Exhibit R-2, RDT&E Budget Item Justification: PB 2014 Navy

#### APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

1319: Research, Development, Test & Evaluation, Navy

PE 0204460M: (U)Ground/Air Task Oriented Radar (G/ATOR)

BA 7: Operational Systems Development

COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	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	0.000	0.000	75.088	78.208	-	78.208	77.413	74.653	49.969	19.968	Continuing	Continuing
9C89: Marine Ground-Air Radar	0.000	0.000	75.088	78.208	-	78.208	77.413	74.653	49.969	19.968	Continuing	Continuing

<sup>&</sup>lt;sup>#</sup> FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

## A. Mission Description and Budget Item Justification

Ground/Air Task Oriented Radar (G/ATOR) (formerly known as the Multi-Role Radar System (MRRS)) is an expeditionary, 3-dimensional, high-mobility, multi-purpose wheeled vehicle, short/medium range multi-role radar designed to detect cruise missiles, air breathing targets, rockets, mortars, and artillery. MRRS and GWLR (Ground Weapons Locating Radar) merged into a single requirement/capability (G/ATOR) and will replace an aging fleet of single mission legacy radar systems. G/ATOR will support air defense, air surveillance, counter-battery/target acquisition, aviation radar tactical enhancements and the final evolution will also support the Air Traffic Control mission. This project was funded under Program Element 0206313M Project C3099 prior to FY 2010 and Program Element 0206313M Project 9C89 in FY11 and 12. It was moved to Program Element 0204460M in FY13.

B. Program Change Summary (\$ in Millions)	FY 2012	FY 2013	FY 2014 Base	FY 2014 OCO	FY 2014 Total
Previous President's Budget	0.000	75.088	78.436	-	78.436
Current President's Budget	0.000	75.088	78.208	-	78.208
Total Adjustments	0.000	0.000	-0.228	-	-0.228
<ul> <li>Congressional General Reductions</li> </ul>	-	-			
<ul> <li>Congressional Directed Reductions</li> </ul>	-	-			
<ul> <li>Congressional Rescissions</li> </ul>	-	-			
<ul> <li>Congressional Adds</li> </ul>	-	-			
<ul> <li>Congressional Directed Transfers</li> </ul>	-	-			
<ul> <li>Reprogrammings</li> </ul>	-	-			
SBIR/STTR Transfer	-	-			
<ul> <li>Rate/Misc Adjustments</li> </ul>	0.000	0.000	-0.228	-	-0.228

# **Change Summary Explanation**

Technical: Not applicable. Schedule: Not applicable.

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<sup>##</sup> The FY 2014 OCO Request will be submitted at a later date

Exhibit R-2A, RDT&E Project Ju	ustification	: PB 2014 N	lavy							DATE: Apı	ril 2013	
APPROPRIATION/BUDGET ACT 1319: Research, Development, To BA 7: Operational Systems Devel	est & Evalua	ation, Navy				` '		sk Oriented	PROJECT 9C89: Marine Ground-Air Radar			
COST (\$ in Millions)	All Prior Years	FY 2012	FY 2013 <sup>#</sup>	FY 2014 Base	FY 2014 OCO ##	FY 2014 Total	FY 2015	FY 2016	FY 2017	FY 2018	Cost To Complete	Total Cost
9C89: Marine Ground-Air Radar	0.000	0.000	75.088	78.208	-	78.208	77.413	74.653	49.969	19.968	Continuing	Continuing
Quantity of RDT&F Articles	0	0	0	0		0	n	0	0	0		

<sup>\*</sup>FY 2013 Program is from the FY 2013 President's Budget, submitted February 2012

