Exhibit R-2, RDT&E Budget Item Justification: PB 2016 Office of the Secretary Of Defense											Date: February 2015	
Appropriation/Budget Activity 0400: *Research, Development, Test & Evaluation, Defense-Wide I* BA 4: *Advanced Component Development & Prototypes (ACD&P)*						**R-1 Program Element (Number/Name)** PE 0604670D8Z *I Human Social Culture Behavior (HSCB) Modeling Research and Engineering*						

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
Total Program Element	-	2.000	-	-	-	-	-	-	-	-	Continuing	Continuing
P670: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	-	2.000	-	-	-	-	-	-	-	-	Continuing	Continuing

A. Mission Description and Budget Item Justification

The Office of the Secretary of Defense (OSD) Human Social Culture Behavior (HSCB) Modeling Program is a vertically integrated effort to research, develop, and transition technologies, tools, and systems to programs of record and users in need. The Program exists to optimize U.S. forces' ability to perform population-centric sensing, understand behaviors driven by social and cultural variables, and select effective courses of action in the full range of military operations. Program research will enhance population-centric intelligence, surveillance, and reconnaissance (ISR) capabilities for understanding the increasingly complex global environment to address national strategic challenges such as instability, aggression, proliferation of weapons of mass destruction, and violent extremism. In three integrated program elements (PEs), the Program will conduct applied research, mature and demonstrate advanced technology, and develop transitionable methods, technology, tools, and prototypes. Work under PE 0604670D8Z will create transition ready software tools that will help intelligence analysts, operations analysts, operations planners, wargamers, and others represent, understand, and forecast sociocultural behavior at the strategic, operational, and tactical levels. This program focuses on maturing, hardening, and validating human, social, culture, and behavior modeling software for transition to meet the needs of the warfighter, integration into the architectures of existing programs of record, and/or maturing software via open architectures to allow broad systems integration. The Program provides a development to product transition pathway for sociocultural models, tools, and capabilities to rapidly meet immediate and emerging warfighter needs. The work supports the testing, validation, and transition of model-based technology into existing and developing systems in coordination with Program Executive Offices or Program Managers, Combatant Commanders, Joint and Service organizations, warfighters in need, and other transition customers. The Program will mature sociocultural relevant data and tools to provide essential sociocultural understanding and forecasting capabilities at the strategic, operational and tactical levels.

B. Program Change Summary ($ in Millions)

	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total
Previous President's Budget	2.000	-	-	-	-
Current President's Budget	2.000	-	-	-	-
Total Adjustments	-	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the Secretary Of Defense										Date: February 2015	

| Appropriation/Budget Activity
0400 I 4 | | | | R-1 Program Element (Number/Name)
PE 0604670D8Z I Human Social Culture Behavior (HSCB) Modeling Research and Engineering | | | | Project (Number/Name)
P670 I Human Social Culture Behavior (HSCB) Modeling Research and Engineering | | | |

COST ($ in Millions)	Prior Years	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
P670: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	-	2.000	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

A. Mission Description and Budget Item Justification

This Program will create transition-ready software tools that will help intelligence analysts, operations analysts, operations planners, wargamers, and others represent, understand, and forecast sociocultural behavior at the strategic, operational, and tactical levels. The Program focuses on maturing, hardening, and validating human, social, culture, and behavior modeling software for transition to meet the needs of the warfighter, integration into the architectures of existing programs of record, and/or maturing software via open architectures to allow broad systems integration. The Program provides a development to product transition pathway for sociocultural models, tools, and capabilities to rapidly meet immediate and emerging warfighter needs. The work supports the testing, validation, and transition of model-based technology into existing and developing systems in coordination with Program Executive Offices or Program Managers, Combatant Commanders, Joint and Service organizations, warfighters in need, and other transition customers. The Program will mature sociocultural relevant data and tools to provide essential forecasting capabilities at the strategic, operational, and tactical levels.

