Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force											Date: March 2014	
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 2013**	**FY 2014**	**FY 2015 Base**	**FY 2015 OCO #**	**FY 2015 Total**	**FY 2016**	**FY 2017**	**FY 2018**	**FY 2019**	**Cost To Complete**	**Total Cost**
Total Program Element	-	-	-	73.088	-	73.088	334.137	640.589	536.459	376.198	Continuing	Continuing
650003: *JSTARS Recapitalization*	-	-	-	73.088	-	73.088	334.137	640.589	536.459	376.198	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

The FY 2015 OCO Request will be submitted at a later date.

Note

In FY 2015, Project 650003, JSTARS Recapitalization efforts were transferred from PE 0604283F, BMC2 Sensor Development, Project 645363, MP-RTIP, in order to consolidate efforts and continue development of the JSTARs Recap.

In FY 2015, Project 650003, JSTARS Recapitalization efforts were transferred from PE 0207581F, Joint Surveillance/Target Attack Radar System (JSTARS), Project 670003, JSTARS, in order to consolidate efforts and continue development of the JSTARs Recap.

A. Mission Description and Budget Item Justification

The Joint Surveillance Target Attack Radar System (JSTARS) Recapitalization (Recap) will provide a unique blend of Battle Management Command and Control (BMC2) and Intelligence, Surveillance, and Reconnaissance (ISR) that enables the central tenant of Air Forces doctrine "Centralized Control and Decentralized Execution". Air Battle Managers onboard the JSTARS use its wide area ground surveillance radar to build situational awareness and identify targets which are passed to strike assets or crossed cued with ISR platforms. The capability to perform this dual mission at the tactical edge both reduces the time to execute the kill chain and improves ISR collections across the range of military options.

This program element enhances the warfighter's ability to achieve the joint vision of combat operations. It develops advanced battle management aids and information fusion technologies to enable rapid decisions by automating tracking and addressing time-critical targets. Concept exploration, program definition/risk reduction efforts, and studies support continuous improvements in development of BMC2 capabilities, network centric operational capabilities, and interoperability with joint service, allied, and coalition systems.

Currently this program element is comprised of the JSTARS Recap Program to include: (1) BMC2 System; (2) Sensor Systems; (3) Air Vehicle & Avionics Systems; (4) Data, Voice, & Advanced Communications Systems; and (5) Systems Engineering & Integration (SE&I). It may also include the furtherance of other related activities to include, but not be limited to, Open System Architecture (OSA) development and/or refinement for sensor systems and BMC2.

Activities also include studies and analyses to support both current program planning/execution and future program planning.

JSTARS Recap:

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The JSTARS Recap program was initiated to satisfy the JSTARS Mission Area capability gaps and life-cycle affordability challenges as defined in the Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI); JSTARS Mission Area Analysis of Alternative (AoA) and the SAR/MTI, BMC2 Initial Capabilities Document (ICD). The JSTARS Recap program consists of multiple efforts for the development and integration of all sub-systems necessary to satisfy the requirements documented in the ICD, AOA and, upon completion, the Capability Development Document (CDD). The efforts include, but are not limited to: BMC2 System; Sensor Systems; Air Vehicle & Avionics Systems; Data, Voice & Advanced Communications Systems; SE&I; as well as related OSA development or refinement activities to improve AF weapon system life-cycle affordability.

This program is in Budget Activity 5, System Development and Demonstration (SDD) because it is conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production. MDD is expected in FY14 with a MS B decision in FY16.

B. Program Change Summary ($ in Millions)	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total
Previous President's Budget	-	-	-	-	-
Current President's Budget	-	-	73.088	-	73.088
Total Adjustments	-	-	73.088	-	73.088
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-	73.088	-	73.088

Change Summary Explanation

PE 0307581F was established in the FY15 PB to continue development for JSTARS Recapitalization; previously, JSTARS Recapitalization activities were funded under PE 0604283F (Congressional add in FY13) and PE 0207581F.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Title: BMC2 System	-	-	22.636
Description: The BMC2 System development effort builds upon a broad body of work in OSA by evaluating and applying lessons learned from system designs across many areas such as Air Operations Centers (AOC), AWACS Block 40/45, and the Open Mission Systems (OMS) Working Group. Using an evolutionary approach made possible by an OSA design that firmly defines interfaces and messaging standards, the BMC2 System will provide an on-board BMC2 solution that meets the Joint/Air Force Requirements as defined in the AoA, ICD, and CDD, thereby enabling rapid technology insertion based on mission need and			

