Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

2040: Research, Development, Test & Evaluation, Army

PE 0604746A: Automatic Test Equipment Development

BA 5: Development & Demonstration (SDD)

COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost
Total Program Element	17.020	15.240	14.041	0.000	14.041	14.425	13.737	15.035	15.257	Continuing	Continuing
L59: DIAGNOST/EXPERT SYS DE	13.552	11.698	10.609	0.000	10.609	10.917	11.179	11.378	11.557	Continuing	Continuing
L65: Test Equipment Development	3.468	3.542	3.432	0.000	3.432	3.508	2.558	3.657	3.700	Continuing	Continuing

A. Mission Description and Budget Item Justification

This program element (PE) provides for development and testing of general-purpose test equipment and of state-of-the-art diagnostics and prognostics technology, software and systems to support the increasingly complex electronic components of the Army's new and upgraded weapon systems. It focuses on implementation of commercial test and diagnostic technologies across multiple weapon platforms to minimize the cost of troubleshooting and maintenance of Army equipment in the field. Modular, reconfigurable automatic and semi-automatic systems are developed under this program to satisfy weapon system test and diagnostics requirements. The Next Generation Automatic Test System (NGATS) currently under development will provide state-of-the-art test and diagnostic capabilities to support current and future weapon systems. It is the platform for transitioning Agile Rapid Global Combat Support System (ARGCS) technologies into the Army weapon system support structure, and will replace several aging automatic test systems (ATS) which are becoming prohibitively expensive to operate and maintain. This PE also provides for continued development and improvement of general-purpose test equipment and calibration standards with emphasis on the incorporation of digital electronics and tailoring of configurations to improve deployability, mobility and survivability of the support equipment. Artificial intelligence and anticipatory maintenance applications are being developed to support the integration of self-diagnostic capabilities in Army weapons and support systems. The goal of these efforts is to reduce logistics burdens and improve readiness by minimizing the need for external testers and improving the troubleshooting abilities of soldiers in the field.FY11 Base funding for this program continues development in accordance with Department of Defense and Army policies of the Army standard Next Generation Automatic Test System which will improve deployability and mobility of test and diagnostic equipment and replace aging and obso

Exhibit R-2, RDT&E Budget Item Justification: PB 2011 Army DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

2040: Research, Development, Test & Evaluation, Army

PE 0604746A: Automatic Test Equipment Development

BA 5: Development & Demonstration (SDD)

B. Program Change Summary (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Previous President's Budget	18.521	15.320	14.099	0.000	14.099
Current President's Budget	17.020	15.240	14.041	0.000	14.041
Total Adjustments	-1.501	-0.080	-0.058	0.000	-0.058
 Congressional General Reductions 		-0.080			
 Congressional Directed Reductions 		0.000			
 Congressional Rescissions 	0.000	0.000			
 Congressional Adds 		0.000			
 Congressional Directed Transfers 		0.000			
 Reprogrammings 	-1.000	0.000			
 SBIR/STTR Transfer 	-0.501	0.000			
 Adjustments to Budget Years 	0.000	0.000	-0.058	0.000	-0.058

Change Summary Explanation

FY11 funding of \$58 thousand realigned to higher priority requirements.

DATE: February 2010

Exhibit N-2/1, ND 1 CD 110 Jett Sustincation: 1 D 2011 / Miny						Dittie. I coi	uary 2010				
APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE			PROJECT								
2040: Research, Development, Test & E	Evaluation, Ar	my		PE 0604746A: Automatic Test Equipment L			L59: DIAGNOST/EXPERT SYS DE				
BA 5: Development & Demonstration (SDD)			Development	<u> </u>						
			FY 2011	FY 2011	FY 2011						
COST (\$ in Millions)	FY 2009	FY 2010	Base	OCO	Total	FY 2012	FY 2013	FY 2014	FY 2015	Cost To	
	Actual	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Estimate	Complete	Total Cost
L59: DIAGNOST/EXPERT SYS DE	13.552	11.698	10.609	0.000	10.609	10.917	11.179	11.378	11.557	Continuing	Continuing
Quantity of RDT&E Articles											