## A. Mission Description and Budget Item Justification

The Ground/Air Task Oriented Radar (G/ATOR) is multi-role, ground-based, expeditionary radar that replaces five legacy radar systems for the Marine Air Ground Task Force. It satisfies the Marine Air Command and Control System and the Ground Counter Fire/Counter Battery capabilities. The G/ATOR replaces the AN/TPS-63 and complements the AN/TPS-59 long range radar and will provide mobile, multi-functional, three-dimensional surveillance of air breathing targets, detection of cruise missiles and UAS, and the cueing of air defense weapons. The G/ATOR contributes to the extension of Sea Shield/Sea Strike by surveillance and detection of enemy air threats not seen by Navy sensors in the littorals by participating in a cooperative engagement network of sensors and shooters. G/ATOR enables Integrated Fire Control (IFC) and provides engage/fire on remote capability. G/ATOR surveillance coverage with IFC will provide unprecedented reach, volume, and precision in the execution of Operational Maneuver From The Sea, allowing Naval forces to project and sustain power deep inland.

B. Accomplishments/Planned Programs (\$ in Millions, Article Quantities in Each)	FY 2012	FY 2013	FY 2014
Title: G/ATOR Contractor Technical, Development Engineering/EDM	0.000	49.754	55.777
Articles:	,	0	0
FY 2013 Plans: Finish Developmental Test 1B (DT1B), provide support for the conduct of Operational Assessment (OA), provide hardware and software updates in support of government directed changes as a result of DT1B and OA testing, assist in the development of program documentation in support of Milestone C (MS C), continue Anti-Tamper (AT) efforts, and continue to assist the government in development of LRIP configuration in support of Transition to Production.			
FY 2014 Plans: Continue Anti-Tamper implementation, Transition to Production and Robust Transition to Production, and Producibility Enhancements. Begin development of Ground Weapons Locating Radar (GWLR) and Systems Engineering Program Management (SEPM) for Block II.			
Title: G/ATOR: Test and Evaluation  Articles:	0.000	8.436 0	1.990 0
FY 2013 Plans:			

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<sup>\*\*\*</sup> The FY 2014 OCO Request will be submitted at a later date

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Exhibit R-2A, RDT&E Project Justific	ation: PB	2014 Navy		-					DATE: A	April 2013	
APPROPRIATION/BUDGET ACTIVITY 1319: Research, Development, Test & E BA 7: Operational Systems Development	Evaluation,	Navy		PE 02	<b>EM NOMEN</b> 04460M: ( <i>U</i> ( <i>G/ATOR</i> )		Task Oriente	PROJE 9C89: <i>N</i>		nd-Air Radar	
B. Accomplishments/Planned Progra	ms (\$ in <b>N</b>	/lillions, Art	ticle Quantit	ties in Each	)				FY 2012	FY 2013	FY 2014
Provide support for the completion of D preparation for DT1C for Block I. Begin					ional Asses	sment (OA) a	and begin				
FY 2014 Plans:											
Continue preparation for DT1C, begin IO Block II FOT&E.	OT&E prep	paration for	Block I. Beg	in Block II D	T preparation	n, continue	preparation f	or			
Title: Government Technical Support									0.000	9.902	12.081
							A	rticles:		0	0
FY 2013 Plans: Government support from the following PHD, MARCORSYSCOM.	activities t	o enable pro	ogram execu	ition; MITRE	, NSWC Da	hlgren, NSW	C Crane, NS	SWC			
FY 2014 Plans: Government support from the following PHD, MARCORSYSCOM.	activities t	o enable pro	ogram execu	ıtion; MITRE	, NSWC Da	hlgren, NSW	/C Crane, NS	SWC			
Title: G/ATOR: Engineering, Managem	ent, & Log	istics Suppo	ort				A	Articles:	0.000	6.696 0	8.360 0
FY 2013 Plans: Continue engineering, management & I	ogistics pr	ogram office	e support.								
FY 2014 Plans: Continue engineering, management & I	ogistics pr	ogram office	e support.								
Title: G/ATOR: Program Office Manage	ement & Ti	ravel Costs					A	Articles:	0.000	0.300	0.000
FY 2013 Plans: Continue travel efforts in support of sys	tem devel	opment and	test.								
				Accor	nplishment	s/Planned P	rograms Su	ıbtotals	0.000	75.088	78.208
C. Other Program Funding Summary	(\$ in Milli	ons)									
	<b>*</b>	•	FY 2014	FY 2014	FY 2014					Cost To	
Line Item • PMC/465000: GRND/AIR TASK ORIENTED RADAR	<b>FY 2012</b> 4.246	<b>FY 2013</b> 90.348	<b>Base</b> 99.325	<u>000</u>	<u>Total</u> 99.325	<b>FY 2015</b> 74.830	<b>FY 2016</b> 236.165	<b>FY 2017</b> 237.381		291.475	Total Cost 1,262.770