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Title: Modeling Capabilities	1.000	-	-
Description: Mature and deliver sociocultural modeling capabilities for integration into existing DoD systems. Conduct validation testing of HSCB model based applications. Complete development of sentiment analysis (iSENT) component into the Worldwide Integrated Crisis Early Warning System (W-ICEWS), increase the volume and range of data sources, and increase sensitivity of the core instability detection capability. Extend and complete sentiment analysis component to social media. Extend and complete SPECTRUM capabilities for countering violent extremism, with enhanced organization tracking, mining of social media, and coverage of additional regions. Demonstrate and complete prototype social radar in the Distributed Common Ground System-Army (DCGS-A) or comparable environment for one or more of the following use cases: counterinsurgency, counterterrorism, countering violent extremism, countering-weapons of mass destruction, countering transnational criminal organizations, or mitigating the effect of adversarial nation state influence. *FY 2014 Accomplishments:* Further developed W-ICEWS capabilities by improving sentiment accuracies of English and Spanish language models to meet 80 percent target accuracy goal. Added Arabic model to include complex Arabic dialect feature analysis.			
Title: Data Collection	0.700	-	-

Exhibit R-2A, RDT&E Project Justification: PB 2016 Office of the Secretary Of Defense		Date: February 2015
Appropriation/Budget Activity 0400 I 4	**R-1 Program Element (Number/Name)** PE 0604670D8Z I *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	**Project (Number/Name)** P670 I *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2014	FY 2015	FY 2016
Description: Develop and test methods and tools for collection of sociocultural behavior data, including and especially in denied areas. Demonstrate resources and tools for extraction, integrated analysis, and fusion of data from open sources at scale with particular focus on social media. Support development and testing of architectures and systems to enable access to structured, validated sociocultural behavior data across tactical to strategic levels. Complete development of and demonstrate ability to ingest, structure, and visualize multiple data modalities at scale, in real-time, or near real-time to support both short-term and long-term instability monitoring. Complete development and demonstration of transition-ready automated data collection, management, translation, and extraction tools to service HSCB models. *FY 2014 Accomplishments:* Extended iSENT capability to automatically identify potential disinformation and quantify the spread and/or influence of that disinformation based on content and degree of social networking reach. Developed dashboard capability that allows the user to configure a custom dashboard that includes automated alerts, social momentum gauges and graphs, real-time streaming of social and regular media, and television feeds.			
Title: Risk Reduction *Description:* Conduct the risk reduction activities necessary to ensure that HSCB technologies are validated, accurate, and address user/program of record requirements. Continue to apply existing processes for evaluating discrete research projects. Gather data necessary to populate existing Program level measures of effectiveness. Develop, complete, and transition rapid prototypes to demonstrate technology effectiveness toward new U.S. Government challenges. Quantify effect of HSCB technologies on user effectiveness and efficiency. *FY 2014 Accomplishments:* Conducted risk reduction activities necessary to ensure that HSCB technologies are validated, accurate, and address user/program of record requirements. Continued to apply existing processes for evaluating research projects.	0.300	-	-
Accomplishments/Planned Programs Subtotals	2.000	-	-

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PE 0602670D8Z BA 2: *HSCB Applied Research*	2.000	-	-	-	-	-	-	-	-	Continuing	Continuing

Exhibit R-2A, **RDT&E Project Justification:** PB 2016 Office of the Secretary Of Defense		**Date:** February 2015
Appropriation/Budget Activity 0400 *I* 4	**R-1 Program Element (Number/Name)** PE 0604670D8Z *I Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	**Project (Number/Name)** P670 *I Human Social Culture Behavior (HSCB) Modeling Research and Engineering*

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2014	FY 2015	FY 2016 Base	FY 2016 OCO	FY 2016 Total	FY 2017	FY 2018	FY 2019	FY 2020	Cost To Complete	Total Cost
• PE 0603670D8Z BA 3: *HSCB Advanced Development*	2.000	-	-	-	-	-	-	-	-	Continuing	Continuing