A. Mission Description and Budget Item Justification

Exhibit R-2A RDT&E Project Justification: PR 2011 Army

This project funds development of and system enhancements for the Next Generation Automatic Test System (NGATS). The NGATS is a general-purpose automatic test system (ATS) that will provide test and diagnostic capabilities required to support current and future weapons and combat support systems and will facilitate retirement of aging and obsolete test equipment that is imposing increasing logistics and operations and support cost burdens. It is the platform for transitioning Agile Rapid Global Combat Support System (ARGCS) technologies into the Army weapon system support structure. The ARGCS initiative was sponsored by the Department of Defense, and all Services are expected to transition demonstrated technologies into their ATS programs. This project also provides for continuing efforts to upgrade and improve general-purpose automatic test equipment to satisfy test and diagnostic requirements of the Army's new and upgraded weapon systems; development and adaptation of automatic test equipment required to overcome existing deficiencies and voids in organic test and diagnostic capabilities; development and testing of common procedures utilizing existing test program sets and software applications; and market surveys of commercially available test equipment, methods and procedures to determine applicability to Army requirements. The test and diagnostic systems and procedures developed under this project are essential for ensuring the operational readiness, accuracy and effectiveness of the Army's warfighting systems.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	5.952	0.000	0.000	0.000	0.000
FY09: Continued NGATS Increment 1 design improvements and testing resulting from operational test					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipment Development		PROJECT L59: DIAGN	OST/EXPER	T SYS DE		
B. Accomplishments/Planned Program (\$ in Millions)							
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #2		4.000	0.000	0.000	0.000	0.000	
FY09: Continued rehost, test, and evaluation of initial complement NGATS first unit equipped	of Abrams/Bradley test program sets (TPS) for						
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #3		3.000	0.000	0.000	0.000	0.000	
FY09: Continued development of NGATS initial logistics support manuals and calibration)	products (including provisioning, technical						
FY 2009 Accomplishments: FY 2009							

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	ruary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipmen Development	nt	PROJECT L59: DIAGN	PROJECT L59: DIAGNOST/EXPERT SYS DE		
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #4		0.100	0.000	0.000	0.000	0.000
FY09: Began development and testing of hardware and software for NGAT (EO) subsystem to include the capability to support new ground and aerial vehicles)						
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #5		0.500	0.000	0.000	0.000	0.000
FY09: Continued developmental and operational follow-on testing activities	es					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipment Development		PROJECT L59: <i>DIAGN</i>	PROJECT L59: <i>DIAGNOST/EXPERT SYS DE</i>		
B. Accomplishments/Planned Program (\$ in Millions)	<u> </u>					
	FY	2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #6		0.000	2.547	0.000	0.000	0.000
FY10: Complete NGATS Increment 1 design improvements and	testing resulting from operational test					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #7		0.000	4.074	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	ruary 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipme Development	ent	PROJECT L59: DIAGN	OJECT 9: DIAGNOST/EXPERT SYS DE			
B. Accomplishments/Planned Program (\$ in Millions)							
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY10: Continue rehost, test, and evaluation of initial complement of Abrar NGATS first unit equipped	ms/Bradley test program sets (TPS) for						
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #8		0.000	3.000	0.000	0.000	0.000	
FY10: Continue development of NGATS initial logistics support products manuals and calibration)	(including provisioning, technical						
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipm Development	nent	PROJECT L59: DIAGNOST/EXPERT SYS DE				
B. Accomplishments/Planned Program (\$ in Millions)							
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2011 OCO Plans: FY 2011 OCO							
Program #9		0.000	0.200	0.000	0.000	0.000	
FY10: Continue development and testing of hardware and software optics (EO) subsystem to include the capability to support new gray ground vehicles)							
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #10		0.000	0.800	0.000	0.000	0.000	
FY10: Continue developmental and operational follow-on testing	activities						
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipme Development	nt	PROJECT L59: DIAGN	OST/EXPERT	T SYS DE	
B. Accomplishments/Planned Program (\$ in Millions)						
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #11		0.000	0.750	0.000	0.000	0.000
FY10: Develop and test hardware and software for NGATS Increme	ent 2 system					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #12		0.000	0.000	4.309	0.000	4.309
FY11: Rehost, test, and evaluate initial complement of Abrams/Brad unit equipped	lley test program sets (TPS) for NGATS first					
FY 2009 Accomplishments: FY 2009						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	hibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010				
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipme Development	ent	PROJECT L59: DIAGN	CT AGNOST/EXPERT SYS DE				
B. Accomplishments/Planned Program (\$ in Millions)								
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total		
FY 2010 Plans: FY 2010								
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #13		0.000	0.000	0.750	0.000	0.750		
FY11: Complete development of NGATS initial logistics suppormanuals and calibration)	t products (including provisioning, technical							
FY 2009 Accomplishments: FY 2009								
FY 2010 Plans: FY 2010								
FY 2011 Base Plans: FY 2011 Base								
FY 2011 OCO Plans: FY 2011 OCO								
Program #14		0.000	0.000	1.500	0.000	1.500		
FY11: Develop and test hardware and software for NGATS Incre- include the capability to support new ground and aerial sensors for								

