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Exhibit R-2, RDT&E Budget Item Justification: PB 2013 Office of Secretary Of Defense	DATE: February 2012
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APPROPRIATION/BUDGET ACTIVITY 0400: <i>Research, Development, Test & Evaluation, Defense-Wide</i> BA 5: <i>Development & Demonstration (SDD)</i>	R-1 ITEM NOMENCLATURE PE 0605140D8Z: <i>Trusted Foundry</i>
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COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Total Program Element	33.627	-	-	-	-	-	-	-	-	Continuing	Continuing
Trusted Foundry: <i>P014</i>	33.627	-	-	-	-	-	-	-	-	Continuing	Continuing

Note
The Trusted Foundry PE 0605140D8Z transfered to the Defense Logistics Agency in FY 2012.

A. Mission Description and Budget Item Justification

The Department of Defense (DoD) and National Security Agency (NSA) require uninterrupted access to state-of-the-art design and manufacturing processes to produce custom integrated circuits designed specifically for military purposes. In accordance with DoD Instruction 5200.39, integrated circuits in critical/essential systems need to be procured from trusted sources in order to avoid counterfeit, tampered, or sabotaged parts. Worldwide competition from foreign state-subsidized manufacturing facilities (foundries) is making fabless semiconductor companies the norm in the United States. Sophisticated off-shore design and manufacturing facilities with engineering labor rates vastly less than U.S. engineering rates have resulted in outsourcing of electronics components and integrated circuits. These trends threaten the integrity and worldwide leadership of the U.S. semiconductor industry by eliminating many domestic on-shore suppliers and reducing access to trusted fabrication sources for advanced technology. These trends are of acute concern to the defense and intelligence community. Secure communications and cryptographic applications depend heavily upon high performance semiconductors where a generation of improvement can translate into a significant force multiplier and capability advantage. Important defense technology investments and demonstrations carry size, weight, power, and performance goals that can only be met through the use of the most sophisticated semiconductors.

The Trusted Foundry program provides DoD and NSA with trusted state-of-the-art microelectronics design and manufacturing capabilities necessary to meet the performance and delivery needs of their customers. The program will also provide the Services with a competitive cadre of trusted suppliers that will meet the needs of their mission critical/essential systems for trusted integrated circuit components. NSA, in their role as the Trusted Access Program Office, has successfully looked to commercial sources to satisfy their requirements. Access to trusted suppliers is imperative to ongoing and future DoD/NSA systems, and most centrally, Trusted Foundry access is absolutely necessary to meet secure communication and cryptographic needs for state-of-the-art semiconductor technologies.

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B. Program Change Summary (\$ in Millions)	<u>FY 2011</u>	<u>FY 2012</u>	<u>FY 2013 Base</u>	<u>FY 2013 OCO</u>	<u>FY 2013 Total</u>
Previous President's Budget	35.512	-	-	-	-
Current President's Budget	33.627	-	-	-	-
Total Adjustments	-1.885	-	-	-	-
• Congressional General Reductions	-	-			
• Congressional Directed Reductions	-	-			
• Congressional Rescissions	-	-			
• Congressional Adds	-	-			
• Congressional Directed Transfers	-	-			
• Reprogrammings	-0.623	-			
• SBIR/STTR Transfer	-0.942	-			
• Economic Assumptions	-0.180	-	-	-	-
• FFRDC	-0.130	-	-	-	-
• Other Program Adjustments	-0.010	-	-	-	-

Change Summary Explanation

The Trusted Foundry PE 0605140D8Z transfered to the Defense Logistics Agency in FY 2012.

