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Exhibit R-2, RDT&E Budget Item Justification: PB 2020 Air Force	Date: February 2019
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Appropriation/Budget Activity	R-1 Program Element (Number/Name)											
3600: <i>Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development</i>	PE 0307577F I <i>Intelligence Mission Data (IMD)</i>											
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
Total Program Element	-	8.684	4.117	8.614	0.000	8.614	7.768	6.601	6.479	6.952	Continuing	Continuing
675306: <i>Analysis Enterprise</i>	-	5.074	1.337	7.820	0.000	7.820	7.768	6.601	6.479	6.952	Continuing	Continuing
675307: <i>TARGETING ENTERPRISE RESEARCH</i>	-	3.610	2.780	0.794	0.000	0.794	0.000	0.000	0.000	0.000	Continuing	Continuing

A. Mission Description and Budget Item Justification

Intelligence Mission Data (IMD) encompasses several key intelligence data efforts used to support IMD-dependent programs, including the fifth generation aircraft capabilities. The term IMD encompasses Red (adversary military systems), White (commercial systems), Blue (U.S. military systems), and Grey (neutral military systems) Characteristics & Performance; Signatures; Geospatial Intelligence; Electronic Warfare systems and Operational Order of Battle mission data. Supports fighter/ bomber operational reconnaissance and integration, focusing on leveraging fifth generation aircraft capabilities to augment the entire Combat Air Force. The PE funds: Planning & direction, collection, processing & exploitation, analysis & production, and dissemination & Evaluation (PCPAD-E) to support IMD-dependent programs.

As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the FY 2018 Air Force penalty total is \$14.373M. The calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.

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 anticipate production funding in the current or subsequent fiscal year.

B. Program Change Summary (\$ in Millions)	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Previous President's Budget	8.684	4.117	2.033	0.000	2.033
Current President's Budget	8.684	4.117	8.614	0.000	8.614
Total Adjustments	0.000	0.000	6.581	0.000	6.581
• Congressional General Reductions	0.000	0.000			
• 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	0.000	0.000			
• SBIR/STTR Transfer	0.000	0.000			
• Other Adjustments	0.000	0.000	6.581	0.000	6.581

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Change Summary Explanation \$6.581M added via internal re-alignment in FY20, adding \$4.019M in a ZBT balancing 3400 to 3600 funding. That ZBT will support mission data reprogramming on F-35 and B-2 Defense Management System Modernization and develop threat modeling technology to meet AF needs. The \$2.562 came from the Acquisition Intelligence Requirements Task Force/OUISD-I for execution of responsibilities for Intel Mission Data mission.		

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force										Date: February 2019		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0307577F / Intelligence Mission Data (IMD)				Project (Number/Name) 675306 / Analysis Enterprise			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
675306: Analysis Enterprise	-	5.074	1.337	7.820	0.000	7.820	7.768	6.601	6.479	6.952	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
A. Mission Description and Budget Item Justification												
In FY 2018, PE 0207431F, Combat Air Intelligence Systems, Intelligence Mission Data efforts were transferred to new for 2018 PE 0307577F, Intelligence Mission Data (IMD), in order to provide better oversight of IMD research and development. (+\$5.074M)												
Intelligence Mission Data efforts in BPAC 675306 fund RDT&E to enable Advanced Non-cooperative Target Recognition (NCTR) collection, Operational Reconnaissance and traditional ELINT capabilities, advanced all-source analysis and production of IMD across EWIR, C&P, and Signatures to enable combat ID and ensure survivability for air superiority and global strike platforms.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2018	FY 2019	FY 2020	
Title: NCTR Collection and IMD Production Tools									5.074	1.337	7.820	
Description: Development of MASINT collection systems, creation of automated tools to process ELINT data, and development of improved analysis, production, and dissemination tools to create IMD used for combat ID.												
FY 2019 Plans:												
- Complete development and upgrade of 3 collection sensors												
- Continue development of automated tools to PROCESS ELINT data for utilization in EWIR												
- Begin development of C&P tools to enable automated processing of data for IMD purposes												
- Continue Development of new modeling tools to create Measurement and Signatures of emerging threats												
FY 2020 Plans:												
Continue development of automated tools to disseminate measurement and signatures information, EWIR, C&P including developing and integrating automation machine learning to develop, document, and deliver models of advanced threat systems.												
FY 2019 to FY 2020 Increase/Decrease Statement:												
Increased due to increased requirements.												
Accomplishments/Planned Programs Subtotals									5.074	1.337	7.820	