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010			
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipme Development	ent	PROJECT L59: DIAGN	NOST/EXPERT	T SYS DE	
B. Accomplishments/Planned Program (\$ in Millions)			I			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #15		0.000	0.000	1.500	0.000	1.500
FY11: Complete developmental and operational follow-on testing ac	tivities					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #16		0.000	0.000	0.750	0.000	0.750

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: Febr	ruary 2010					
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipme Development	PROJECT L59: DIAGNOST/EXPERT SYS DE							
B. Accomplishments/Planned Program (\$ in Millions)									
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total			
FY11: Develop and test hardware and software for NGATS Increment 2 sy	stem								
FY 2009 Accomplishments: FY 2009									
FY 2010 Plans: FY 2010									
FY 2011 Base Plans: FY 2011 Base									
FY 2011 OCO Plans: FY 2011 OCO									
Program #17		0.000	0.000	0.500	0.000	0.500			
FY11: Develop expanded general-purpose shop replaceable unit diagnostic	capability								
FY 2009 Accomplishments: FY 2009									
FY 2010 Plans: FY 2010									
FY 2011 Base Plans: FY 2011 Base									
FY 2011 OCO Plans: FY 2011 OCO									

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: Febr	uary 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipment Development	ent	PROJECT L59: DIAGN	NOST/EXPER		
B. Accomplishments/Planned Program (\$ in Millions)		1				
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #18		0.000	0.000	1.000	0.000	1.000
FY11: Initiate redesign, test and evaluation of Abrams/Bradley tes	t program sets					
FY 2009 Accomplishments: FY 2010 Plans: FY 2010 Plans: FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans: FY 2011 OCO						
Program #19		0.000	0.000	0.300	0.000	0.300
FY11: Develop software capabilities to incorporate common logist and embedded diagnostics data collection and analysis for closed lecondition-based maintenance FY 2009 Accomplishments: FY 2009 FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	DATE: February 2010		
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
2040: Research, Development, Test & Evaluation, Army	PE 0604746A: Automatic Test Equipment	L59: <i>DIAGN</i>	NOST/EXPERT SYS DE
BA 5: Development & Demonstration (SDD)	Development		

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO					
Program #20	0.000	0.327	0.000	0.000	0.000
FY10: Small Business Innovative Research/Small Business Technology Transfer programs					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	13.552	11.698	10.609	0.000	10.609

C. Other Program Funding Summary (\$ in Millions)

			FY 2011	FY 2011	FY 2011					Cost To	
<u>Line Item</u>	FY 2009	FY 2010	Base	OCO	<u>Total</u>	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
• Ord. #1: <i>OPA3</i> , <i>MB4000</i> , <i>Integrated</i>	46.159	102.524	104.472	0.622	105.094	100.206	46.545	83.236	53.266	Continuing	Continuing
Family of Test Equipment (IFTE)											