PE 0204460M: *(U)Ground/Air Task Oriented Radar (G/ATOR)*Navy

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Exhibit R-2A, RDT&E Project Justification: PB 2014 Navy			DATE: April 2013
APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	<b>PROJECT</b>	
1319: Research, Development, Test & Evaluation, Navy	PE 0204460M: (U)Ground/Air Task Oriented	9C89: Mar	ine Ground-Air Radar
BA 7: Operational Systems Development	Radar (G/ATOR)		

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

	•	<del>-</del>	FY 2014	FY 2014	FY 2014					<b>Cost To</b>	
Line Item	FY 2012	FY 2013	Base	OCO	<u>Total</u>	FY 2015	FY 2016	FY 2017	FY 2018	Complete	<b>Total Cost</b>
RDTE/0604504N: Air Control	0.000	0.000	3.000		3.000	0.000	0.000	0.000	0.000	0.000	3.000
MATCALS											
PMC/700000: Initial Spares	0.000	0.000	7.500		7.500	6.800	18.900	21.200	26.300	0.000	80.700
• RDTE/0206313M: <i>GRND/AIR</i>	102.455	0.000	0.000		0.000	0.000	0.000	0.000	0.000	0.000	102.455
TASK ORIENTED RADAR											

#### Remarks

## D. Acquisition Strategy

The Ground/Air Task Oriented Radar (G/ATOR) is multi-role, ground-based, expeditionary radar that replaces five legacy radar systems and provides the USMC Air Defense and Air Surveillance (AD/AS), Counterfire/Targeting, and Air Traffic Control capability. The AD/AS development effort was competitively awarded in 2007 and is scheduled for Milestone C in the 4th Qtr of FY13. Development of the Counterfire/Targeting capability was initiated in FY10 with a RFI to industry, followed by a Business Case Analysis (BCA) to select the most cost effective procurement strategy. The results of the BCA indicated that a sole source contract to NGSC was the most cost effective solution. Consequently, a J&A has been submitted reflecting the results of the BCA, and the contract award is scheduled for the first Qtr of FY14. In FY13, a BCA will be performed to determine the optimum strategy for development of the Air Traffic Control mission with a targeted development contract to be awarded in FY15. The \$3M in the Navy's R&D funding in FY14 will support systems engineering activities prior to contract award, including integration studies with ATNAVICS, the Navy provided ATC C2 systems.

#### E. Performance Metrics

N/A

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy

R-1 ITEM NOMENCLATURE

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

**PROJECT** 

BA 7: Operational Systems Development

PE 0204460M: (U)Ground/Air Task Oriented 9C89: Marine Ground-Air Radar

Radar (G/ATOR)

Product Developme	nt (\$ in Mi	illions)		FY 2	2012	FY 2	2013		2014 ise	FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
G/ATOR	C/CPIF	NORTHROP GRUMMAN SYSTEMS CORPORATION:LINT HEIGHTS, MD	0.000 HICUM	0.000		49.754	Dec 2012	55.777	Dec 2013	-		55.777	0.000	105.531	
		Subtotal	0.000	0.000		49.754		55.777		0.000		55.777	0.000	105.531	

#### Remarks

Award date reflects the actual obligation date for the first incremental award. The Northrop Grumman Product Development contract is incrementally funded throughout the fiscal year.