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force										Date: February 2019	
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0307577F / Intelligence Mission Data (IMD)				Project (Number/Name) 675306 / Analysis Enterprise			
C. Other Program Funding Summary (\$ in Millions)											
			<u>FY 2020</u>	<u>FY 2020</u>	<u>FY 2020</u>					<u>Cost To</u>	
<u>Line Item</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>Base</u>	<u>OCO</u>	<u>Total</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>Complete</u>	<u>Total Cost</u>
• OPAF 07 030577F: Intelligence Mission Data	1.313	0.606	0.000	-	0.000	0.514	0.000	0.000	-	Continuing	Continuing
Remarks											
D. Acquisition Strategy											
N/A											
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 2020 Air Force													Date: February 2019		
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>					Project (Number/Name) 675306 / <i>Analysis Enterprise</i>				

Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
NCTR Collection and IMD Production Tools Development	Various	NASIC : WPAFB, OH	-	5.074	Feb 2018	1.337	Mar 2019	7.820	Feb 2020	-		7.820	Continuing	Continuing	-
Subtotal			-	5.074		1.337		7.820		-		7.820	Continuing	Continuing	N/A

	Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract	
Project Cost Totals		-	5.074		1.337		7.820		-		7.820	Continuing	Continuing	N/A

Remarks
 Contract award is expected 90 days after budget authority for FY18. FY19 will be one year after FY18.

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force										Date: February 2019																			
Appropriation/Budget Activity 3600 / 7										R-1 Program Element (Number/Name) PE 0307577F / Intelligence Mission Data (IMD)										Project (Number/Name) 675306 / Analysis Enterprise									

	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
	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
NCTR and IMD Tool Development																												
NCTR sensor dev start																												
SIGINT/EWIR Tools Development																												
SIGNATURE Tool Development																												
C&P Tool Development																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force		Date: February 2019
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0307577F / Intelligence Mission Data (IMD)	Project (Number/Name) 675306 / Analysis Enterprise

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>NCTR and IMD Tool Development</i>				
NCTR sensor dev start	3	2018	3	2020
SIGINT/EWIR Tools Development	3	2019	3	2023
SIGNATURE Tool Development	3	2018	3	2023
C&P Tool Development	3	2019	3	2023

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force										Date: February 2019		
Appropriation/Budget Activity 3600 / 7					R-1 Program Element (Number/Name) PE 0307577F / Intelligence Mission Data (IMD)				Project (Number/Name) 675307 / TARGETING ENTERPRISE RESEARCH			
COST (\$ in Millions)	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	Cost To Complete	Total Cost
675307: TARGETING ENTERPRISE RESEARCH	-	3.610	2.780	0.794	0.000	0.794	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		
Note												
In FY 2018, PE 0207431F, Combat Air Intelligence Systems, Intelligence Mission Data efforts were transferred to the new PE 37577F for 2018, Intelligence Mission Data (IMD), in order to provide better oversight of IMD research and development.												
A. Mission Description and Budget Item Justification												
In FY 2018, PE 0207431F, Combat Air Intelligence Systems, Intelligence Mission Data efforts were transferred to new for 2018 PE 0307577F, Intelligence Mission Data (IMD), in order to provide better oversight of IMD research and development. (+\$5.074M)												
Intelligence Mission Data efforts in BPAC 675307, Targeting Enterprise Research, fund RDT&E for Operational Reconnaissance Capabilities; Tactical Data Recorder; Advanced Non-cooperative Target Recognition (NCTR) Collection.												
These tools enable the collection, storage, and dissemination of Ops Recce data gathered during operational missions by currently fielded air platforms.												
In addition, the Advanced NCTR collection sensor supports CAF-wide requirements for improved ID capabilities.												
B. Accomplishments/Planned Programs (\$ in Millions)									FY 2018	FY 2019	FY 2020	
Title: Operational Reconnaissance Electronic Warfare Capabilities									3.610	2.780	0.794	
Description: RDT&E efforts to develop recording, storage, and dissemination systems for Ops Recce data gathered during operational missions.												
FY 2019 Plans:												
Continue RDT&E efforts to develop recording, storage, and dissemination systems for Ops Recce data gathered during non-ISR operational missions. These include but are not limited to data off-boarding and radar warning receiver performance assessment.												
FY 2020 Plans:												
Will continue RDT&E efforts to develop recording, storage, and dissemination systems for Ops Recce data gathered during non-ISR operational missions. These include but are not limited to data off-boarding and radar warning receiver performance assessment.												
FY 2019 to FY 2020 Increase/Decrease Statement:												
Decrease in funding due to program requirements												
Accomplishments/Planned Programs Subtotals									3.610	2.780	0.794	