D. Acquisition Strategy

This developmental project consists of cooperative in-house and competitive and sole-source contractual actions. When the necessary expertise and capability are available within the Department of Defense, services required for the individual development projects are ordered from the government source; otherwise, commercial contracts are used. Equipment

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Exhibit R-2A, RDT&E Project Justification: PB 2011 Army		DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
2040: Research, Development, Test & Evaluation, Army	PE 0604746A: Automatic Test Equipment	L59: DIAGNOST/EXPERT SYS DE
BA 5: Development & Demonstration (SDD)	Development	
required for developmental projects is obtained by contract from the obeing completed under a sole-source contract awarded to the prime of acquisition strategy using spiral development. The NGATS Incremental Base Shop Test Facility (BSTF) (V)3 and BSTF (V)5 systems respectively.	ontractor for the Integrated Family of Test Equipment off nt 1 will replace the Direct Support Electrical Systems Te	-platform testers. NGATS will follow an evolutionary
E. Performance Metrics		
Performance metrics used in the preparation of this justification mate	erial may be found in the FY 2010 Army Performance Bu	dget Justification Book, dated May 2010.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army

PE 0604746A: Automatic Test Equipment

L59: DIAGNOST/EXPERT SYS DE

BA 5: Development & Demonstration (SDD)

Development

Product Development (\$ in Millions)

				FY :	2010		2011 ase	FY :	2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Prototype Development	SS	Northrop Grumman Rolling Meadows, IL	13.472	0.000		0.000		0.000		0.000	Continuing	Continuing	13.472
Hardware/Support Items Development	SS	Northrop Grumman Rolling Meadows, IL	47.000	5.000		2.250		0.000		2.250	Continuing	Continuing	0
Software Development/ Verification/Validation	SS	Northrop Grumman Rolling Meadows, IL	4.239	3.879		6.110		0.000		6.110	Continuing	Continuing	0
		Subtotal	64.711	8.879		8.360		0.000		8.360			13.472

Remarks

Support (\$ in Millions)

		_										
			FY 2	2010		-		-	FY 2011 Total			
Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
С	Various Location could not be determined.	43.590	1.542		0.600		0.000		0.600	Continuing	Continuing	0
С	Various Location could not be determined.	1.390	0.500		0.400		0.000		0.400	Continuing	Continuing	0
	Method & Type C	Method & Activity & Location Various C Location could not be determined. Various C Location could not be determined.	Method & Activity & Total Prior Years Cost Various Location could not be determined. Various C Various Location could not be determined. Various Location could not 1.390	Contract Method Activity & Total Prior Location Years Cost Various Location could not be determined. C Various Location could not be determined. C Location could not Location could not be determined.	Method & Type Activity & Location Total Prior Years Cost Cost Award Date C Various Location could not be determined. 43.590 1.542 C Various Location could not	Contract Method Activity & Total Prior Location Years Cost Cost Award Date Cost Various Location could not be determined. C Various Location could not be determined. C Location could not Location could not be determined.	Contract Method & Type Performing Activity & Location Total Prior Years Cost Cost Award Date Cost Award Date C Various Location could not be determined. 43.590 1.542 0.600 C Various Location could not Location could	Contract Method Activity & Total Prior Location Vears Cost Cost Award Date Cost Award Date Cost Cost Various Location could not be determined. C Various Location could not be determined. C Location could not Location could not be determined. C Location could not Location cou	Contract Method Activity & Total Prior Location Vears Cost Cost Award Date Cost Award Date	Contract Method Activity & Total Prior Location Various C Various C Various C Location could not be determined. C Location could not Location C Location	Contract Performing Activity & Total Prior Location Various Cost Location could not be determined. Cost Location could not be determin	Contract Method Activity & Total Prior Location Various C Various C Various C Location could not be determined. C Various C Location could not be determined. C Location could not Location C Locati

