

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2023 Navy **Date:** April 2022

Appropriation/Budget Activity 1319: <i>Research, Development, Test & Evaluation, Navy / BA 7: Operational Systems Development</i>	R-1 Program Element (Number/Name) PE 1203109N / <i>Satellite Communications (SPACE)</i>
---	---

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	29.252	35.128	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	64.380
2472: <i>Mobile User Objective Sys (MUOS)</i>	29.252	35.128	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	64.380

Program MDAP/MAIS Code:
Project MDAP/MAIS Code(s): 345

A. Mission Description and Budget Item Justification

The Mobile User Objective System (MUOS) program provides for the development of the next generation Department of Defense (DoD) advanced narrowband communications satellite constellation. MUOS is the only Ultra High Frequency (UHF) satellite system replacing the aging UHF Follow-on (UFO) system, which is currently beyond its design life. MUOS provides legacy UHF satellite communications as well as a Wideband Code Division Multiple Access (WCDMA) capability which significantly increases performance and capacity critical to support Combatant Command priorities.

Starting in FY22, MUOS (Project 2472) funding transfers to United States Space Force (USSF).

<u>B. Program Change Summary (\$ in Millions)</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023 Base</u>	<u>FY 2023 OCO</u>	<u>FY 2023 Total</u>
Previous President's Budget	35.956	0.000	0.000	-	0.000
Current President's Budget	35.128	0.000	0.000	-	0.000
Total Adjustments	-0.828	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-0.828	0.000			
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000

Change Summary Explanation

Schedule:

MUOS (Project 2472) - Contract and acquisition planning for MUOS 6 and 7

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy **Date:** April 2022

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 1203109N / <i>Satellite Communications (SPACE)</i>	Project (Number/Name) 2472 / <i>Mobile User Objective Sys (MUOS)</i>
--	---	--

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
2472: <i>Mobile User Objective Sys (MUOS)</i>	29.252	35.128	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	64.380
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

Project MDAP/MAIS Code: 345

A. Mission Description and Budget Item Justification

Mobile User Objective System (MUOS) provides a worldwide, multi-service population of mobile and fixed-site terminal users with Ultra High Frequency (UHF) Narrowband, beyond line of sight satellite communications (SATCOM). MUOS significantly increases performance and capacity in support of critical Combatant Command SATCOM priorities. MUOS is the replacement system for the UHF Follow-on (UFO) system, which is currently beyond its design life. MUOS consists of Space, Ground, and User Entry Segments. The Space Segment consists of 5 geosynchronous satellites, one which is an on-orbit spare, and provides both a legacy UHF payload, which is backward compatible with UFO, and a Wideband Code Division Multiple Access (WCDMA) payload, which provides 3G cellular-like capability. The Ground Segment consists of four world-wide Radio Access Facilities (RAFTs) and two satellite control facilities. Each RAFT includes three 60 ft. antennas, and numerous racks of equipment. The RAFT in Hawaii includes a Network Management Facility (NMF). The RAFTs in Hawaii and Virginia each include a Switching Facility (SF). The User Entry Segment consists of the MUOS waveform that is ultimately integrated into MUOS-capable terminals. The MUOS legacy capability has been in operational use since 2012, and the WCDMA capability transitioned to Early Combatant Command Use in July 2016.

Starting in FY22, MUOS funding transfers to United States Space Force (USSF).