Remarks

D. Acquisition Strategy

The Program produces software prototypes configured for use in programs such as USSTRATCOM's Global Adaptive Planning Collaborative Information Environment (GAP-CIE). The program is executed by a Broad Agency Announcement (BAA) and a targeted Request for Proposals (RFP) process. The BAA and RFPs were issued in FY 2011. Proposals were solicited from all DoD organizations, other federal agencies, and the commercial sector. Proposals were selected using review panels.

E. Performance Metrics

N/A

PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Mod...*
Office of the Secretary Of Defense

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2016 Office of the Secretary Of Defense		Date: February 2015

Appropriation/Budget Activity 0400 I 4	R-1 Program Element (Number/Name) PE 0604670D8Z I Human Social Culture Behavior (HSCB) Modeling Research and Engineering	Project (Number/Name) P670 I Human Social Culture Behavior (HSCB) Modeling Research and Engineering

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
iSent - Social Media Analytics, Experimentation, and Operational Transition	Option/ CPFF	Lockheed Martin Corporation : King of Prussia, PA	-	1.962	Apr 2014	-		-		-		-	-	-	-
		Subtotal	-	1.962		-		-		-		-	-	-	-

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	Prior Years	FY 2014 Cost	FY 2014 Award Date	FY 2015 Cost	FY 2015 Award Date	FY 2016 Base Cost	FY 2016 Base Award Date	FY 2016 OCO Cost	FY 2016 OCO Award Date	FY 2016 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
iSent - Social Media Analytics, Experimentation, and Operational Transition	RO	SPAWAR Systems Center Pacific : San Diego, CA	-	0.038		-		-		-		-	-	-	-
		Subtotal	-	0.038		-		-		-		-	-	-	-

			Prior Years	FY 2014		FY 2015		FY 2016 Base		FY 2016 OCO		FY 2016 Total	Cost To Complete	Total Cost	Target Value of Contract
		Project Cost Totals	-	2.000		-		-		-		-	-	-	-

Remarks

Exhibit R-4, **RDT&E Schedule Profile:** PB 2016 Office of the Secretary Of Defense		**Date:** February 2015
Appropriation/Budget Activity 0400 *I* 4	**R-1 Program Element (Number/Name)** PE 0604670D8Z *I Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	**Project (Number/Name)** P670 *I Human Social Culture Behavior (HSCB) Modeling Research and Engineering*

	FY 2014				FY 2015				FY 2016				FY 2017				FY 2018				FY 2019				FY 2020			
	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
iCEWS Delivery Schedule																												
iDATA and iCAST Version 1.1		████																										
iSENT Version 3.1				███																								
iDATA Version 1.2				████																								
iCAST Version 1.3, iSENT Version 3.3					███																							
iDATA Version 1.3, iCAST Version 1.4, and iSENT Version 4.0						███																						

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Exhibit R-4A, RDT&E Schedule Details: PB 2016 Office of the Secretary Of Defense				Date: February 2015
Appropriation/Budget Activity 0400 I 4		R-1 Program Element (Number/Name) PE 0604670D8Z I Human Social Culture Behavior (HSCB) Modeling Research and Engineering		Project (Number/Name) P670 I Human Social Culture Behavior (HSCB) Modeling Research and Engineering

Schedule Details

Events by Sub Project	Start		End	
	Quarter	Year	Quarter	Year
iCEWS Delivery Schedule				
iDATA and iCAST Version 1.1	2	2014	4	2014
iSENT Version 3.1	4	2014	1	2015
iDATA Version 1.2	4	2014	2	2015
iCAST Version 1.3, iSENT Version 3.3	1	2015	2	2015
iDATA Version 1.3, iCAST Version 1.4, and iSENT Version 4.0	2	2015	3	2015