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army

PE 0604746A: Automatic Test Equipment

L59: DIAGNOST/EXPERT SYS DE

BA 5: Development & Demonstration (SDD)

Development

Support (\$ in Millions)

				FY	2010		2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
		Subtotal	44.980	2.042		1.000		0.000		1.000			0.000

Remarks

Test and Evaluation (\$ in Millions)

				FY	FY 2010		2011 ase	FY 2011 OCO					
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Operational Testing	C/Various	Various Location could not be determined.	2.814	0.000		1.000		0.000		1.000	Continuing	Continuing	0
Developmental Testing	C/Various	Various Location could not be determined.	0.597	0.450		0.249		0.000		0.249	Continuing	Continuing	0
		Subtotal	3.411	0.450		1.249		0.000		1.249			0.000

Remarks

Test Program Set (TPS) test and evalutation is included in the product development cost.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army

PE 0604746A: Automatic Test Equipment

L59: DIAGNOST/EXPERT SYS DE

BA 5: Development & Demonstration (SDD)

Development

Management Services (\$ in Millions)

				FY 2	2010		2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
SBIR/STTR	С	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.327		0.000		0.000		0.000	Continuing	Continuing	0
		Subtotal	0.000	0.327		0.000		0.000		0.000			0.000

Remarks

										Target
	Total Prior Years Cost	FY 2010	FY :	2011 ase	FY:	2011 CO	FY 2011 Total	Cost To Complete	Total Cost	Value of Contract
Project Cost Totals	113.102	11.698	10.609		0.000		10.609			13.472

Exhibit R-4, RDT&E Schedule Profile: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604746A: Automatic Test Equipment

Development

PROJECT

L59: DIAGNOST/EXPERT SYS DE

]	FY 2009		F	Y 2	201	0 FY 2011 FY			FY 2012		FY 2013		3	FY 2014			1	FY 2	201	FY 2015							
	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
Milestone C		#																										
Full Rate Production Decision Review												#																
Full Materiel Release													#															
First Unit Equipped														#														
NGATS Testing (Increment 1)								#	#	#																		
NGATS Production (Increment 1)			#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	#	
NGATS SDD (Increment 2)			#	#	#	#	#	#	#	#	#																	
NGATS Testing (Increment 2)							#	#	#	#	#	#	#	#	#	#	#	#	#									
NGATS SDD (Increment 3)							#	#	#	#	#	#	#	#	#													
NGATS Testing (Increment 3)															#	#	#	#	#	#	#	#	#					
NGATS P3I - Netcentric																			#	#	#	#	#	#	#	#	#	
New Systems Test Capability																			#	#	#	#	#	#	#	#	#	

Exhibit R-4A, RDT&E Schedule Details: PB 2011 Army

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army
BA 5: Development & Demonstration (SDD)

PROJECT

PE 0604746A: Automatic Test Equipment
Development

Development

Development

Schedule Details

	St	art	En	ıd
Event	Quarter	Year	Quarter	Year
Milestone C	2	2009	2	2009
Full Rate Production Decision Review	4	2011	4	2011
Full Materiel Release	1	2012	1	2012
First Unit Equipped	2	2012	2	2012
NGATS Testing (Increment 1)	4	2010	2	2011
NGATS Production (Increment 1)	3	2009	3	2015
NGATS SDD (Increment 2)	3	2009	3	2011
NGATS Testing (Increment 2)	3	2010	3	2013
NGATS SDD (Increment 3)	3	2010	3	2012
NGATS Testing (Increment 3)	3	2012	3	2014
NGATS P3I - Netcentric	3	2013	3	2015
New Systems Test Capability	3	2013	3	2015

