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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 0207431F / <i>Combat Air Intelligence System Activities</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	-	7.291	6.793	10.911	0.000	10.911	10.552	10.882	11.070	11.269	Continuing	Continuing
675307: <i>TARGETING ENTERPRISE RESEARCH</i>	-	5.585	5.050	6.263	0.000	6.263	5.839	5.948	6.049	6.157	Continuing	Continuing
675309: <i>GEO Info & Serv Software</i>	-	1.706	1.743	4.648	0.000	4.648	4.713	4.934	5.021	5.112	Continuing	Continuing

A. Mission Description and Budget Item Justification

The mission of Combat Air Intelligence Systems (CAIS) is to process, analyze, and disseminate intelligence for air component and unit operations worldwide by providing key intelligence infrastructure and production capabilities for the supported and supporting forces with true backbone type of intelligence support for air operations and air support to joint operations. CAIS is focused on providing the intelligence infrastructure and funding to Air Force Major Commands, Intelligence, Cyber, and Space Squadrons, Field Operating Agencies, and subordinate units.

This program is in Budget Activity 7, Operational System Development because this budget activity includes development efforts to upgrade and integrate systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>
Previous President's Budget	7.891	7.793	11.260	0.000	11.260
Current President's Budget	7.291	6.793	10.911	0.000	10.911
Total Adjustments	-0.600	-1.000	-0.349	0.000	-0.349
• Congressional General Reductions	0.000	0.000			
• Congressional Directed Reductions	0.000	-1.000			
• Congressional Rescissions	0.000	0.000			
• Congressional Adds	0.000	0.000			
• Congressional Directed Transfers	0.000	0.000			
• Reprogrammings	-0.600	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	-0.349	0.000	-0.349

Change Summary Explanation

FY15: Funds reprogrammed to support emerging CALDERA EVENT technology

FY16: Congressional reduction for forward financing

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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 0207431F / <i>Combat Air Intelligence System Activities</i>				Project (Number/Name) 675307 / <i>TARGETING ENTERPRISE RESEARCH</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
675307: <i>TARGETING ENTERPRISE RESEARCH</i>	-	5.585	5.050	6.263	0.000	6.263	5.839	5.948	6.049	6.157	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Provides support to personnel utilizing Target Development, Planning, and Execution applications; Unit Level Intelligence; Tactical Intelligence Applications; and direct support to national, combatant command, and Air Force intelligence missions.

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

	FY 2015	FY 2016	FY 2017
<p>Title: Targeting Enterprise Research</p> <p>Description: Continue to conduct Targeting Enterprise research and advancement for projects such as Information for Operational and Tactical Analysis (IOTA), Global Command and Control System Integrated Imagery and Intelligence (GCCS-I3), Intelligence, Surveillance and Reconnaissance (ISR) Strategy-to-Task Assessment of Kill-chain Effectiveness (STAKE), and Imagery Analyst (IA) Pioneer Electronic Light Table (ELT), to include emerging technology (Target System Analysis, 4D visualization, etc.) the System Architect and Integration Facilitator (SAIF) effort.</p> <p>FY 2015 Accomplishments: Enhanced current analysis capabilities with improved applications and services.</p> <p>FY 2016 Plans: Continue efforts to address operator desired changes and improve/increase interoperability of applications. Migrate and consolidate targeting capabilities into one portfolio under the Targeting and Geospatial Intelligence (T&G) Program Management Office (PMO).</p> <p>FY 2017 Plans: Continue to migrate and consolidate targeting capabilities into one portfolio under the T&G PMO. The standing up of the System Architect and Integration Facilitator (SAIF) - capability to facilitate agile development for new tools and applications.</p>	4.565	2.320	5.394
<p>Title: Joint Targeting Toolbox (JTT)</p> <p>Description: Develop full-spectrum mission areas for Joint Targeting Toolbox (JTT) user interface and data structures.</p> <p>FY 2015 Accomplishments:</p>	0.912	2.030	0.156