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Exhibit R-2A, RDT&E Project Justification: PB 2013 Office of Secretary Of Defense									DATE: February 2012		
APPROPRIATION/BUDGET ACTIVITY 0400: Research, Development, Test & Evaluation, Defense-Wide BA 5: Development & Demonstration (SDD)				R-1 ITEM NOMENCLATURE PE 0605140D8Z: Trusted Foundry				PROJECT Trusted Foundry: P014			
COST (\$ in Millions)	FY 2011	FY 2012	FY 2013 Base	FY 2013 OCO	FY 2013 Total	FY 2014	FY 2015	FY 2016	FY 2017	Cost To Complete	Total Cost
Trusted Foundry: P014	33.627	-	-	-	-	-	-	-	-	Continuing	Continuing
Quantity of RDT&E Articles											
A. Mission Description and Budget Item Justification											
<p>The Department of Defense (DoD) and National Security Agency (NSA) require uninterrupted access to state-of-the-art design and manufacturing processes to produce custom integrated circuits designed specifically for military purposes. In accordance with DoD Instruction 5200.39, integrated circuits in critical/essential systems need to be procured from trusted sources in order to avoid counterfeit, tampered, or sabotaged parts. Worldwide competition from foreign state-subsidized manufacturing facilities (foundries) is making fabless semiconductor companies the norm in the United States. Sophisticated off-shore design and manufacturing facilities with engineering labor rates vastly less than U.S. engineering rates have resulted in outsourcing of electronics components and integrated circuits. These trends threaten the integrity and worldwide leadership of the U.S. semiconductor industry by eliminating many domestic on-shore suppliers and reducing access to trusted fabrication sources for advanced technology. These trends are of acute concern to the defense and intelligence community. Secure communications and cryptographic applications depend heavily upon high performance semiconductors where a generation of improvement can translate into a significant force multiplier and capability advantage. Important defense technology investments and demonstrations carry size, weight, power, and performance goals that can only be met through the use of the most sophisticated semiconductors.</p>											
<p>The Trusted Foundry program provides DoD and NSA with trusted state-of-the-art microelectronics design and manufacturing capabilities necessary to meet the performance and delivery needs of their customers. The program will also provide the Services with a competitive cadre of trusted suppliers that will meet the needs of their mission critical/essential systems for trusted integrated circuit components. NSA, in their role as the Trusted Access Program Office, has successfully looked to commercial sources to satisfy their requirements. Access to trusted suppliers is imperative to ongoing and future DoD/NSA systems, and most centrally, Trusted Foundry access is absolutely necessary to meet secure communication and cryptographic needs for state-of-the-art semiconductor technologies.</p>											
B. Accomplishments/Planned Programs (\$ in Millions)								FY 2011	FY 2012	FY 2013	
Title: Trusted Foundry								33.627	-	-	
FY 2011 Accomplishments: Established a cadre of trusted suppliers for the critical trusted components and services needed for appropriate Defense systems. This included design, fabrication, aggregation, packaging and testing. Enhanced Trusted Foundry products to include key specialty processes requested by DoD programs, such as high voltage, extreme environments, and embedded non-volatile memory. For example the high performance silicon germanium bipolar/CMOS technology ("9HP"). Completed 26 CMOS and BICMOS runs for DoD programs, delivering thousands of individual dye.											
Accomplishments/Planned Programs Subtotals								33.627	-	-	

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C. Other Program Funding Summary (\$ in Millions) N/A		
D. Acquisition Strategy NSA has negotiated a "commercial" capacity type IDIQ contract with IBM with 10 one-year options. IBM will provide custom and semi-custom integrated circuit parts in production and prototype quantities to meet DoD/NSA leading-edge integrated circuit needs. Additional suppliers of leading-edge production processes will be developed and accredited as Trusted Suppliers by the DMEA. This will provide program managers the flexibility to acquire trusted parts appropriate to the minimum risk and vulnerability of their particular system needs. Process IP will be obtained from trusted suppliers to assure the availability of parts over the long term.		
E. Performance Metrics N/A		

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Exhibit R-4, RDT&E Schedule Profile: PB 2013 Office of Secretary Of Defense										DATE: February 2012			
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	FY 2011				FY 2012				FY 2013				FY 2014				FY 2015				FY 2016				FY 2017			
	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
Funding Received																												
Aggregate Volume Purchase Agreements																												
Intellectual Property (IP)																												
Security Upgrades																												
Certify Trusted Suppliers																												
Form Partnerships with Suppliers to Improve the Infrastructure for Trust																												
Accreditation of Trusted Suppliers																												
Post 2016 Plans and Backup Operations																												

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Exhibit R-4A, RDT&E Schedule Details: PB 2013 Office of Secretary Of Defense			DATE: February 2012
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Schedule Details

Events	Start		End	
	Quarter	Year	Quarter	Year
Funding Received	1	2011	4	2011
Aggregate Volume Purchase Agreements	1	2011	4	2011
Intellectual Property (IP)	1	2011	4	2011
Security Upgrades	1	2011	4	2011
Certify Trusted Suppliers	1	2011	4	2011
Form Partnerships with Suppliers to Improve the Infrastructure for Trust	2	2011	4	2011
Accreditation of Trusted Suppliers	2	2011	4	2011
Post 2016 Plans and Backup Operations	2	2011	4	2011