DATE: February 2010

Exhibit K-2A, KD I &E I Toject Justin	ication. FD 20	JII Allily							DATE. Peul	uary 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)				R-1 ITEM N PE 0604746A Development	A: Automatic	_	ent	PROJECT L65: Test Equipment Development				
COST (\$ in Millions)	FY 2009 Actual	FY 2010 Estimate	FY 2011 Base Estimate	FY 2011 OCO Estimate	FY 2011 Total Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	Cost To Complete	Total Cost	
L65: Test Equipment Development	3.468	3.542	3.432	0.000	3.432	3.508	2.558	3.657	3.700	Continuing	Continuing	
Quantity of RDT&E Articles												

A. Mission Description and Budget Item Justification

Exhibit R-2A RDT&F Project Justification: PR 2011 Army

This project supports development and demonstration of state-of-the-art calibration standards and techniques, and upgrades/improvements to existing Army calibration systems. It provides for feasibility studies, market research, inventory analyses, bid sample testing, and prototyping to support calibration systems and general-purpose test and diagnostic equipment acquisitions. Primary efforts under this project include testing of an up-armor ready AN/GSM-421(V2) tactical calibration capability, development of calibration capability for chemical and biological agent detection systems and night vision testers, improvement of test and measurement equipment performance envelopes via preplanned product improvements (P3I), and development/evaluation of advanced technology and higher reliability calibration systems and general-purpose test, measurement and diagnostic equipment (TMDE). Preplanned product improvements are underway to current test and measurement systems to overcome deficiencies and voids in existing organic capabilities and to ensure the operational readiness, accuracy, effectiveness, and safety of Army weapons and combat support systems. These improvements will employ reconfigurable open electronics architecture and computer-based instrumentation wherever feasible and will be focused on reducing test equipment footprints to improve deployability and mobility in areas of operation.

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #1	0.600	0.000	0.000	0.000	0.000
FY09: Developed hardware via preplanned product improvements to enhance TMDE systems' performance capabilities FY 2009 Accomplishments:					
FY 2009					
FY 2010 Plans: FY 2010					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipment Development		PROJECT L65: Test Eq	uipment Deve	elopment	
B. Accomplishments/Planned Program (\$ in Millions)	<u> </u>		I			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #2		0.827	0.000	0.000	0.000	0.000
FY09: Tested and integrated hardware developed for preplanned	I product improvements					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #3		1.101	0.000	0.000	0.000	0.000
FY09: Developed, evaluated, and integrated test and measureme	ent equipment					
FY 2009 Accomplishments: FY 2009						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipment Development	I	JECT Test Eq	quipment Deve	lopment	
B. Accomplishments/Planned Program (\$ in Millions)		'				
	FY 20	09 FY	2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #4	0	210	0.000	0.000	0.000	0.000
FY09: Continued development and evaluation of test and calibration proceed	dures					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #5	0	730	0.000	0.000	0.000	0.000
FY09: Performed market research and evaluation of commercial equipmen specifications for acquisitions	t, and developed performance					

	UNCLASSIFIED					
Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipm Development	ent	PROJECT L65: Test Eq	uipment Deve	elopment	
B. Accomplishments/Planned Program (\$ in Millions)			1			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #6		0.000	0.605	0.000	0.000	0.000
FY10: Develop hardware via preplanned product improvements to capabilities	o enhance TMDE systems' performance					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
<i>FY 2011 OCO Plans:</i> FY 2011 OCO						
Program #7		0.000	0.850	0.000	0.000	0.000

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	ruary 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipm Development	ent	PROJECT L65: Test Eq	C T t Equipment Development			
B. Accomplishments/Planned Program (\$ in Millions)							
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY10: Test and integrate hardware developed for preplanned produc	et improvements						
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #8		0.000	0.960	0.000	0.000	0.000	
FY10: Develop, evaluate, and integrate test and measurement equipment	nent						
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
2040: Research, Development, Test & Evaluation, Army	PE 0604746A: Automatic Test Equipment	L65: Test Eq	quipment Development
BA 5: Development & Demonstration (SDD)	Development		

