Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Air Force										DATE: February 2012	
APPROPRIATION/BUDGET ACTIVITY 3600: *Research, Development, Test & Evaluation, Air Force* BA 7: *Operational Systems Development*				R-1 ITEM NOMENCLATURE PE 0207444F: *Tactical Air Control Party Modernization*							
COST ($ in Millions)	**FY 2011**	**FY 2012**	**FY 2013 Base**	**FY 2013 OCO**	**FY 2013 Total**	**FY 2014**	**FY 2015**	**FY 2016**	**FY 2017**	**Cost To Complete**	**Total Cost**
Total Program Element	-	9.515	16.226	-	16.226	10.511	10.421	10.697	10.832	Continuing	Continuing
676013: *Equipment Modernizaton*	-	9.515	16.226	-	16.226	10.511	10.421	10.697	10.832	Continuing	Continuing
Quantity of RDT&E Articles	0	0	0	0	0	0	0	0	0		

Note

In FY2012, Project 676013, Equipment Modernization, efforts were transferred from PE 0207423F, Advanced Communications Systems, Project 674934, TACP-M, in order to better identify and delineate efforts for Tactical Air Control Party Modernization.

"The Cost to Complete and Total Cost for MDAP projects in this program element are documented in the R3. The Cost to Complete and Total Cost on the R2 are entered as "Continuing" and not reflective of the total cost for MDAP projects since the R2 does not account for prior years funding."

A. Mission Description and Budget Item Justification

The Tactical Air Control Party-Modernization (TACP-M) program acquires capabilities for TACP operations. TACP members deploy with Army maneuver units and provide a Command and Control (C2) link for Close Air Support (CAS), airlift, and Air Force surveillance/reconnaissance missions. TACP's are equipped with various targeting and communication equipment which interfaces with ground maneuver forces, CAS aircraft, Joint Fires assets, C2 aircraft/agencies, and Intelligence, Surveillance, and Reconnaissance (ISR) platforms/agencies. Throughout the performance of their duties, TACP's detect targets and compute precision coordinates to aircraft to ensure pilots track the correct target in the employment of GPS aided weapons. The actions performed by TACPs not only shorten the kill chain, but also reduces the potential for fratricide and collateral damage in civilian-occupied areas.

The TACP-M program provides equipment modernization capabilities to TACP, Air Support Operations Centers (ASOCs), and Tactical Operations Center (TOCs) personnel. The program supports the Overseas Contingency Operations (OCO) and significantly increased the mission effectiveness of the TACPs and ASOCs during Operation Enduring Freedom and Operation New Dawn. The TACP-M program continues to be instrumental in providing ground communications for TACPs during federal emergency relief operations and Homeland Defense initiatives.

The purpose of the TACP-M program is to reduce reliance on voice transmission and replace analog equipment with the latest digital, data link and streaming video (e.g. Streaming Video Receiver) technology. Upgraded digital communications enable machine-to-machine interface between TACPs and Close Air Support (CAS) aircraft, Army units and other TACP units. Machine-to-machine communication provides reliable, high speed digital communications, ultimately supports joint and multinational interoperability, improves battlefield Situational Awareness (SA), increases targeting accuracy, reduces kill chain decision time, improves data flows/ information exchange, and reduces potential fratricide. TACPs use Software Communication Architecture (SCA)-certified, Joint Tactical Radio System (JTRS), software programmable radios, and ancillary components for reliable voice & data UHF SATCOM and LOS UHF /VHF communications. TACP-M is divided into three segments: Software, Dismounted and Mounted. The Mounted segement is further divided into Fixed and Mobile elements.

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The Software segment utilizes a common Close Air Support System Software(CASS) baseline across all TACP systems. The CASS software major thrust provides cross-service interoperability with numerous aircraft (A-10, F-16, F/A-18, etc), helicopters, unmanned air vehicles (Predator), land and naval artillery, network enabled weapons, command & control nodes, and communications systems utilizing numerous messaging systems (such as Variable Message Format (VMF), Situational Awareness Data Link (SADL), and Link-16 to provide maximum flexibility and capability to the TACP for the execution of joint fires support mission. FY13 funding associated with the software segement will support the CASS major thrust.

