Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force											Date: April 2022	
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*					R-1 Program Element (Number/Name) PE 0305240F / *Support to DCGS Enterprise*							
COST ($ in Millions)	**Prior Years**	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**	**FY 2024**	**FY 2025**	**FY 2026**	**FY 2027**	**Cost To Complete**	**Total Cost**
Total Program Element	-	33.486	40.421	28.774	0.000	28.774	33.550	30.876	31.253	31.948	Continuing	Continuing
674826: *Common Imagery Ground / Surface Systems*	-	1.027	2.330	2.389	0.000	2.389	2.400	2.405	2.455	2.510	Continuing	Continuing
675265: *Common Imagery Processor (CIP)*	-	32.459	38.091	26.385	0.000	26.385	31.150	28.471	28.798	29.438	Continuing	Continuing

A. Mission Description and Budget Item Justification

This Program Element funds the Imagery Processing effort which consists of the Virtual Imagery Processing Capability (VIP-C) program and associated Imagery Processing Research and Development.

1) The Imagery Processing effort develops the Virtual Imagery Processing Capability (VIP-C) and the High Performance Compute (HPC) Environment within the DCGS architecture. The VIP-C and HPC environment provides end-to-end image processing to include raw data ingest, data format standardization to facilitate exploitation, secondary image processing, metadata conditioning, and image quality enhancements. It also covers a comprehensive plan to employ advanced technologies, automation, and augmentation at speed and scale to close the gap between image collection and actionable intelligence. Current efforts are focused on 1) ensuring new sensors being fielded and associated data types can be processed and normalized 2) improving the Machine Assisted Geospatial Intelligence (GEOINT) Exploitation (MAGE) capability.

2)The DCGS Enterprise Interoperability and Cyber Defense efforts provide support to the Office of the Under Secretary of Defense for Intelligence and Security (OUSD(I&S)), AF DCGS and NATO interoperability efforts. This includes the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY21, 0.00M was expended for civilian pay expenses in this program element, and in FY22, 1.00M is forecasted for civilian pay expenses in this program element.

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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Air Force					Date: April 2022
Appropriation/Budget Activity 3600: *Research, Development, Test & Evaluation, Air Force* / BA 7: *Operational Systems Development*		R-1 Program Element (Number/Name) PE 0305240F / *Support to DCGS Enterprise*			
B. Program Change Summary ($ in Millions)	**FY 2021**	**FY 2022**	**FY 2023 Base**	**FY 2023 OCO**	**FY 2023 Total**
Previous President's Budget	33.486	40.421	0.000	0.000	0.000
Current President's Budget	33.486	40.421	28.774	0.000	28.774
Total Adjustments	0.000	0.000	28.774	0.000	28.774
• 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	28.774	0.000	28.774

Change Summary Explanation

The FY 2022 President's Budget submittal did not reflect FY 2023 through FY 2026 funding. Therefore, an explanation of the change between the two budget positions for FY2023 cannot be made in a relevant manner.

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force			Date: April 2022
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305240F / *Support to DCGS Enterprise*	Project (Number/Name) 674826 / *Common Imagery Ground / Surface Systems*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
674826: *Common Imagery Ground / Surface Systems*	-	1.027	2.330	2.389	0.000	2.389	2.400	2.405	2.455	2.510	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project element funds the Common Imagery Ground / Surface Systems enterprise support capabilities. This includes support to OUSD(I&S) and AF DCGS priority efforts.

The funding provides support to OUSD(I&S), AF DCGS and NATO interoperability efforts. This includes the development, testing, and implementation of international standards (to include NATO standardization agreements) to ensure joint, allied, and coalition interoperability.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In PY $0.00M was expended for civilian pay expenses in this program element, and in CY $0.00M is forecasted for civilian pay expenses in this program element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: DCGS Enterprise Interoperability	1.027	2.330	2.389	-	2.389
Description: Provide support to OUSD(I&S), AF DCGS and NATO Interoperability Enterprise efforts. ***FY 2022 Plans:*** Continue to support OUSD(I&S), AF DCGS and NATO Interoperability Enterprise efforts. ***FY 2023 Base Plans:*** Will continue to support OUSD(I&S), AF DCGS and NATO Interoperability Enterprise efforts. ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Increase is an adjustment for inflation.					
Accomplishments/Planned Programs Subtotals	1.027	2.330	2.389	-	2.389

C. Other Program Funding Summary ($ in Millions)

N/A

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305240F / *Support to DCGS Enterprise*	**Project (Number/Name)** 674826 / *Common Imagery Ground / Surface Systems*

C. Other Program Funding Summary ($ in Millions)

Remarks

D. Acquisition Strategy

The Air Force uses an evolutionary, incremental acquisition approach with development cycles and sprints to develop, field, and upgrade the system and structure contracts for the improved capabilities through full and open competition to the maximum extent possible. Additionally, strategic partnerships and agreements with National Laboratories and other agencies will be utilized.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Air Force			Date: April 2022
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305240F / *Support to DCGS Enterprise*	Project (Number/Name) 674826 / *Common Imagery Ground / Surface Systems*	