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
Program #9	0.000	0.230	0.000	0.000	0.000
FY10: Continue development and evaluation of test and calibration procedures					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #10	0.000	0.824	0.000	0.000	0.000
FY10: Perform market research and evaluation of commercial equipment, and develop performance specifications for acquisitions					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					

	CI (CEI ISSII IEE					
Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	ruary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equip Development	oment	PROJECT L65: Test Eq	juipment Deve	elopment	
B. Accomplishments/Planned Program (\$ in Millions)	'		1			
		FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 OCO Plans: FY 2011 OCO						
Program #11		0.000	0.000	0.595	0.000	0.595
FY11: Develop hardware via preplanned product improvements to capabilities	enhance TMDE systems' performance					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
FY 2011 Base Plans: FY 2011 Base						
FY 2011 OCO Plans: FY 2011 OCO						
Program #12		0.000	0.000	0.810	0.000	0.810
FY11: Test and integrate hardware developed for preplanned produ	uct improvements					
FY 2009 Accomplishments: FY 2009						
FY 2010 Plans: FY 2010						
			1			

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army			DATE: Febr	ruary 2010	
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipment Development	PROJECT L65: Test Ed	quipment Deve		
B. Accomplishments/Planned Program (\$ in Millions)					
	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2011 Base Plans: FY 2011 Base FY 2011 OCO Plans:					
FY 2011 OCO Plans: FY 2011 OCO					
Program #13	0.00	0.000	0.990	0.000	0.990
FY11: Develop, evaluate, and integrate test and measurement equipment					
FY 2009 Accomplishments: FY 2009					
FY 2010 Plans: FY 2010					
FY 2011 Base Plans: FY 2011 Base					
FY 2011 OCO Plans: FY 2011 OCO					
Program #14	0.00	0.000	0.242	0.000	0.242
FY11: Continue development and evaluation of test and calibration procedu	ires				
FY 2009 Accomplishments: FY 2009					

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army				DATE: Febr	uary 2010		
APPROPRIATION/BUDGET ACTIVITY 2040: Research, Development, Test & Evaluation, Army BA 5: Development & Demonstration (SDD)	R-1 ITEM NOMENCLATURE PE 0604746A: Automatic Test Equipment Development	I	PROJECT L65: Test Equipment Development				
B. Accomplishments/Planned Program (\$ in Millions)							
	FY	2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total	
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #15		0.000	0.000	0.795	0.000	0.795	
FY11: Perform market research and evaluation of commercial equipmen for acquisitions	t, and develop performance specifications						
FY 2009 Accomplishments: FY 2009							
FY 2010 Plans: FY 2010							
FY 2011 Base Plans: FY 2011 Base							
FY 2011 OCO Plans: FY 2011 OCO							
Program #16		0.000	0.073	0.000	0.000	0.000	
FY10: Small Business Innovative Research/Small Business Technology	Transfer Programs						

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
2040: Research, Development, Test & Evaluation, Army	PE 0604746A: Automatic Test Equipment	L65: Test Equipment Development
BA 5: Development & Demonstration (SDD)	Development	

B. Accomplishments/Planned Program (\$ in Millions)

	FY 2009	FY 2010	FY 2011 Base	FY 2011 OCO	FY 2011 Total
FY 2009 Accomplishments:					
FY 2009					
FY 2010 Plans:					
FY 2010					
FY 2011 Base Plans:					
FY 2011 Base					
FY 2011 OCO Plans:					
FY 2011 OCO					
Accomplishments/Planned Programs Subtotals	3.468	3.542	3.432	0.000	3.432

C. Other Program Funding Summary (\$ in Millions)

				FY 2011	FY 2011	FY 2011					Cost To	
	<u>Line Item</u>	FY 2009	FY 2010	Base	<u>oco</u>	Total	FY 2012	FY 2013	FY 2014	FY 2015	Complete	Total Cost
•	• Ord. #1: <i>OPA3</i> , <i>N10000</i> , <i>Calibration</i>	9.660	16.791	38.778	0.000	38.778	13.831	5.802	19.774	20.093	Continuing	Continuing
1.5	Sets Equipment											
•	• Ord. #2: <i>OPA3</i> , <i>N11000</i> , <i>Test</i>	22.311	19.294	19.166	0.000	19.166	30.925	5.595	5.689	5.781	Continuing	Continuing
1	Equipment Modernization											