The Dismounted segment consists of integrated, man-portable systems procured via streamlined acquisition using non-developmental and off-the-shelf (OTS) components which is carried by dismounted airman. These include laser rangefinders, thermal imagers, laser designators, man-pack and handheld radios, ruggedized tactical computers, streaming video receivers, and other required equipment. The dismounted segment also incorporates the development of an advanced Target Location Designation System (TLDS) which is also being managed under the Army-led Joint Effects Targeting System (JETS) program. TLDS will combine the capability of a laser marker, designator and thermal imagers into a small, lightweight system. FY13 funding will continue to support this major thrust and focus on the development of TLDS within the JETS program.

The mounted (Fixed) segment integrates computer and communications equipment into re-locatable vehicle, rack or transit case mounted systems for use in Tactical Operations Center (TOC) or Air Support Operations Center (ASOC) locations. The TACP mounted (Fixed) segment includes the High Mobility, Multi-Wheeled Vehicle (HMMWV)-mounted Air Support Operations Center (ASOC) Gateway, Gateway Lite, and the Dismounted Communications Package (DCP). The TACP Mounted (Mobile) segment integrates similar equipment into mobile tactical vehicles employed by the Army and provides on-the-move tactical voice and data capability.

Prior to FY12, the major thrust associated with the mounted segment of TACP-M was the Vehicular Communication System (VCS). This thrust focused on placing a TACP equipment suite into a HMMWV. In September 2010, the AF decided not to pursue production of the large HMMWV-Mounted VCS system due to survivability issues related to the current theaters of operations, and cancelled the program in early 2011. However, the requirement capability to conduct robust communications in both tactical operations center locations and on-the-move in tactical vehicles remains. The Air Force is now engaged in the JCIDS process and focused on a Capability Development Document to address these capability gaps. FY13 the VCS thrust is renamed Moblie Communication Capability (MCC), and funding will be used to conduct studies and risk reduction activities for TACP mounted communications systems for fixed and vehicular platforms.

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

This program is in Budget Activity 7, 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 anticipated production funding in the current or subsequent fiscal year.

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B. Program Change Summary ($ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total
Previous President's Budget	-	15.978	16.194	-	16.194
Current President's Budget	-	9.515	16.226	-	16.226
Total Adjustments	-	-6.463	0.032	-	0.032
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-6.300			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Other Adjustments	-	-0.163	0.032	-	0.032

Change Summary Explanation

FY12 Congressional Directed Reduction: $4.3M for VCS program termination and restructure, $2.0M for JETS contract delays.

FY13 funding decrease is due to higher Department of Defense priorities.

C. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
Title: Close Air Support System (CASS)	-	4.887	9.127

Description: CASS Software - Upgrade TACP digital communications mission software to enable machine-to-machine (MTM) interfaces between TACPs and multiple systems (e.g. CAS aircraft, Command and Control (C2) nodes, etc.) Develop new capabilities to satisfy documented requirements to improve battlefield Situational Awareness, increase targeting accuracy, reduce the kill chain, and improve data flow/information exchange and reduce fratricide.

FY 2011 Accomplishments:

N/A

FY 2012 Plans:

Continue to develop new MTM interfaces with weapons (e.g. Small Diameter Bomb II), new interfaces with Joint Air Ground Integration Cell, C2 Nodes, indirect fires integration, and aircraft across the USAF, Joint (e.g. F-35) and Coalition environment, and satisfy validated warfighter requirements. This effort also continues to support the Joint Digital Aided Close Air Support (DACAS) Block 1 initiative which will provide a common CAS terminal execution phase capability across service and coalition