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
funds availability. The BMC2 System development effort will also inform the AF OSA concept and frameworks with regard to applicability and efficacy of on-board BMC2 mission systems. ***FY 2015 Plans:*** Will further define a OSA reference architecture. Will perform demonstration activities, requirements analysis, system definition, and selection criteria definition.			
Title: Sensor Systems ***Description:*** The Sensor Systems development effort intends to leverage the government owned, platform-independent, radar OSA enterprise specification to develop a modern radar that meets the Joint/Air Force Requirements as defined in the AoA, ICD, and CDD. JSTARS Recap is the first planned Major Defense Acquisition Program (MDAP) to leverage this body of work. JSTARS Recap also takes into considerations lessons learned from the Dismount Detection Radar (DDR) Quick Reaction Capability (QRC) program, which was a pathfinder for OSA radar in a small, pod configured for surface surveillance missions. The JSTARS Recap Sensor Systems development effort will not only satisfy the requirements of the JSTARS Recap, but also intends to provide critical feedback to an OSA radar concept and framework with regard to applicability and efficacy in a wide area surface surveillance mission. Other sensor systems may include, but are not limited to, Electro-Optical/Infrared (EO/IR) and multi/hyper-spectral. ***FY 2015 Plans:*** Will further define a OSA reference architecture. Will perform demonstration activities, requirements analysis, system definition, and selection criteria definition.	-	-	28.699
Title: Air Vehicle and Avionics Systems ***Description:*** The Air Vehicle & Avionics System effort will evaluate available air vehicles and select one based on its ability to meet the Joint/Air Force Requirements as defined in the AoA, ICD and CDD. It will deliver greater unrefueled range, increased fuel efficiency, higher operational ceiling, and possess the ability to operate from shorter runways than the current platform. All of these attributes provide for operational capabilities that meet the requirements of the mission profiles considered in the AoA. Of note is the fact that multiple Air Vehicle manufacturers have standard design kits that modify commercially available air frames to meet anticipated JSTARS Recap fuselage and power requirements, thereby reducing development time, cost and risk. ***FY 2015 Plans:*** Will conduct cosite analysis (analysis of antenna-to-antenna coupled electromagnetic interference); size, weight, and power cooling (SWAP-C)analysis; and integration analysis. Will perform requirements analysis, system definition, and selection criteria definition.	-	-	10.200
Title: Data, Voice, and Advanced Communications Systems	-	-	1.302

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2013	FY 2014	FY 2015
Description: The Data, Voice, & Advanced Communications Systems effort will leverage existing communications systems to integrate with the air vehicle and BMC2 System to create a capability that meets the Joint/Air Force Requirements as defined in the AoA, ICD, and CDD. The capability will provide Beyond Line of Sight (BLOS) and Line of Sight (LOS) Internet Protocol (IP)-based data transport to theater C2 and ISR nodes with reachback through a Global Information Grid entry point. Communications systems will include, but are not limited to air to ground Common Data Link (CDL), Link-16, Intelligence Broadcast Service (IBS), Blue Force Tracker (BFT), and voice networks (UHF, VHF, HF). Additional potential communications capabilities may include, but are not limited to Joint Arial Layer Network (JALN) waveforms, Intra-Flight Data Link (IFDL), Multi-function Advanced Data Link (MADL), 5th to 4th Generation Data Link translation, Mobile User Objective System (MUOS), Integrated Waveform (IW), and Tactical Targeting Network Technology (TTNT). ***FY 2015 Plans:*** Will conduct risk reduction efforts to leverage existing communication capabilities as well as assess new and advanced communication capabilities to meet requirements as defined in the program CDD once approved.			
Title: System Engineering and Integration ***Description:*** The SE&I effort will provide actionable analysis, deliverables, and recommendations leading to the efficient execution and integration of the complete weapon system. This effort supports the creation and maintenance of products that drive the successful use of engineering practices and complex system integration such as: Program Management Plans, Integrated Master Plans, Integrated Master Schedules, and System Engineering Plans. Included in the key activities are: Requirements Management/Trade Development, Interface Control Management, Architecture Management, Risk/Opportunity/ Issue Management, Technical Baseline Management, and Information Assurance Management. ***FY 2015 Plans:*** Will conduct key program planning activities including but not limited to the definition and production of key program execution planning documents and finalization of system interface definitions.	-	-	10.251
Accomplishments/Planned Programs Subtotals	-	-	73.088