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2015	FY 2016	FY 2017
<p>Completed development of enhanced target lists and folders for kinetic and non-kinetic targeting mission areas, to include importing data from all National Geospatial-Intelligence Agency (NGA) certified point mensuration applications, targeting of critical elements, and JTT workflow enhancement.</p> <p>FY 2016 Plans: Modernize and improve JTT interoperability and data exchange with other applications, and incorporate new targeting capabilities into those applications including the overall Targeting Enterprise. Build in new capabilities (mass weaponeering deletion, target graphic association to specific JDPI, creation of collateral damage and sensitive target list, ability to select and delete objectives from multiple targets, ability to add justification remarks to the Target List, etc).</p> <p>FY 2017 Plans: Continue efforts to Modernize and improve JTT interoperability and data exchange with other applications, and incorporate new targeting capabilities into those applications including the overall Targeting Enterprise. Migrate JTT to a modular format that is conducive with the Global Command & Control System – Joint (GCCS-J) architecture.</p>				
<p>Title: Common Geopositioning Services (CGS)</p> <p>Description: Upgrade Common Geopositioning Services (CGS)</p> <p>FY 2015 Accomplishments: Continued to transition to new 3D and stereo display systems will begin in FY15 and continue through FY16. Delivered CGS version 2.3.6 for test integration into the Targeting Application Workstation (TAW), addressing highest Air Combat Command (ACC) priority change requests and provide a new measurement capability for images.</p> <p>FY 2016 Plans: Continue to address highest Air Combat Command (ACC) priority change requests: to transition to new 3D stereo display systems; and provide a new measurement capability for images. Another CGS release (2.3.7) will be planned to make CGS Web a deployed capability. Efforts to address operator concerns, issues, and desired changes will also be continued. CGS 2.3.7 will be developed and tested with imagery in the new NSGPDD format and new tactical ISR sensor models.</p> <p>FY 2017 Plans: Transition CGS Web and continue NGA development of candidate capabilities (CGS Web, web-based stereo viewing capability, merging Geographic Information System (GIS) with CGS Web; integration of data sources for multiple platforms. All Navy installations, afloat and ashore, will be updated to CGS 2.3.7 and current NGA-provided iStore configurations as legacy formats for NTM are discontinued. This technical refresh will be accomplished by the Distributed Common Ground System - Navy (DCGS-</p>		0.108	0.700	0.713

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B. Accomplishments/Planned Programs (\$ in Millions)	FY 2015	FY 2016	FY 2017
N) through software and hardware changes to the Increment 1, Block 1 and 2, installations maintained by SPAWAR (PMW-120). CGS 2.3.7 will be fielded with the IA Pioneer ELT in both Navy and Air Force installations.			
Accomplishments/Planned Programs Subtotals	5.585	5.050	6.263

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
• OPAF: BA03: Line Item #832070: <i>Intelligence Comm Equipment</i>	5.110	3.894	6.294	0.000	6.294	6.534	6.273	4.384	4.464	Continuing	Continuing

Remarks
Combat Air Intelligence System (CAIS) procurement funds.

D. Acquisition Strategy
All contracts are awarded based on full and open competition.

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 0207431F / Combat Air Intelligence System Activities					Project (Number/Name) 675307 / TARGETING ENTERPRISE RESEARCH						
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
Targeting Enterprise Research	Various	TBD : TBD	-	2.868	Dec 2015	0.688	Dec 2015	3.733	Dec 2016	0.000		3.733	Continuing	Continuing	TBD
Joint Targeting Toolbox	TBD	TBD : TBD	-	0.912	Jul 2015	2.030	Dec 2015	0.156	Dec 2016	0.000		0.156	Continuing	Continuing	TBD
Common Geopositioning Services	Various	BAE Systems : San Diego, CA	-	0.108	Sep 2015	0.700	May 2016	0.713	May 2017	0.000		0.713	0.000	1.521	-
Subtotal			-	3.888		3.418		4.602		0.000		4.602	-	-	-
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
Targeting Enterprise Research	Various	SPAWAR : Phili, PA	-	0.556	Jan 2015	0.560	Jan 2016	0.570	Jan 2017	0.000		0.570	0.000	1.686	-
Subtotal			-	0.556		0.560		0.570		0.000		0.570	0.000	1.686	-
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
46th Test Squadron	PO	46th Test Squadron : Eglin, FL	-	0.332	Dec 2015	0.220	Dec 2016	0.224	Dec 2017	0.000		0.224	0.000	0.776	-
Subtotal			-	0.332		0.220		0.224		0.000		0.224	0.000	0.776	-
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
Targeting Research Enterprise	Various	Program Management Office : Hanscom, MA	-	0.809	Dec 2014	0.852	Jan 2016	0.867	Jan 2017	0.000		0.867	0.000	2.528	-
Subtotal			-	0.809		0.852		0.867		0.000		0.867	0.000	2.528	-