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
forces. CAS software will also be focused on developing a simplified user interface which is user tailorable to specific TACP missions. This effort will include contractor support, engineering support, test and evaluation. ***FY 2013 Plans:*** Will continue to develop new MTM interfaces with weapons (e.g. Small Diameter Bomb II), new interfaces with Joint Air Ground Integration Cell, C2 Nodes, indirect fires integration, and aircraft across the USAF, Joint (e.g. F-35) and Coalition environment, and satisfy validated warfighter requirements. This effort also continues to support the Joint Digital Aided Close Air Support (DACAS) Block 1 initiative which will provide a common CAS terminal execution phase capability across service and coalition forces. CAS software will also be focused on developing a simplified user interface which is user tailorable to specific TACP missions. This effort will include contractor support, engineering support, test and evaluation.			
Title: Joint Effects Targeting System (JETS) ***Description:*** JETS is an Army-led program to develop, integrate, and test an integrated CAS targeting system that is smaller, lighter, and more accurate than current systems. JETS consists of two sub-systems: the Target Locations and Designation System (TDLS) that provides target acquisition, high-accuracy target location and laser designation. JETS will be incrementally developed. ***FY 2011 Accomplishments:*** N/A ***FY 2012 Plans:*** AF funds continue to support the development of a prototype TLDS system through the JETS program office. The primary TLDS capability requirements are: provide a reduction in hardware weight from current similar systems, provide a highly accurate target location capability. This effort includes contractor support, engineering support, and test and evaluation. ***FY 2013 Plans:*** AF funds will continue to support the development of a prototype TLDS system through the JETS program office. The primary TLDS capability requirements are: provide a reduction in hardware weight from current similar systems, provide a highly accurate target location capability. This effort includes contractor support, engineering support, and test and evaluation.	-	4.128	6.099
Title: Mobile Communication Capability ***Description:*** Renamed from Vehicular Communication System (VCS), Mobile Communication Capability (MCC) - Design, develop, fabricate, integrate, test, provide associated documentation (e.g. technical manuals) in support of delivering a digital multiple-channel, mobile communication system to replace the aging analog GRC-206 communications pallet. ***FY 2011 Accomplishments:***	-	0.500	1.000

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C. Accomplishments/Planned Programs ($ in Millions)	FY 2011	FY 2012	FY 2013
N/A ***FY 2012 Plans:*** After VCS HMMWV cancellation in FY11, Tactical Air Control Party-Modernization RDT&E efforts are focusing studies and analyses on developing Joint Capabilities Integration and Development System (JCIDS) documentation in support of a long term replacement for the aging GRC-206 communications pallet and other TACP systems. ***FY 2013 Plans:*** Will continue to perform studies and analyses to develop Tactical Air Control Party-Modernization (TACP-M) Joint Capabilities Integration and Development System (JCIDS) documentation in support of a long term replacement for the aging GRC-206 communications pallet and other TACP systems.			
Accomplishments/Planned Programs Subtotals	-	9.515	16.226

D. Other Program Funding Summary ($ in Millions)

Line Item	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
• OPAF, PE 0207423F, Tactical C-E ...: *Tactical C-E Equipment*	170.673	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• OPAF, PE 0207444F, Tactical C-E ...: *Tactical C-E Equipment*	0.000	53.839	35.304	0.000	35.304	33.329	30.001	25.582	25.925	Continuing	Continuing

E. Acquisition Strategy

TACP-M is executing an incremental development for the TACP CASS software. TACP CASS software systems engineering, design, integration, and fielding support is being provided under a cost plus fixed fee contract. JETS is an Army-managed joint interest development program the Air Force will continue to support.

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 2013 Air Force		DATE: February 2012
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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Air Force		DATE: February 2012
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Schedule Details

	Start		End	
Events	**Quarter**	**Year**	**Quarter**	**Year**
JCIDS Documentation	2	2011	4	2013
Tactical Vehicle Capability	1	2014	4	2017
Close Air Support System (CASS) v1.4.2	1	2011	1	2012
Close Air Support System (CASS) v1.4.4	1	2011	4	2012
Interim Contractor Support (ICS)	1	2013	4	2014
Close Air Support System (CASS) v1.4.5	2	2013	4	2016
Close Air Support System (CASS) v1.4.6	1	2015	4	2017
Joint Effects Targeting Systems	1	2011	4	2013