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
DCGS Enterprise Interoperability	C/Various	Various : Various	-	1.027	Apr 2021	2.330	Apr 2022	2.389	Apr 2023	-		2.389	Continuing	Continuing	-
		Subtotal	-	1.027		2.330		2.389		-		2.389	Continuing	Continuing	N/A

	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	1.027		2.330		2.389		-		2.389	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305240F / *Support to DCGS Enterprise*	**Project (Number/Name)** 674826 / *Common Imagery Ground / Surface Systems*

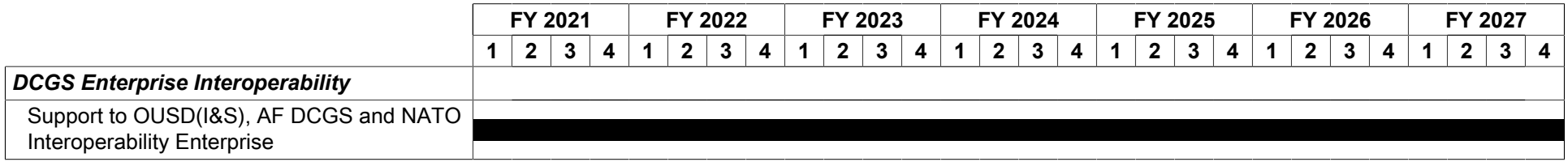

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305240F / *Support to DCGS Enterprise*	**Project (Number/Name)** 674826 / *Common Imagery Ground / Surface Systems*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
DCGS Enterprise Interoperability				
Support to OUSD(I&S), AF DCGS and NATO Interoperability Enterprise	1	2021	4	2027

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force			Date: April 2022
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305240F / *Support to DCGS Enterprise*	Project (Number/Name) 675265 / *Common Imagery Processor (CIP)*	

COST ($ in Millions)	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
675265: *Common Imagery Processor (CIP)*	-	32.459	38.091	26.385	0.000	26.385	31.150	28.471	28.798	29.438	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

The Imagery Processing effort develops the Virtual Imagery Processing Capability (VIP-C) within the DCGS architecture. VIP-C accepts airborne imagery data, processes it into an exploitable format, and provides it to other elements within the weapon system and/or the DCGS Enterprise. Current efforts include further developing the virtual software capability to improve processing across the enterprise and testing, development, and demonstrations integrating updated and new/ emerging sensors into DCGS. In addition, the project involves improving the Machine Assisted Geospatial Intelligence (GEOINT) Exploitation (MAGE) capability to employ advanced technologies, automation, and augmentation at speed and scale to close the gap between image collection and actionable intelligence.

This program element may include necessary civilian pay expenses required to manage, execute, and deliver weapon system capability. The use of such programs funds would be in addition to the civilian pay expenses budgeted in program element 0605827F, 0605828F, 0605829F, 0605831F, 0605832F, 0605833F, 0605898F, 0606398F. In FY21, 0.00M was expended for civilian pay expenses in this program element, and in FY22, $1.00M is forecasted for civilian pay expenses in this program element.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Imagery Processor	32.459	38.091	26.385	0.000	26.385
Description: Continue developing VIP-C to keep pace with growing sensor baseline and enhance imagery data quality.					
FY 2022 Plans: Continue to upgrade and improve VIP-C to enable better geo-coordinate accuracy, facilitate automated intelligence discovery and integrate new algorithms. This includes developing and integrating into a Cloud infrastructure and cyber defense. Continue MAGE research and development by leveraging Department of Energy and Air Force Research Laboratory expertise. This includes identification of targets through machine learning algorithms, use and refinement of test harness, validation of new algorithms, and generation of test data and methods.					
FY 2023 Base Plans:					

Exhibit R-2A, RDT&E Project Justification: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305240F / *Support to DCGS Enterprise*	**Project (Number/Name)** 675265 / *Common Imagery Processor (CIP)*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Will continue to upgrade and improve VIP-C to enable better geo-coordinate accuracy, facilitate automated intelligence discovery and integrate new algorithms. This includes developing and integrating into a Cloud infrastructure and cyber defense. Will continue MAGE research and development by leveraging Department of Energy and Air Force Research Laboratory expertise. This includes identification of targets through machine learning algorithms, use and refinement of test harness, validation of new algorithms, and generation of test data and methods. ***FY 2023 OCO Plans:*** N/A ***FY 2022 to FY 2023 Increase/Decrease Statement:*** Decrease in funding due to completion of certain MAGE development efforts.					
Accomplishments/Planned Programs Subtotals	32.459	38.091	26.385	0.000	26.385

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	FY 2024	FY 2025	FY 2026	FY 2027	Cost To Complete	Total Cost
• OPAF 04 Line Item 846080: *DCGS-AF*	22.288	124.774	79.742	-	79.742	73.113	33.234	29.970	30.630	Continuing	Continuing

