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Exhibit R-2, RDT&E Budget Item Justification: PB 2019 Air Force										Date: February 2018		
Appropriation/Budget Activity 3600: Research, Development, Test & Evaluation, Air Force I BA 7: Operational Systems Development					R-1 Program Element (Number/Name) PE 0207697F I Distributed Training and Exercises							
COST (\$ in Millions)	Prior Years	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total	FY 2020	FY 2021	FY 2022	FY 2023	Cost To Complete	Total Cost
Total Program Element	-	4.241	4.190	4.225	0.000	4.225	4.303	4.377	4.467	4.549	Continuing	Continuing
675190: JFCOM Wargaming	-	4.241	4.190	4.225	0.000	4.225	4.303	4.377	4.467	4.549	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

Funding supports the CSAF Title 10 wargaming efforts to test concepts, capabilities, programming choices, and plans using simulation and other techniques, otherwise known as wargaming. Based on the Department and Air Force direction, there is a concerted effort in these periods of fiscal restraint to reinvigorate, institutionalize, and systematize wargaming across the Department. This effort requires continued funding to maintain the level of effort to most effectively pursue an innovative strategy, avoid operational and technical surprise and make best use of limited resources. The Air Force continues to refine the wargame process and design to better integrate and synergize those efforts in support of the new Air Force Strategy, Planning, and Programming (SP3) process. Specifically, in addition to maintaining a robust Title 10 Wargame series, Global Engagement, servicing Chief of Staff of the Air Force (CSAF) objectives. The HAF Wargaming Enterprise is executing on-call Wargaming in support of the AF/A5/8, the Agile series, along with quick-turning wargame support to the USAF Enterprise Capability Collaboration Team (ECCT) requirements, the Enterprise series, Plan Blue, and to service AF/A5S strategy and concept development objectives; all to better address the requirements of the SP3 process and cycles. Additionally, HAF Wargaming provides and coordinates Air Force representation at other Service and Joint wargames as they execute across the department. These efforts are providing decision support to senior Air Force leaders involving investment strategies and develop concepts to best employ U.S. forces in future conflicts.

The Wargame Information Environment (WIE) is a continually evolving system that provides an array of services to game players which enables the accomplishment of game objectives. The backbone of the WIE is GameNet, a deployable, standalone, Local Area Network (LAN) with servers and laptops that host applications to support virtual battlespace collaboration, decision making, three-dimensional visualizations & mapping, and services. Behind these applications are cutting edge technologies and database architectures from both commercial off-the-shelf and government developed software that assures relevance to the wargame. The modeling, simulation, and analysis applications allow participants, adjudicators, and control team members to effectively and efficiently collaborate, make decisions, present those decisions, and execute moves within the wargame; documenting each step in the process. This information capture enables discovery during the wargame and permits postgame analysis. These findings inform portfolio rebalancing exercises, concept and strategy development, and very senior leader decision making.

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.

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B. Program Change Summary (\$ in Millions)	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Previous President's Budget	3.886	4.190	4.257	0.000	4.257
Current President's Budget	4.241	4.190	4.225	0.000	4.225
Total Adjustments	0.355	0.000	-0.032	0.000	-0.032
• 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	0.355	0.000	-0.032	0.000	-0.032
C. Accomplishments/Planned Programs (\$ in Millions)					
	FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
Title: Develop/ Upgrade M&S Tools for WIE	1.284	1.463	1.490	-	1.490
Description: Develop air, space and cyber space wargaming specific functionality in existing modeling and simulation and analysis tools and integrate into the latest version of the WIE					
FY 2018 Plans:					
- Continue to refine and provide tailored wargame support and analytic decision support to Air Force, Joint, and Senior Defense leaders. To include development of processes tailored to enable participation of senior leaders.					
- Upgrade GameNet and the WIE. At the conclusion of Global Engagement 18, the current wargaming cycle, the next version of the WIE expected to be instantiated to better support the new charter and SP3 process along with supporting greater number and more diverse wargames.					
FY 2019 Base Plans:					
- Extend the WIE to include either the Lemay Center Wargaming Institute BubbleNet or Air Force Space Command Schriever Wargame System in support of an Air Force Title 10 Game event.					
- Integrate tools to capture implications of force structures and capabilities employed in wargames to influence budgeting and programming choices.					
- Continue to expand and develop the WIE, incorporating latest technology and tools, in support of a more flexible and agile wargaming enterprise; quicker to respond and tailorable for a wider range of wargaming. This					