Support (\$ in Million	ıs)			FY 2	2012	FY	2013		2014 ase	FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To Complete	Total Cost	Target Value of Contract
G/ATOR	FFRDC	MITRE:BOSTON, MA	0.000	0.000		1.518	Dec 2012	1.804	Dec 2013	-		1.804	0.000	3.322	
G/ATOR	WR	NSWC- DAHLGREN:DAHLGF VA	REN, 0.000	0.000		6.736	Dec 2012	8.102	Dec 2013	-		8.102	0.000	14.838	
G/ATOR	WR	NSWC- CRANE:CRANE, IN	0.000	0.000		0.307	Dec 2012	0.455	Dec 2013	-		0.455	0.000	0.762	
G/ATOR	C/FP	MCSC:QUANTICO, VA	0.000	0.000		0.225	Dec 2012	0.794	Dec 2013	-		0.794	0.000	1.019	
G/ATOR	C/CPIF	MCOTEA:QUANTICO VA	0.000	0.000		0.512	Dec 2012	0.711	Dec 2013	-		0.711	0.000	1.223	
G/ATOR	WR	NSWC PHD:DAM NECK, VA	0.000	0.000		0.604	Dec 2012	0.215	Dec 2013	-		0.215	0.000	0.819	
		Subtotal	0.000	0.000		9.902		12.081		0.000		12.081	0.000	21.983	

#### Remarks

Award dates reflect the actual obligation date for the first incremental award. Each activity, with the exception of MITRE, is incrementally funded throughout the fiscal year.

PE 0204460M: (U)Ground/Air Task Oriented Radar (G/ATOR) Navy

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R-1 Line #177

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy

R-1 ITEM NOMENCLATURE

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy

**PROJECT** 

BA 7: Operational Systems Development

PE 0204460M: (U)Ground/Air Task Oriented 9C89: Marine Ground-Air Radar

Rad	ar (	G/A	47	Οl	₹,

Test and Evaluation	(\$ in Milli	ions)		FY 2	2012	FY:	2013		2014 ase		2014 CO	FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
G/ATOR	C/CPIF	NORTHROP GRUMMAN SYSTEMS CORPORATION:LINT HEIGHTS, MD	0.000 HICUM	0.000		3.801	Dec 2012	0.000		-		0.000	0.000	3.801	
G/ATOR	C/CPFF	AIMS:ROBINS AFB, GA	0.000	0.000		0.031	Dec 2012	0.000		-		0.000	Continuing	Continuing	Continuing
G/ATOR	WR	NSWC DAHLGREN:DAHLGR VA	REN, 0.000	0.000		0.125	Dec 2012	0.000	Dec 2013	-		0.000	Continuing	Continuing	Continuing
G/ATOR	WR	MC AIR STATION:YUMA, AZ	0.000	0.000		0.937	Dec 2012	0.000		-		0.000	0.000	0.937	
G/ATOR	MIPR	AMRDEC:REDSTONE ARSENAL, AL	0.000	0.000		0.000		0.501	Dec 2013	-		0.501	0.000	0.501	
G/ATOR	MIPR	JTIC:FT HUACHUCA, AZ	0.000	0.000		0.018	Dec 2012	0.000		-		0.000	0.000	0.018	
G/ATOR	WR	NSWC- FALLBROOK:CRANE IN	, 0.000	0.000		0.000		0.540	Dec 2013	-		0.540	0.000	0.540	
G/ATOR	C/CPIF	MCOTEA:QUANTICO VA	, 0.000	0.000		3.462	Dec 2012	0.603	Dec 2013	-		0.603	0.000	4.065	
G/ATOR	WR	NSWC CORONA:CORONA, CA	0.000	0.000		0.062	Dec 2012	0.346	Dec 2013	-		0.346	0.000	0.408	
		Subtotal	0.000	0.000		8.436		1.990		0.000		1.990			

## **Remarks**

Award dates reflect the actual obligation date for the first incremental award. Each activity is incrementally funded throughout the fiscal year.

