

**UNCLASSIFIED**

**Exhibit R-2, RDT&E Budget Item Justification:** PB 2017 The Joint Staff **Date:** February 2016

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 6: RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0303166J <i>I Support to Information Operations Capability</i>
--	---

COST (\$ in Millions)	Prior Years	FY 2015	FY 2016	FY 2017 Base	FY 2017 OCO	FY 2017 Total	FY 2018	FY 2019	FY 2020	FY 2021	Cost To Complete	Total Cost
Total Program Element	12.323	11.552	10.404	0.857	-	0.857	0.673	0.673	0.673	0.781	Continuing	Continuing
001: <i>Information Operations Range</i>	12.323	11.552	10.404	0.857	-	0.857	0.673	0.673	0.673	0.781	Continuing	Continuing
Quantity of RDT&E Articles	-	-	-	-	-	-	-	-	-	-		

**A. Mission Description and Budget Item Justification**

The Joint Information Operations Range (JIOR) provides DoD a closed-loop, persistent, geographically distributed network to conduct training, testing, and experimentation in support of Computer Network Attack (CNA)/Computer Network Defense (CND) in a threat representative environment with realistic and relevant targets and command & control systems of interest. JIOR uniquely provides Services, Combatant Commanders (CCMD), and other government agencies the ability to test deployment and collaboratively gain insights into advanced Cyberspace, Information Operations (IO), and Electronic Warfare (EW) capabilities under current and future operational environment conditions. JIOR integrates other cyberspace ranges, replicates critical infrastructure, cyber targets, Internet traffic, and opposing forces. These provide the capacity to meet Presidential policy and CJCS mandates for training and certification of 6000+ cyber warriors by 2017 and DoD/Interagency cyber vulnerability assessments. The JIOR security construct allows users to develop, test, and secure their unique cyber capabilities and protect their identity during range activities. The JIOR conducts multiple, simultaneous, and disparate training, testing, and experimentation events.

<b>B. Program Change Summary (\$ in Millions)</b>	<u>FY 2015</u>	<u>FY 2016</u>	<u>FY 2017 Base</u>	<u>FY 2017 OCO</u>	<u>FY 2017 Total</u>
Previous President's Budget	11.552	10.413	0.857	-	0.857
Current President's Budget	11.552	10.404	0.857	-	0.857
Total Adjustments	0.000	-0.009	0.000	-	0.000
• Congressional General Reductions	-	-0.009			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-	-			
• SBIR/STTR Transfer	-	-			

**Change Summary Explanation**

The majority of funding for the Joint IO range shifted to the Operation and Maintenance appropriation (same program element) for proper execution. A program requirements review determined most of the cost for the range was in the operation and maintenance of systems, support contracts, and overhead expenses, better suited for the O&M appropriation.

**UNCLASSIFIED**

<b>Exhibit R-2, RDT&amp;E Budget Item Justification:</b> PB 2017 The Joint Staff		<b>Date:</b> February 2016		
<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide I BA 6: RDT&amp;E Management Support</i>		<b>R-1 Program Element (Number/Name)</b> PE 0303166J <i>I Support to Information Operations Capability</i>		
<b>C. Accomplishments/Planned Programs (\$ in Millions)</b>		<b>FY 2015</b>	<b>FY 2016</b>	<b>FY 2017</b>
<p><b>Title:</b> Information Operations Range</p> <p><b>Description:</b> The Joint Information Operations Range (JIOR) is a closed-loop network that forms a live-fire range utilizing encrypted tunneling over existing networks to conduct training, testing, and experimentation in support of Information Operations (IO), Electronic Warfare (EW), Computer Network Attack (CNA)/Computer Network Defense (CND)), and Cyberspace mission areas in a threat representative environment.</p> <p><b>FY 2015 Accomplishments:</b></p> <p>(1) Expanded national, DoD, and Inter-Agency awareness and support regarding IO and cyber related activities.                  (2) Improved the threat representation and operational relevance of the network.                  (3) Improved the integration of Live Virtual Constructive (LVC) simulations with other Joint training and testing communities and infrastructures.</p> <p><b>FY 2016 Plans:</b>                  Continues FY 2015 efforts:</p> <p>(1) Expand national, DoD, and Inter-Agency awareness and support regarding IO and cyber related activities.                  (2) Improve the threat representation and operational relevance of the network.                  (3) Improve the integration of LVC simulations with other Joint training and testing communities and infrastructures.</p> <p><b>FY 2017 Plans:</b>                  The Joint Staff conducted a thorough program review and determined the majority of IO Range expenses were better suited to the O&amp;M appropriation for proper execution.</p> <p>(1) Continues FY2016 efforts.                  (2) Evaluate and deploy network automation tools to better manage the JIOR.</p>		11.552	10.404	0.857
<b>Accomplishments/Planned Programs Subtotals</b>		11.552	10.404	0.857
<b>D. Other Program Funding Summary (\$ in Millions)</b>				
N/A				
<b>Remarks</b>				

UNCLASSIFIED

Exhibit R-2, RDT&E Budget Item Justification: PB 2017 The Joint Staff Date: February 2016

<b>Appropriation/Budget Activity</b> 0400: <i>Research, Development, Test &amp; Evaluation, Defense-Wide</i> / BA 6: <i>RDT&amp;E Management Support</i>	<b>R-1 Program Element (Number/Name)</b> PE 0303166J / <i>Support to Information Operations Capability</i>
--	---

**E. Acquisition Strategy**

The Joint IO Range manages the development and expansion of Joint IO Range capabilities to an increasing number of customers. Integration into the Joint Exercise program has allowed users to increase the use and capability of the range. Continued development of tools for the range will be required as adversarial capabilities improve. Automation of JIOR scheduling and network reconfiguration will be critical to increasing capacity and meeting user demands.

The Joint Staff conducted a thorough program review and determined the majority of IO Range expenses were better suited to the O&M appropriation for proper execution.

Continues FY2016 efforts:

- (1) Expand national, DoD, and Inter-Agency awareness and support regarding IO and cyber related activities.
- (2) Improve the threat representation and operational relevance of the network.
- (3) Improve the integration of LVC simulations with other Joint training and testing communities and infrastructures.

Evaluate and deploy network automation tools to better manage the JIOR.

**F. Performance Metrics**

The Joint Staff conducted a thorough program review and determined the majority of IO Range expenses were better suited to the O&M appropriation for proper execution.

Measures: JIOR modernization results in reduced network reconfiguration time for use and reuse of DoD Enterprise Cyber Range Environment (DECRE) ranges.

- Number of Defense Research an Engineering Network (DREN) circuits remaining and rate of replacement with Defense Information Systems Network (DISN) circuits (Cost).
- Estimated man-hours saved due to transforming manual paper-driven planning processes to on-demand automated services (Schedule).
- Sufficient capacity & agility to support Cyber Mission Forces force development and MDAP/C2 systems cybersecurity assessments & testing (Outcomes).
- Improved rapid response for short-notice mission rehearsal requirements from days to on-demand (Outcomes).

**UNCLASSIFIED**

**THIS PAGE INTENTIONALLY LEFT BLANK**

**UNCLASSIFIED**