Exhibit R-2, **RDT&E Budget Item Justification:** PB 2014 Office of Secretary Of Defense		**DATE:** April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
Total Program Element	-	7.037	5.131	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
P670: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	-	7.037	5.131	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Change from FY 2013 to FY 2014 reflects a reallocation of funds from the Office of the Secretary of Defense (OSD) Human Social Culture Behavior (HSCB) Modeling program to higher priority DoD requirements.

A. Mission Description and Budget Item Justification

The OSD 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/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.

Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Office of Secretary Of Defense				DATE: April 2013	
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*			**R-1 ITEM NOMENCLATURE** PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*		

B. Program Change Summary ($ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	7.252	5.131	5.234	-	5.234
Current President's Budget	7.037	5.131	0.000	-	0.000
Total Adjustments	-0.215	0.000	-5.234	-	-5.234
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.213	-			
• SBIR/STTR Transfer	-	-			
• Baseline Adjustments	-	-	-5.234	-	-5.234
• Other Adjustments	-0.002	-	-	-	-

Change Summary Explanation

FY 2014 baseline adjustments are reflective of DoD priorities and requirements.

Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense											DATE: April 2013	

APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	PROJECT P670: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*

COST ($ in Millions)	All Prior Years	FY 2012	FY 2013#	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
P670: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	-	7.037	5.131	0.000	-	0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
Quantity of RDT&E Articles												

FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

The FY 2014 OCO Request will be submitted at a later date

Note

Change from FY 2013 to FY 2014 reflects a reallocation of funds from the Office of the Secretary of Defense (OSD) Human Social Culture Behavior (HSCB) Modeling program to higher priority DoD requirements.

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/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 2012	FY 2013	FY 2014
Title: Modeling Capabilities *Description:* Mature and deliver sociocultural modeling capabilities for integration into existing DoD systems. Conduct validation testing of HSCB model based applications. *FY 2012 Accomplishments:* Matured and performed integration of models to enable forecasting of violent extremism at national level. Demonstrated proof of concept components of a "social radar" system to support short-term indications and warnings capability using news and other open source media text at scale. *FY 2013 Plans:*	3.100	3.531	0.000

PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Modeling Rese...*

Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	R-1 ITEM NOMENCLATURE PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	PROJECT P670: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
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.			
Title: Visualization Software **Description:** Mature and develop software that will visually and digitally represent cultural factors within existing and emerging command and control systems. *FY 2012 Accomplishments:* Developed new techniques for graphical representation of relevant sociocultural behavior signals in decision-support systems. As part of prototype systems for understanding instability and violent extremism, engineered dashboards for visualizing highly aggregated indicators with capabilities for drill-down to supporting models and/or applications.	0.205	0.000	0.000
Title: Data Collection **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. *FY 2012 Accomplishments:* Demonstrated tools for real-time processing and visualization of microblog and news data at scale. Demonstrated feasibility of at-scale, near real-time analysis of microblog data to detect short-term shifts in stability. Developed and demonstrated prototypes for representing social media data, measuring key HSCB concepts, and detecting meaningful changes in those measures over time. Developed automated data collection, management, translation, and extraction tools to service HSCB models, in order to facilitate the integration of current and emerging data sets into appropriate data stores and exploit data in forms appropriate for the models users need to address HSCB problem domains and applications. *FY 2013 Plans:*	1.866	1.200	0.000

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Office of Secretary Of Defense		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	**PROJECT** P670: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*

B. Accomplishments/Planned Programs ($ in Millions)	FY 2012	FY 2013	FY 2014
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 of, and demonstrate, transition-ready automated data collection, management, translation, and extraction tools to service HSCB models.			
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. *FY 2012 Accomplishments:* Conducted transition focused risk reduction activities designed to ensure that technologies targeted to end user and program of record requirements are brought through an appropriately scoped systems engineering and technical/theoretical assessment process. *FY 2013 Plans:* 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.	1.866	0.400	0.000
Accomplishments/Planned Programs Subtotals	7.037	5.131	0.000

C. Other Program Funding Summary ($ in Millions)

Line Item	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
• PE 0602670D8Z BA 2: *HSCB Applied Research*	7.658	6.771	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing
• PE 0603670D8Z BA 3: *HSCB Advanced Development*	12.153	8.235	0.000		0.000	0.000	0.000	0.000	0.000	Continuing	Continuing

Remarks

D. Acquisition Strategy

   The Program produces software prototypes configured for use in programs such as the Distributed Common Ground System (DCGS). 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.