Exhibit R-3, RDT&E Project Cost Analysis: PB 2014 Navy

R-1 ITEM NOMENCLATURE

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY

**PROJECT** 

1319: Research, Development, Test & Evaluation, Navy BA 7: Operational Systems Development

PE 0204460M: (U)Ground/Air Task Oriented 9C89: Marine Ground-Air Radar

Radar (G/ATOR)

Management Service	es (\$ in M	illions)		FY 2	2012	FY 2	2013	FY 2 Ba	-	FY 2		FY 2014 Total			
Cost Category Item	Contract Method & Type	Performing Activity & Location	All Prior Years	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Award Date	Cost	Cost To	Total Cost	Target Value of Contract
G/ATOR	C/FP	MCSC:MCSC- QUANTICO, VA	0.000	0.000		6.696	Dec 2012	8.360	May 2014	-		8.360	0.000	15.056	
G/ATOR	Various	MCSC:QUANTICO, VA	0.000	0.000		0.300	Sep 2013	0.000		-		0.000	0.000	0.300	
		Subtotal	0.000	0.000		6.996		8.360		0.000		8.360	0.000	15.356	

#### Remarks

Award dates reflect the actual obligation date for the first incremental award. Each activity is incrementally funded throughout the fiscal year.

	All Prior Years	FY 20	012	FY 2013		2014 ase	FY 2	2014 CO	FY 2014 Total	Cost To Complete	Total Cost	Target Value of Contract
Project Cost Totals	0.000	0.000		75.088	78.208		0.000		78.208			

#### Remarks

Exhibit R-4, RDT&E Schedule Profile: PB 2014 Navy

APPROPRIATION/BUDGET ACTIVITY

R-1 ITEM NOMENCLATURE

PROJECT

APPROPRIATION/BUDGET ACTIVITY

1319: Research, Development, Test & Evaluation, Navy
BA 7: Operational Systems Development

PE 0204460M: (U)Ground/Air Task Oriented PC89: Marine Ground-Air Radar (G/ATOR)

**G/ATOR Program Schedule** FY12 FY13 FY14 FY15 FY16 FY17 FY18 G/ATOR Block 1 MSC Gate Gate Gate FRPD Review Jul 13 Review Jul 16 Aug 16 Review Air Defense/Air Surveillance DT1C IOTE DT1B OA Refurb 1  $\wedge$ LRIP FRP Contract IOC G/ATOR Block 2 Award Aug 17 **Ground Weapons Locating Radar** DT/OA FOTE G/ATOR Block 4 Expeditionary Contract IOC Jul 18 Award Airport Surveillance Radar DT/OT FOTE

Exhibit R-4A, RDT&E Schedule Details: PB 2014 Navy

DATE: April 2013

APPROPRIATION/BUDGET ACTIVITY R-1 ITEM NOMENCLATURE PROJECT

1319: Research, Development, Test & Evaluation, Navy

PE 0204460M: (U) Ground/Air Task Oriented 9C89: Marine Ground-Air Radar

BA 7: Operational Systems Development Radar (G/ATOR)

# Schedule Details

	St	art	End		
Events by Sub Project	Quarter	Year	Quarter	Year	
Proj 9C89		-			
Air Defense/Air Radar AD/SR Capability System Demonstration (DT)(1B)	4	2012	2	2013	
Air Defense/Air Radar AD/SR Capability System Demonstration (DT/OT)(1C)	3	2015	1	2016	
Air Defense/Air Radar AD/SR Capability Operational Assessment (OA)	2	2013	3	2013	
Air Defense/Air Radar AD/SR Capability Low Rate Initial Production (LRIP)	4	2013	3	2017	
Air Defense/Air Radar AD/SR Capability Milestone C	4	2013	4	2013	
Air Defense/Air Radar AD/SR Capability (IOT&E)	2	2016	2	2016	
Air Defense/Air Radar AD/SR Capability (IOC)	4	2016	4	2016	
Air Defense/Air Radar AD/SR Capability Full Rate Production Decision	4	2016	4	2016	