Remarks

D. Acquisition Strategy

For imagery processing the Air Force uses an evolutionary acquisition approach with increments and spirals to develop, field, and upgrade the system and structure contracts for the improved capabilities through full and open competition to the maximum extent possible. In terms of management, Air Force leads the Cross Service Working Group that aligns imagery processing capabilities across the Joint Services in support of USD(I) direction.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Air Force			Date: April 2022
Appropriation/Budget Activity 3600 / 7	R-1 Program Element (Number/Name) PE 0305240F / *Support to DCGS Enterprise*	Project (Number/Name) 675265 / *Common Imagery Processor (CIP)*	

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Imagery Processing Software Development	Various	Various : Various	-	32.459	Dec 2020	37.091	Dec 2021	25.385	Dec 2022	-		25.385	Continuing	Continuing	-
		Subtotal	-	32.459		37.091		25.385		-		25.385	Continuing	Continuing	N/A

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Direct Cite Authority Civilian Pay	C/CPAF	Not specified. : TBD	-	0.000		1.000	Jun 2022	1.000	Jun 2023	-		1.000	Continuing	Continuing	-
		Subtotal	-	0.000		1.000		1.000		-		1.000	Continuing	Continuing	N/A

	Prior Years	FY 2021 Cost	FY 2021 Award Date	FY 2022 Cost	FY 2022 Award Date	FY 2023 Base Cost	FY 2023 Base Award Date	FY 2023 OCO Cost	FY 2023 OCO Award Date	FY 2023 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	32.459		38.091		26.385		-		26.385	Continuing	Continuing	N/A

Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305240F / *Support to DCGS Enterprise*	**Project (Number/Name)** 675265 / *Common Imagery Processor (CIP)*

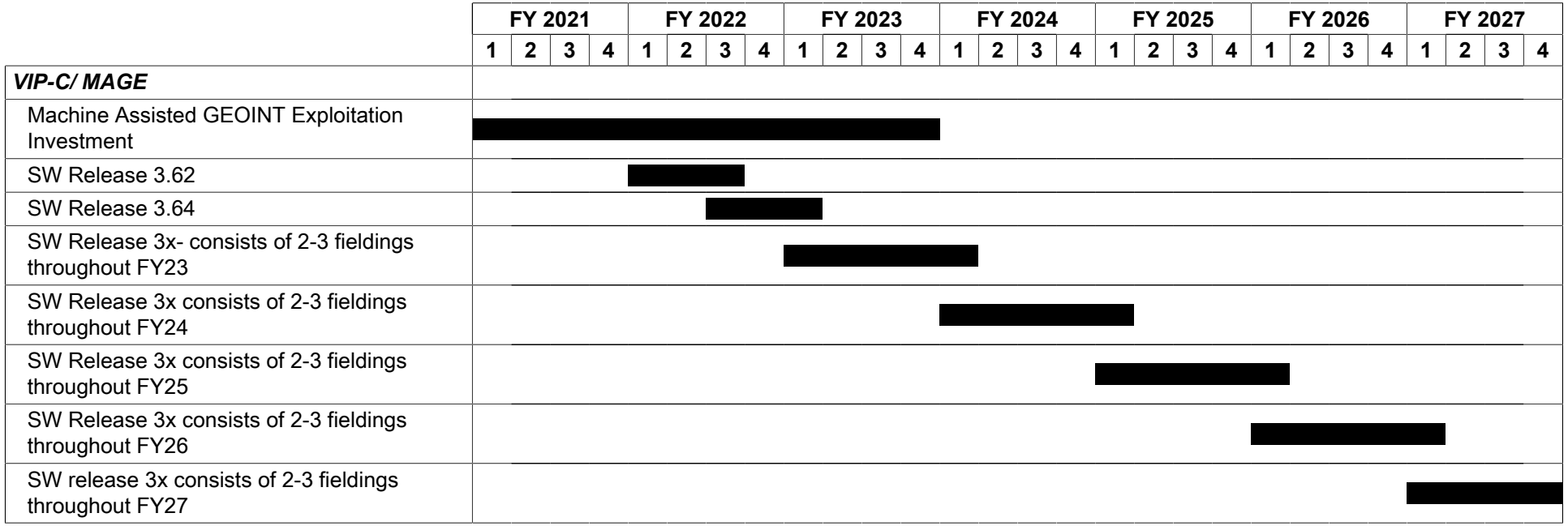

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Air Force		Date: April 2022
Appropriation/Budget Activity 3600 / 7	**R-1 Program Element (Number/Name)** PE 0305240F / *Support to DCGS Enterprise*	**Project (Number/Name)** 675265 / *Common Imagery Processor (CIP)*

Schedule Details

	Start		End	
Events by Sub Project	**Quarter**	**Year**	**Quarter**	**Year**
VIP-C/ MAGE				
Machine Assisted GEOINT Exploitation Investment	1	2021	4	2023
SW Release 3.62	1	2022	3	2022
SW Release 3.64	3	2022	1	2023
SW Release 3x- consists of 2-3 fieldings throughout FY23	1	2023	1	2024
SW Release 3x consists of 2-3 fieldings throughout FY24	1	2024	1	2025
SW Release 3x consists of 2-3 fieldings throughout FY25	1	2025	1	2026
SW Release 3x consists of 2-3 fieldings throughout FY26	1	2026	1	2027
SW release 3x consists of 2-3 fieldings throughout FY27	1	2027	4	2027