Exhibit R-2A, **RDT&E Project Justification:** PB 2014 Office of Secretary Of Defense		**DATE:** April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	**PROJECT** P670: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*

E. Performance Metrics

  N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Office of Secretary Of Defense			DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 4: Advanced Component Development & Prototypes (ACD&P)	R-1 ITEM NOMENCLATURE PE 0604670D8Z: Human Social Culture Behavior (HSCB) Modeling Research and Engineering	PROJECT P670: Human Social Culture Behavior (HSCB) Modeling Research and Engineering

Product Development ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Product Development	MIPR	Various:Various	-	1.618		4.366		-		-		-	Continuing	Continuing	
Product Development	MIPR	BBN Technologies Corp:Cambridge, MA	-	1.369		0.000		-		-		-	Continuing	Continuing	
Product Development	MIPR	Lockheed Martin Corp:King of Prussia, PA	-	2.927		0.000		-		-		-	Continuing	Continuing	
		Subtotal	0.000	5.914		4.366		0.000		0.000		0.000			

Support ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Support Costs	MIPR	Various:Various	-	0.075		0.090		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.075		0.090		0.000		0.000		0.000			

Test and Evaluation ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Test and Evaluation	MIPR	Various:Various	-	0.300		0.375		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.300		0.375		0.000		0.000		0.000			

Management Services ($ in Millions)

Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	FY 2012 Cost	FY 2012 Award Date	FY 2013 Cost	FY 2013 Award Date	FY 2014 Base Cost	FY 2014 Base Award Date	FY 2014 OCO Cost	FY 2014 OCO Award Date	FY 2014 Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Management Services	MIPR	Various:Various	-	0.748		0.300		0.000		-		0.000	Continuing	Continuing	
		Subtotal	0.000	0.748		0.300		0.000		0.000		0.000			

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Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Office of Secretary Of Defense									DATE: April 2013	

APPROPRIATION/BUDGET ACTIVITY
0400: *Research, Development, Test & Evaluation, Defense-Wide*
BA 4: *Advanced Component Development & Prototypes (ACD&P)*

R-1 ITEM NOMENCLATURE
PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*

PROJECT
P670: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*

	All Prior Years	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	7.037	5.131	0.000	0.000	0.000			

Remarks

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Exhibit R-4, **RDT&E Schedule Profile:** PB 2014 Office of Secretary Of Defense		**DATE:** April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	**PROJECT** P670: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*

	FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017				FY 2018			
	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
Spiral 2 of projects selected in FY 2009/2010 for influence analysis modeling, COA analysis, and decision support modeling tools	▮																											
Spiral 3 of projects selected in FY 2009/2010 for influence analysis modeling, COA analysis, and decision support modeling tools		▮▮▮																										
Spiral 2 of modeling and visualization framework	▮																											
Spiral 3 of modeling and visualization framework		▮																										
Spiral 1 of projects selected in FY 2011	▮▮																											
Spiral 2 of FY 2011 projects		▮																										
Spiral 3 of FY 2011 projects			▮▮																									

PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Modeling Rese...*

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Office of Secretary Of Defense		DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY 0400: *Research, Development, Test & Evaluation, Defense-Wide* BA 4: *Advanced Component Development & Prototypes (ACD&P)*	**R-1 ITEM NOMENCLATURE** PE 0604670D8Z: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*	**PROJECT** P670: *Human Social Culture Behavior (HSCB) Modeling Research and Engineering*

Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Spiral 2 of projects selected in FY 2009/2010 for influence analysis modeling, COA analysis, and decision support modeling tools	1	2012	1	2012
Spiral 3 of projects selected in FY 2009/2010 for influence analysis modeling, COA analysis, and decision support modeling tools	2	2012	2	2013
Spiral 2 of modeling and visualization framework	1	2012	2	2012
Spiral 3 of modeling and visualization framework	3	2012	4	2012
Spiral 1 of projects selected in FY 2011	1	2012	1	2013
Spiral 2 of FY 2011 projects	2	2013	4	2013
Spiral 3 of FY 2011 projects	1	2014	4	2014