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Exhibit R-2A, RDT&E Project Justification: PB 2020 Air Force							Date: February 2019		
Appropriation/Budget Activity 3600 / 7				R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>			Project (Number/Name) 675307 / <i>TARGETING ENTERPRISE RESEARCH</i>		

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

<u>Line Item</u>	<u>FY 2018</u>	<u>FY 2019</u>	<u>FY 2020</u> <u>Base</u>	<u>FY 2020</u> <u>OCO</u>	<u>FY 2020</u> <u>Total</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u>	<u>FY 2024</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• OPAF 03 Line Item 832070: <i>Intelligence Comm Equipment</i>	1.313	0.606	0.000	-	0.000	0.514	0.000	0.000	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

Capabilities will be developed and integrated onto various platforms using an incremental acquisition approach. The projects will be executed, contracting with appropriate vendor(s) to deliver capability while encouraging competition where possible.

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 2020 Air Force												Date: February 2019			
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>				Project (Number/Name) 675307 / <i>TARGETING ENTERPRISE RESEARCH</i>					

Product Development (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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
Ops Recce Database Projects	Various	Not specified. : TBD	-	3.249	Oct 2017	2.502	Oct 2018	0.794		-		0.794	Continuing	Continuing	-
Not specified.	C/CPAF	Not specified. : TBD	-	-		-		-		-		-	Continuing	Continuing	-
Subtotal			-	3.249		2.502		0.794		-		0.794	Continuing	Continuing	N/A

Management Services (\$ in Millions)				FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 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	Various	Not specified. : TBD	-	0.361	Oct 2017	0.278	Oct 2018	0.000		-		0.000	Continuing	Continuing	-
Subtotal			-	0.361		0.278		0.000		-		0.000	Continuing	Continuing	N/A

			Prior Years	FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals			-	3.610		2.780		0.794		-		0.794	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2020 Air Force																Date: February 2019			
Appropriation/Budget Activity 3600 / 7								R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>								Project (Number/Name) 675307 / <i>TARGETING ENTERPRISE RESEARCH</i>			

	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024			
	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
<i>Ops Recce Projects</i>																												
Ops Recce Projects																												
Data Offboarding																												
Data Offboarding - Analysis																												
Data Offboarding Demo																												
Sensor Development																												
Sensor Development - SW Development																												
Sensor Development - Demo and Analysis																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2020 Air Force			Date: February 2019
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0307577F / <i>Intelligence Mission Data (IMD)</i>	Project (Number/Name) 675307 / <i>TARGETING ENTERPRISE RESEARCH</i>	

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>Ops Recce Projects</i>				
Ops Recce Projects	2	2018	4	2020
Data Offboarding	2	2018	4	2020
Data Offboarding - Analysis	2	2018	4	2020
Data Offboarding Demo	4	2019	4	2020
Sensor Development	2	2018	4	2020
Sensor Development - SW Development	2	2018	2	2020
Sensor Development - Demo and Analysis	2	2019	4	2020