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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 4: Advanced Component Development & Prototypes (ACD&P)</i>	R-1 Program Element (Number/Name) PE 0304270N / <i>Electronic Warfare Development - MIP</i>
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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	6.570	0.805	0.506	0.796	-	0.796	0.680	0.577	0.559	0.510	Continuing	Continuing
2260: <i>Specific Emitter ID</i>	6.570	0.805	0.506	0.796	-	0.796	0.680	0.577	0.559	0.510	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project supports systems development and collection of Specific Emitter Identification (SEI) information from National Technical Means (NTM) to track commercial ships over 200 gross registered tons world-wide. Research and development will cover improvements and enhancements to Electronic Intelligence technology. This will include improved/next generation SEI technology for miniaturization and automation of hardware, national collection systems, signal processing and analysis, and de-interleaving of signals. Propagation in a multi-path signal environment will also be assessed. All work on this project will be undertaken in pursuit of goals stated by the Office of Naval Intelligence and the National Security Agency in support of the Worldwide Ship Tracking Program.

Advanced Component Development and Prototypes (ACD&P) efforts necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment are funded in this Program Element (PE). Most of the work in this PE can be classified between Technology Readiness Level (TRL) 6 (system/subsystem model or prototype demonstration in a relevant environment) and TRL 7 (system prototype demonstration in an operational environment).

This PE is a Military Intelligence Program (MIP).

B. Program Change Summary (\$ in Millions)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Previous President's Budget	0.805	0.506	0.000	-	0.000
Current President's Budget	0.805	0.506	0.796	-	0.796
Total Adjustments	0.000	0.000	0.796	-	0.796
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			
• Program Adjustments	0.000	0.000	0.000	-	0.000
• Rate/Misc Adjustments	0.000	0.000	0.000	-	0.000
• Adjustments to Budget Year	-	-	0.796	-	0.796

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<u>Change Summary Explanation</u> Technical: No significant change. Schedule: No significant change. --- FY 2023 funding increase reflects the fact that the FY 2022 President's Budget request did not include out-year funding.		

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Appropriation/Budget Activity 1319 / 4					R-1 Program Element (Number/Name) PE 0304270N / <i>Electronic Warfare Development - MIP</i>				Project (Number/Name) 2260 / <i>Specific Emitter ID</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
2260: <i>Specific Emitter ID</i>	6.570	0.805	0.506	0.796	-	0.796	0.680	0.577	0.559	0.510	Continuing	Continuing
Quantity of RDT&E Articles		-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This project supports systems development and collection of Specific Emitter Identification (SEI) information from National Technical Means (NTM) to track commercial ships over 200 gross registered tons world-wide. Research and development will cover improvements and enhancements to Electronic Intelligence technology. This will include improved/next generation SEI technology for miniaturization and automation of hardware, national collection systems, signal processing and analysis, and de-interleaving of signals. Propagation in a multi-path signal environment will also be assessed. All work on this project will be undertaken in pursuit of goals stated by the Office of Naval Intelligence and the National Security Agency in support of the Worldwide Ship Tracking Program.

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

	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
Title: Sensor Fusion	0.172	0.130	0.207	0.000	0.207
Articles:	-	-	-	-	-
Description: This effort supports systems development and information fusion of improved SEI technology for automation of hardware, national collection systems, signal processing and analysis, and de-interleaving of signals.					
FY 2022 Plans: - Continue development of advanced technologies to improve signal processing, signal characterization, de-interleaving of signals, and sensor fusion for national collection systems, which employ SEI technology.					
FY 2023 Base Plans: - Continue development of advanced technologies to improve signal processing, signal characterization, de-interleaving of signals, and sensor fusion for national collection systems, which employ SEI technology.					
FY 2023 OCO Plans: N/A					
FY 2022 to FY 2023 Increase/Decrease Statement: There is no significant change from FY 2022 to FY 2023.					
Title: System Automation	0.406	0.200	0.317	0.000	0.317
Articles:	-	-	-	-	-

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Appropriation/Budget Activity 1319 / 4	R-1 Program Element (Number/Name) PE 0304270N / <i>Electronic Warfare Development - MIP</i>	Project (Number/Name) 2260 / <i>Specific Emitter ID</i>

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
<p>Description: This effort supports development of an autonomous surveillance system capable of providing emitter signal information to a central location.</p> <p>FY 2022 Plans: Continue development of technologies for an autonomous surveillance system that provides emitter signal information to a central location. Continue development of improvements and automation of Specific Emitter Identification (SEI) certification hardware and software.</p> <p>FY 2023 Base Plans: - Continue development of technologies for an autonomous surveillance system that provides emitter signal information to a central location. Continue development of improvements and automation of Specific Emitter Identification (SEI) certification hardware and software.</p> <p>FY 2023 OCO Plans: N/A</p> <p>FY 2022 to FY 2023 Increase/Decrease Statement: There is no significant change from FY 2022 to FY 2023.</p>					
<p>Title: Technology Refresh and Communication Enhancement</p> <p align="right">Articles:</p> <p>Description: This effort improves SEI system performance, real-time communication and tactical use of SEI which will be expanded with next generation SEI technology.</p> <p>FY 2022 Plans: Continue improving next generation SEI system performance through developmental improvements in SEI hardware, software and real-time communications. Continue evaluations of new SEI hardware subsystems for improved SEI system performance.</p> <p>FY 2023 Base Plans: - Continue improving next generation SEI system performance through developmental improvements in SEI hardware, software and real-time communications. Continue evaluations of new SEI hardware subsystems for improved SEI system performance.</p> <p>FY 2023 OCO Plans:</p>	0.227 -	0.176 -	0.272 -	0.000 -	0.272 -

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B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2021	FY 2022	FY 2023 Base	FY 2023 OCO	FY 2023 Total
N/A					
<i>FY 2022 to FY 2023 Increase/Decrease Statement:</i> There is no significant change from FY 2022 to FY 2023.					
Accomplishments/Planned Programs Subtotals	0.805	0.506	0.796	0.000	0.796

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

Remarks

D. Acquisition Strategy
Not applicable.

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Exhibit R-4, RDT&E Schedule Profile: PB 2023 Navy **Date:** April 2022

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Proj 2260	FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				FY 2026				FY 2027							
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q				
Demonstration																																
	Installation and Testing																															

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Exhibit R-4A, RDT&E Schedule Details: PB 2023 Navy		Date: April 2022
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
Proj 2260				
Demonstration: Installation and Testing	1	2021	4	2023