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C. Accomplishments/Planned Programs (\$ in Millions)		FY 2017	FY 2018	FY 2019 Base	FY 2019 OCO	FY 2019 Total
will require analysis of utility and functionality of additional models and analytical tools used by other wargames, to include creation of custom interfaces to allow interaction within the WIE.						
FY 2018 to FY 2019 Increase/Decrease Statement: Not Applicable						
Title: Joint Concept Development & Experimentation (JCD&E) Tools		2.957	2.727	2.735	0.000	2.735
Description: Develop scenarios and data for future synthetic environment that grounded in truth to support several wargames and mini-wargames.						
FY 2018 Plans: - Continue to refine and provide tailored wargame support and analytic decision support to Air Force, Joint, and Senior Defense leaders. To include development of processes tailored to enable participation of senior leaders. - Upgrade GameNet and the WIE. At the conclusion of Global Engagement 18, the current wargaming cycle, the next version of the WIE expected to be instantiated to better support the new charter and SP3 process along with supporting greater number and more diverse wargames.						
FY 2019 Base Plans: HAF Wargaming will conclude Global Engagement 18 post-game analysis and report writing, as well as, execute Futures Game 18, along with post-game analysis and report writing. HAF Wargaming will design, develop models, research concepts, and conduct workshops for Global Engagement 20 (USAF Foundation wargame). HAF Wargaming will conduct quick-turn wargames in support of senior leaders (Agile, ECCT) as directed.						
FY 2019 OCO Plans: Not Applicable						
FY 2018 to FY 2019 Increase/Decrease Statement: Not Applicable						
Accomplishments/Planned Programs Subtotals		4.241	4.190	4.225	0.000	4.225
D. Other Program Funding Summary (\$ in Millions)						
N/A						

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D. Other Program Funding Summary (\$ in Millions)		
Remarks		
E. Acquisition Strategy In order to achieve an innovative strategy, avoid operational and technical surprise and make best use of limited resources, wargaming requires an evolutionary acquisition approach for every wargame. Contract support is required as wargame and IT specialized expertise resides with industry and is not available organically. The requirements constantly evolve and a challenge to be accurately defined at the outset of the contract; however, we will continue to pursue a firm fixed price (FFP) contract awarded under a full and open competition.		
F. 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 2019 Air Force												Date: February 2018		
Appropriation/Budget Activity 3600 / 7						R-1 Program Element (Number/Name) PE 0207697F / <i>Distributed Training and Exercises</i>						Project (Number/Name) 675190 / <i>JFCOM Wargaming</i>		

Product Development (\$ in Millions)				FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 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
Various	C/CPFF	TBD : TBD	-	4.241	Mar 2017	4.190	Mar 2018	4.225		0.000		4.225	Continuing	Continuing	-
Subtotal			-	4.241		4.190		4.225		0.000		4.225	Continuing	Continuing	N/A

	Prior Years	FY 2017		FY 2018		FY 2019 Base		FY 2019 OCO		FY 2019 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	-	4.241		4.190		4.225		0.000		4.225	Continuing	Continuing	N/A

Remarks

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Exhibit R-4, RDT&E Schedule Profile: PB 2019 Air Force												Date: February 2018			
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	FY 2017				FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023			
	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
No project title.																												
Develop and Integrate M&S Tools																												
Enhance ViewPoint																												
Improve GamePoint																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2019 Air Force		Date: February 2018
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Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
<i>No project title.</i>				
Develop and Integrate M&S Tools	1	2018	4	2021
Enhance ViewPoint	1	2018	4	2021
Improve GamePoint	1	2018	4	2021