650003 / *JSTARS Recapitalization*

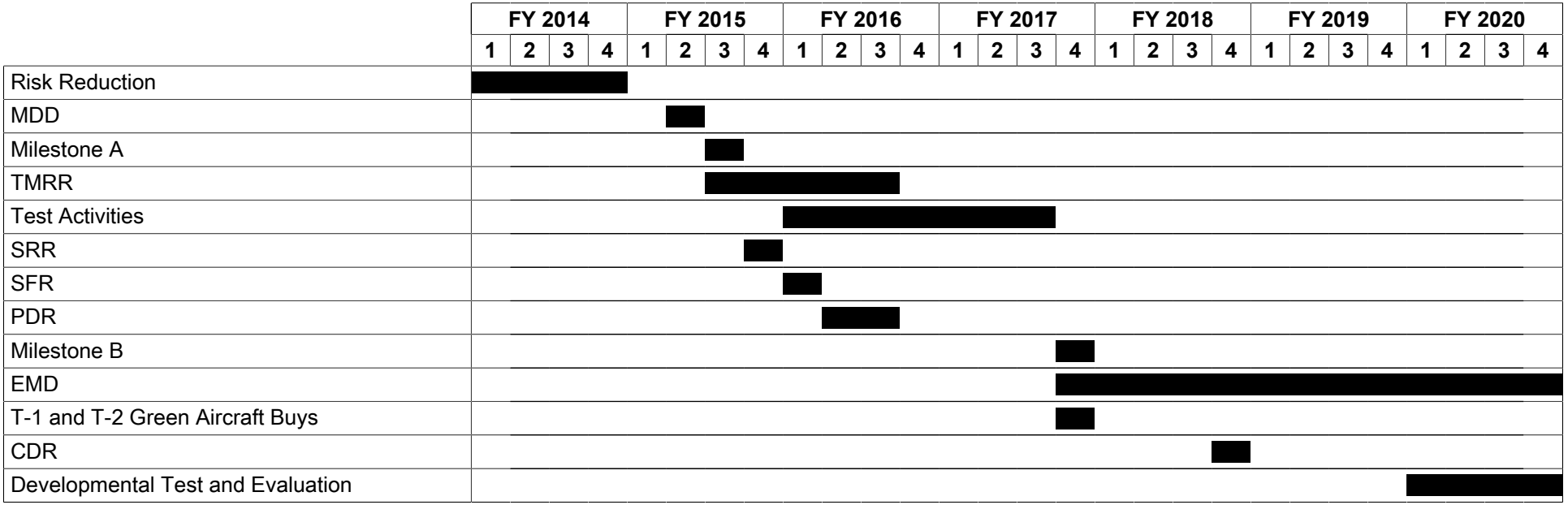

Exhibit R-4A, RDT&E Schedule Details: PB 2016 Air Force		Date: February 2015
Appropriation/Budget Activity 3600 / 5	**R-1 Program Element (Number/Name)** PE 0307581F / *NextGen JSTARS*	**Project (Number/Name)** 650003 / *JSTARS Recapitalization*

Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
Risk Reduction	1	2014	4	2014
MDD	2	2015	2	2015
Milestone A	3	2015	3	2015
TMRR	3	2015	3	2016
Test Activities	1	2016	3	2017
SRR	4	2015	4	2015
SFR	1	2016	1	2016
PDR	2	2016	3	2016
Milestone B	4	2017	4	2017
EMD	4	2017	4	2020
T-1 and T-2 Green Aircraft Buys	4	2017	4	2017
CDR	4	2018	4	2018
Developmental Test and Evaluation	1	2020	4	2020