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)

	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Mobile User Objective Sys (MUOS)	35.128	0.000	0.000	0.000	0.000
Articles:	-	-	-	-	-
FY 2022 Plans: Starting in FY22, MUOS funding moves to United States Space Force (USSF).					
FY 2023 Base Plans: N/A					
FY 2023 OCO Plans: N/A					
Accomplishments/Planned Programs Subtotals	35.128	0.000	0.000	0.000	0.000

UNCLASSIFIED

Exhibit R-2A, RDT&E Project Justification: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 1203109N / <i>Satellite Communications (SPACE)</i>	Project (Number/Name) 2472 / <i>Mobile User Objective Sys (MUOS)</i>

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

<u>Line Item</u>	<u>FY 2021</u>	<u>FY 2022</u>	<u>FY 2023</u> <u>Base</u>	<u>FY 2023</u> <u>OCO</u>	<u>FY 2023</u> <u>Total</u>	<u>FY 2024</u>	<u>FY 2025</u>	<u>FY 2026</u>	<u>FY 2027</u>	<u>Cost To</u> <u>Complete</u>	<u>Total Cost</u>
• WPN/2433: <i>Fleet Satellite Comm Follow-On</i>	52.401	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	0.000	2,316.041

Remarks

Starting in FY22, MUOS funding moves to United States Space Force (USSF).

D. Acquisition Strategy

The program has awarded the Ground and User Entry Segment sustainment contracts. Contractor support for MUOS 6 and 7 pre-acquisition activities will be procured via system engineering support contract.

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 1203109N / <i>Satellite Communications (SPACE)</i>	Project (Number/Name) 2472 / <i>Mobile User Objective Sys (MUOS)</i>
--	---	--

Product Development (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Engineering Contract	C/CPAF	Lockheed Martin : Sunnyvale, CA	7.165	0.000		0.000		0.000		-		0.000	0.000	7.165	-
Follow On Contract	SS/IDIQ	General Dynamics : Falls Church, VA	9.916	9.939	Nov 2020	0.000		0.000		-		0.000	0.000	19.855	-
DMR ACC Engineering Contract	C/CPAF	Lockheed Martin : Sunnyvale, CA	0.000	21.062	Nov 2020	0.000		0.000		-		0.000	0.000	21.062	-
Subtotal			17.081	31.001		0.000		0.000		-		0.000	0.000	48.082	N/A

Remarks
Starting in FY22, MUOS funding moves to United States Space Force (USSF).

Test and Evaluation (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Developmental Test & Evaluation	WR	NIWC PAC : San Diego, CA	1.104	0.000		0.000		0.000		-		0.000	0.000	1.104	-
Operational Test & Evaluation	WR	COTF : Norfolk, VA	2.498	0.000		0.000		0.000		-		0.000	0.000	2.498	-
Subtotal			3.602	0.000		0.000		0.000		-		0.000	0.000	3.602	N/A

Management Services (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			
Contract Engineering Support	C/CPFF	SBG : Alexandria, VA	5.100	2.042	Jan 2021	0.000		0.000		-		0.000	0.000	7.142	-
Government Engineering	WR	NIWC PAC : San Diego, CA	3.469	2.085	Oct 2020	0.000		0.000		-		0.000	0.000	5.554	-
Subtotal			8.569	4.127		0.000		0.000		-		0.000	0.000	12.696	N/A

UNCLASSIFIED

Exhibit R-3, RDT&E Project Cost Analysis: PB 2023 Navy **Date:** April 2022

Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 1203109N / <i>Satellite Communications (SPACE)</i>	Project (Number/Name) 2472 / <i>Mobile User Objective Sys (MUOS)</i>
--	---	--

Management Services (\$ in Millions)				FY 2021		FY 2022		FY 2023 Base		FY 2023 OCO		FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost			

Remarks
Starting in FY22, MUOS funding moves to United States Space Force (USSF).

	Prior Years	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	29.252	35.128	0.000	0.000	-	0.000	0.000	64.380	N/A

Remarks
Starting in FY22, MUOS funding moves to United States Space Force (USSF).

UNCLASSIFIED

Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
Appropriation/Budget Activity 1319 / 7	R-1 Program Element (Number/Name) PE 1203109N / <i>Satellite Communications (SPACE)</i>	Project (Number/Name) 2472 / <i>Mobile User Objective Sys (MUOS)</i>

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2472				
Gate 6/CSB FY21	4	2021	4	2021