D. Acquisition Strategy

Projects are focused on use of commercial and nondevelopmental item technologies. When programmatic and engineering expertise and capability are available within the Department of Defense, services required for the individual development projects are acquired from the government source; otherwise, commercial services contracts are used to provide these capabilities. Equipment required for development projects is obtained from the commercial supplier. Candidate commercial equipment and nondevelopmental items are identified and evaluated through market research and government testing and evaluation.

Exhibit R-2A, RDT&E Project Justification: PB 2011 Army	DATE: February 2010	
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT
2040: Research, Development, Test & Evaluation, Army	PE 0604746A: Automatic Test Equipment	L65: Test Equipment Development
BA 5: Development & Demonstration (SDD)	Development	
E. Performance Metrics		
Performance metrics used in the preparation of this justification may	tarial may be found in the EV 2010 Army Parformance Rud	get Justification Rook, dated May 2010
remormance metrics used in the preparation of this justification ma	terial may be found in the 1-1 2010 Army Ferformance Bud	get Justification Book, dated May 2010.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

2040: Research, Development, Test & Evaluation, Army

BA 5: Development & Demonstration (SDD)

R-1 ITEM NOMENCLATURE

PE 0604746A: Automatic Test Equipment

Development

PROJECT

L65: Test Equipment Development

Product Development (\$ in Millions)

				FY :	2010	FY :	2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Systems Engineering	C/Various	Various Location could not be determined.	6.882	1.417		1.454		0.000		1.454	Continuing	Continuing	0
Procedures Development and Evaluation	C/Various	Various Location could not be determined.	2.108	0.230		0.242		0.000		0.242	Continuing	Continuing	0
Government Engineering	С	Various Location could not be determined.	1.670	0.520		0.496		0.000		0.496	Continuing	Continuing	0
		Subtotal	10.660	2.167		2.192		0.000		2.192			0.000

Remarks

Support (\$ in Millions)

Support (4 in minons	,												
				FY	FY 2010				FY 2011 FY 201 OCO Total				
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Technical Support Services	C/Various	Various Location could not be determined.	0.967	0.310		0.310		0.000		0.310	Continuing	Continuing	0
		Subtotal	0.967	0.310		0.310		0.000		0.310			0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army

DATE: February 2010

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

2040: Research, Development, Test & Evaluation, Army

PE 0604746A: Automatic Test Equipment

L65: Test Equipment Development

BA 5: Development & Demonstration (SDD)

Development

Test and Evaluation (\$ in Millions)

				FY	2010	FY :	2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Testing	C/Various	Various Location could not be determined.	1.631	0.620		0.600		0.000		0.600	Continuing	Continuing	0
	-	Subtotal	1.631	0.620		0.600		0.000		0.600			0.000

Remarks

Management Services (\$ in Millions)

				FY :	2010		2011 ase		2011 CO	FY 2011 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
Program Management Personnel	С	Various Location could not be determined.	0.882	0.372		0.330		0.000		0.330	Continuing	Continuing	0
SBIR/STTR	С	Nothing entered for Activity and Location. Location could not be determined.	0.000	0.073		0.000		0.000		0.000	Continuing	Continuing	0
		Subtotal	0.882	0.445		0.330		0.000		0.330			0.000

Exhibit R-3, RDT&E Project Cost Analysis: PB 2011 Army			DATE: February 2010
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT	
2040: Research, Development, Test & Evaluation, Army	PE 0604746A: Automatic Test Equipment	L65: Test Eq	quipment Development
BA 5: Development & Demonstration (SDD)	Development		

	Total Prior Years Cost	FY 2010		2011 ase	FY 2	2011 CO	FY 2011 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	14.140	3.542	3.432		0.000		3.432			0.000