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Exhibit R-2, RDT&E Budget Item Justification: FY 2018 United States Special Operations Command	Date: May 2017
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Appropriation/Budget Activity 0400: Research, Development, Test & Evaluation, Defense-Wide / BA 2: Applied Research					R-1 Program Element (Number/Name) PE 1160401BB / SOF Technology Development							
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
Total Program Element	437.288	37.084	37.820	34.493	0.000	34.493	37.036	44.662	57.618	58.771	Continuing	Continuing
S100: SOF Technology Development	437.288	37.084	37.820	34.493	-	34.493	37.036	44.662	57.618	58.771	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element enables USSOCOM to conduct studies and develop laboratory prototypes for applied research and advanced technology development, as well as leverage other organizations' technology projects that may not otherwise be affordable within MFP-11. Applying small incremental amounts of investments to Department of Defense (DOD), other government agencies, and commercial organizations allows USSOCOM to influence the direction of technology development or the schedule against which it is being pursued, and to acquire emerging technologies for Special Operations Forces. This project provides an investment strategy for USSOCOM to link technology opportunities with capability deficiencies, capability objectives, technology thrust areas, human endurance and sensory performance, and technology development objectives.

B. Program Change Summary (\$ in Millions)	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total
Previous President's Budget	37.517	37.820	34.493	-	34.493
Current President's Budget	37.084	37.820	34.493	-	34.493
Total Adjustments	-0.433	0.000	0.000	-	0.000
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	0.860	-			
• SBIR/STTR Transfer	-1.293	-			

Change Summary Explanation

Funding:

FY 2016: Net decrease of -\$0.433 million is due to a transfer of -\$1.293 million for Small Business Innovative Research/Small Business Technology Transfer programs and reprogramming of \$0.860 million to fund development of a radio enclosure common connector for TALOS communications.

FY 2017: None.

FY 2018: None.

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<p>Schedule: None.</p> <p>Technical: None.</p>		

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Appropriation/Budget Activity 0400 / 2					R-1 Program Element (Number/Name) PE 1160401BB / SOF Technology Development				Project (Number/Name) S100 / SOF Technology Development			
COST (\$ in Millions)	Prior Years	FY 2016	FY 2017	FY 2018 Base	FY 2018 OCO	FY 2018 Total	FY 2019	FY 2020	FY 2021	FY 2022	Cost To Complete	Total Cost
S100: SOF Technology Development	437.288	37.084	37.820	34.493	-	34.493	37.036	44.662	57.618	58.771	Continuing	Continuing

A. Mission Description and Budget Item Justification

This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11. Small incremental co-investments with DOD, other government agencies, and commercial organizations allow USSOCOM to influence the schedule and direction of technology developments, emerging technologies, and capabilities for Special Operations Forces (SOF), with significant economies of investment. This USSOCOM investment strategy is used to link technology opportunities with USSOCOM capability deficiencies, capability objectives; technology thrust areas, and technology objectives. Technology development needs in these areas may be advertised to industry and government research and development agencies via agency announcements and calls for white papers. Sub-projects within the SOF Technology Demonstration effort include:

- SOF Technology Development Sub-Project: This project conducts studies and develops laboratory prototypes for applied research and advanced technology developments, and leverages other organizations' technology projects that may not otherwise be affordable within MFP-11.
- Tagging, Tracking, and Locating (TTL) Sub-Project: TTL funds Applied Research projects identified in the USSOCOM Quick Look Capabilities Based Assessments (QL-CBA). TTL applies leading edge nanotechnology, biometric and biotechnology, and chemistry which is directed towards the development of revolutionary tags, taggants, sensors, communications, and data processing.
- Classified Sub-Project (provided under separate cover).

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

	FY 2016	FY 2017	FY 2018
Title: SOF Technology Development	18.992	18.858	15.157
FY 2016 Accomplishments: Continued ongoing technology development sub-projects in areas such as, but not limited to: long duration small form factor power supplies, alternative fuel power systems, reduced signature technologies, advance lightweight armor and materials, and began studying high data-rate throughput. Continued advance technologies for combat medical equipment, tactics, human performance, sensor and processing improvements, improved interfaces and displays, and secure communications. Continued pursuit of methods to reduce operator load and provide advanced protection. Developed technologies for improved and widened window of target engagement (escalation of force), pursued enhancements to technologies that can aid in detection of enemy intentions and movement, and continued development and exploration across the electromagnetic spectrum. Based upon agreed technology maturity metrics, transferred successful projects into programs of record. Continued the integration of critical			

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017	FY 2018
technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Focus was on delivering prototype system for soldier protection and augmentation and continued development of situational awareness and command/control systems.				
FY 2017 Plans: Continue ongoing technology development sub-projects in areas such as, but not limited to: long duration small form factor power supplies, alternative fuel power systems, reduce signature technologies, high data-rate throughput, and advance lightweight armor and materials. Advance technologies for combat medical equipment, tactics, human performance, sensor and processing improvements, improve interfaces and displays, and secure communications. Continue pursuit of methods to reduce operator load and provide advanced protection. Develop technologies for improved and widened window of target engagement (escalation of force), pursue enhancements to technologies that can aid in detection of enemy intentions and movement, and continue development and exploration across the electromagnetic spectrum. Based upon agreed technology maturity metrics, transfer successful projects into programs of record. Continue the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Focus is on delivering prototype system for soldier protection and augmentation and continue development of situational awareness and command/control systems.				
FY 2018 Plans: Continues ongoing technology development sub-projects in areas such as, but not limited to: long duration small form factor power supplies, alternative fuel power systems, reduces signature technologies, high data-rate throughput, and advances lightweight armor and materials. Advances technologies for combat medical equipment, tactics, human performance, sensor and processing improvements, improves interfaces and displays, and secure communications. Continues pursuit of methods to reduce operator load and provides advanced protection. Develops technologies for improved and widened window of target engagement (escalation of force), pursues enhancements to technologies that can aid in detection of enemy intentions and movement, and continues development and exploration across the electromagnetic spectrum. Based upon agreed technology maturity metrics, transfers successful projects into programs of record. Continues the integration of critical technologies focused on providing the dismounted special operator leap-ahead capabilities via innovative collaborative processes. Focus is on delivering prototype system for soldier protection and augmentation and continues development of situational awareness and command/control systems.				
Title: Tagging, Tracking, and Locating Technologies (TTL)		14.435	15.137	15.441
FY 2016 Accomplishments: Continued projects to exploit nanotechnology, biotechnology and chemistry for application to TTL and TTL-enabling systems. Initiated projects linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA.				
FY 2017 Plans:				

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B. Accomplishments/Planned Programs (\$ in Millions)		FY 2016	FY 2017
Continue projects to exploit nanotechnology, biotechnology and chemistry for application to TTL and TTL-enabling systems. Initiate projects linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA.			
FY 2018 Plans: Continues projects to exploit nanotechnology, biotechnology and chemistry for application to TTL and TTL-enabling systems. Initiates projects linked to the USSOCOM/DOD TTL Roadmap, which is updated via the JCS/J8-approved annual TTL QL-CBA.			
Title: Classified Sub-Project			
FY 2016 Accomplishments: Details provided under separate cover.			
FY 2017 Plans: Details provided under separate cover.			
FY 2018 Plans: Details provided under separate cover.			
Accomplishments/Planned Programs Subtotals		3.657	3.825
			3.895
		37.084	34.493
C. Other Program Funding Summary (\$ in Millions)			
N/A			
Remarks			
D. Acquisition Strategy			
N/A			
E. Performance Metrics			
N/A			