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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 0207431F / <i>Combat Air Intelligence System Activities</i>	Project (Number/Name) 675307 / <i>TARGETING ENTERPRISE RESEARCH</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
Software/Hardware Development	[REDACTED]																											
Test and Evaluation	[REDACTED]																											

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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 0207431F / <i>Combat Air Intelligence System Activities</i>	Project (Number/Name) 675307 / <i>TARGETING ENTERPRISE RESEARCH</i>

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Software/Hardware Development	1	2015	4	2021
Test and Evaluation	1	2015	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 0207431F / <i>Combat Air Intelligence System Activities</i>				Project (Number/Name) 675309 / <i>GEO Info & Serv Software</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
675309: <i>GEO Info & Serv Software</i>	-	1.706	1.743	4.648	0.000	4.648	4.713	4.934	5.021	5.112	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Provides support to personnel using Geospatial resources utilized in Geospatial Intelligence (GEOINT) databasing applications, unit level intelligence, technology exploration and refresh initiatives, management and dissemination architecture, geospatial information and services modernization, and enablers for targeting capabilities. Provides support to the MAJCOMs to ensure requisite and available target intelligence and GEOINT tools for information directly available to warfighters.

The GEOINT information and service software program funds the Air Force Geospatial Product Library (GPL) which is currently fielded to all combatant command air components and subordinate units supporting global air operations. The GPL provides digital GEOINT data to support mission planning, targeting & intelligence in support of mission objectives.

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

	FY 2015	FY 2016	FY 2017
Title: Enhanced Geospatial Product Library (EGPL)	1.706	1.743	4.648
Description: Provide continuing support for EGPL software and storage to meet future and evolving IT and GEOINT standards and support.			
FY 2015 Accomplishments: Completed EGPL version 2.0.2 engineering manufacturing development (EMD) phase.			
FY 2016 Plans: Continue efforts to reduce duplication of functionality, increase communication between enterprise tools, and increase functions in critical mission areas. Begin to enhance data services and data access across base and network design and continue existing development support (EGPL data update, system security certification, etc).			
FY 2017 Plans: Continue year in EGPL Version 3.0 development, test efforts, sustainment, (Development Test (DT), and Force Development Evaluation (FDE)).			
Accomplishments/Planned Programs Subtotals	1.706	1.743	4.648

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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 0207431F / <i>Combat Air Intelligence System Activities</i>	Project (Number/Name) 675309 / <i>GEO Info & Serv Software</i>

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

<u>Line Item</u>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017</u> <u>Base</u>	<u>FY 2017</u> <u>OCO</u>	<u>FY 2017</u> <u>Total</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u>	<u>FY 2021</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF:BA03: Line Item #832070: <i>Intelligence Comm Equipment</i>	5.110	3.894	6.294	0.000	6.294	6.534	6.273	4.384	4.464	Continuing	Continuing

Remarks

Combat Air Intelligence System (CAIS) procurement funds

D. Acquisition Strategy

All major contracts within this project will be awarded after full and open competition.

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 0207431F / Combat Air Intelligence System Activities				675309 / GEO Info & Serv Software								
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	
Enhanced Geospatial Product Library	Various	TBD : TBD	-	1.406	Jan 2015	1.241	Jan 2016	4.390	Jan 2017	0.000		4.390	Continuing	Continuing	-	
Subtotal			-	1.406		1.241		4.390		0.000		4.390	-	-	-	
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	
Subtotal			-	-		-		-		-		-	-	-	-	
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	
46 Test Squadron	PO	46th Test Squadron : Eglin, FL	-	0.058	Dec 2015	0.116	Dec 2016	0.118	Dec 2017	0.000		0.118	0.000	0.292	-	
Subtotal			-	0.058		0.116		0.118		0.000		0.118	0.000	0.292	-	
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	
Program Office Support	Various	Not Specified : Hanscom, MA	-	0.242	Jan 2015	0.386	Jan 2016	0.140	Jan 2017	0.000		0.140	0.000	0.768	-	
Subtotal			-	0.242		0.386		0.140		0.000		0.140	0.000	0.768	-	
Project Cost Totals			-	1.706		1.743		4.648		0.000		4.648	-	-	-	

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Exhibit R-4, RDT&E Schedule Profile: PB 2017 Air Force		Date: February 2016
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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

Software Development

[Redacted]																											
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Exhibit R-4A, RDT&E Schedule Details: PB 2017 Air Force		Date: February 2016
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Schedule Details

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	Quarter	Year	Quarter	Year
Software Development	1	2015	4	2021