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• PE 0604283F, BPAC 645363: *JSTARS Recap Risk Reduction*	8.805	-	-	-	-	-	-	-	-	-	-

Exhibit R-2, RDT&E Budget Item Justification: PB 2015 Air Force	Date: March 2014
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D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2013	FY 2014	FY 2015 Base	FY 2015 OCO	FY 2015 Total	FY 2016	FY 2017	FY 2018	FY 2019	Cost To Complete	Total Cost
• APAF: BA05: Line Item # E0800: *JSTARS Recap Production*	-	-	-	-	-	-	-	111.214	272.277	3,925.464	4,309.000

Remarks

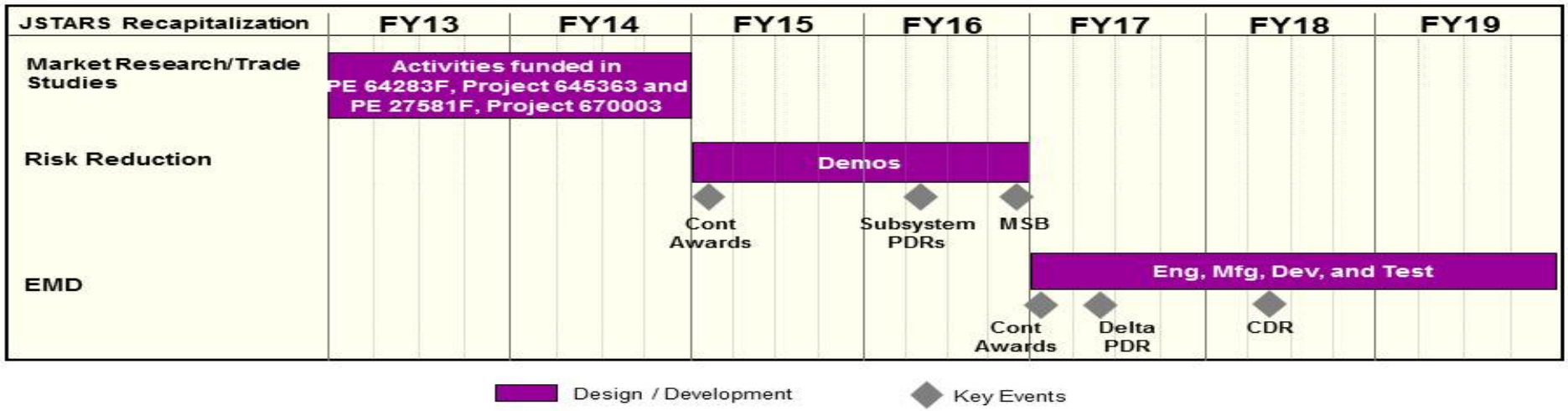
E. Acquisition Strategy

The JSTARS Recap program is a pre-Major Defense Acquisition Program (MDAP) with a planned Material Development Decision (MDD) in FY14. The acquisition strategy is in development. The program intends to make use of high Technology Readiness Level (TRL) components to reduce development time, cost and risk. The Acquisition Strategy will be designed to enable maximum competition for each major sub-system through the EMD phase. Each major sub-system has a capable industry base large enough to make competition an effective tool in achieving the goal of system affordability through development, procurement and sustainment. The program will also leverage ongoing DoD and industry work on Open System Architectures and standard inferfaces to enhance competition and ease of upgrades throughout the program life cycle.

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-4, RDT&E Schedule Profile: PB 2015 Air Force		Date: March 2014
Appropriation/Budget Activity 3600 / 5	**R-1 Program Element (Number/Name)** PE 0307581F / *NextGen JSTARS*	**Project (Number/Name)** 650003 / *JSTARS Recapitalization*



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