

GROUND/AIR TASK ORIENTED RADAR



Program Background

Ground/Air Task Oriented Radar (G/ATOR) is a three-dimensional short-to-medium-range tactical radar that is designed to detect, identify, and track low level cruise missiles, manned aircraft, and unmanned aerial vehicles (UAVs) as well as rockets, mortars, and artillery fire. G/ATOR capabilities include the ability to track hostile UAVs, assist in air traffic control, serve as a fire control system, support ground-based air defense, and detect rockets, artillery, and mortars in order to direct the counter fire.

Developed by prime contractor Northrop Grumman Electronic Systems in Baltimore, Md., G/ATOR

will replace legacy radar systems to perform air surveillance, cue air defense weapons, determine hostile indirect firing locations, and provide data to air traffic controllers.

Program Status

In July 2012 Northrop Grumman delivered the AN/TPS-80 G/ATOR system to Surface Combat Systems Center Wallops Island for Developmental Testing (DT). The successful DT and the Operational Assessment for G/ATOR were completed in Yuma, Arizona, in 2013.

The AN/TPS-80 G/ATOR system received a successful Milestone C on 24 January 2014 from

the Assistant Secretary of the Navy (Research, Development and Acquisition); Northrop Grumman was awarded the low-rate initial production contract in October 2014 for four systems.

G/ATOR's Top Technical Issues:

1. Lowering Manufacturing Costs

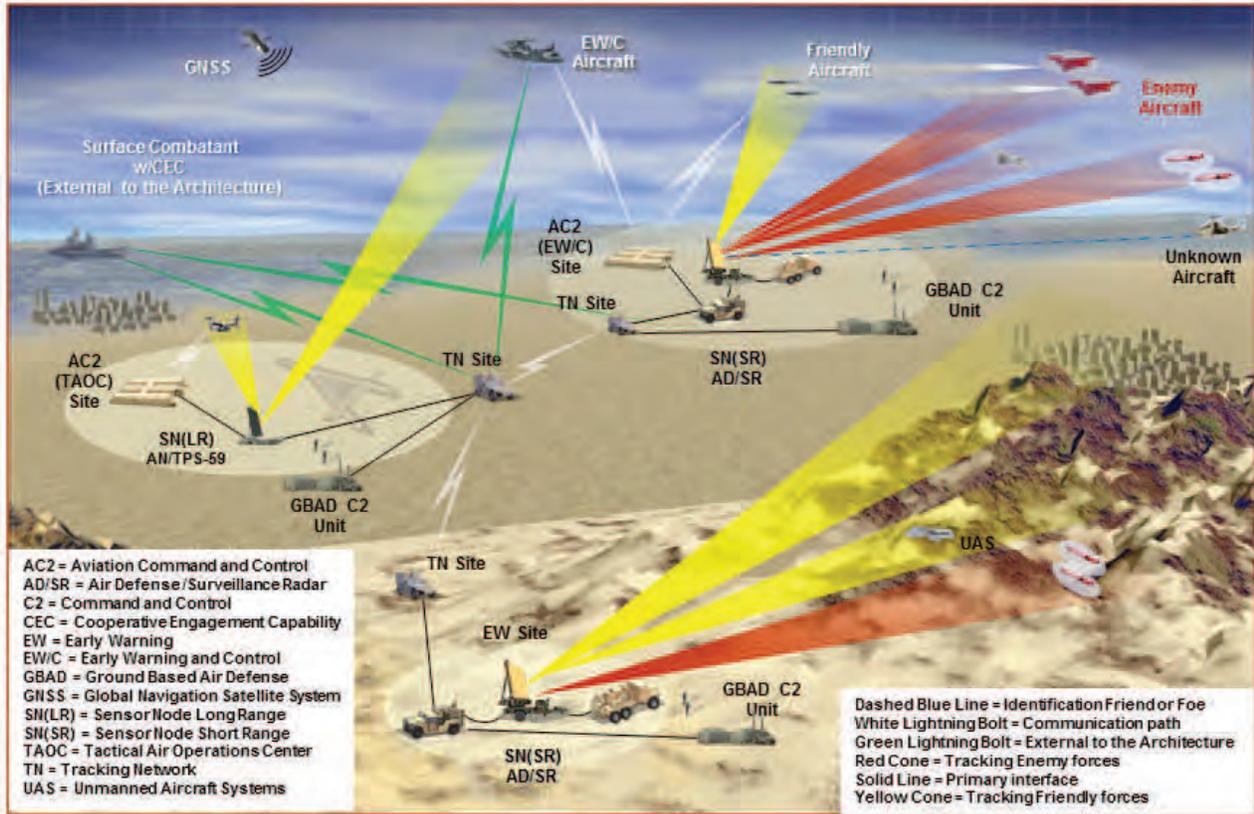
Technologies are needed that reduce manufacturing cost across multiple areas of production, including: 1) air ducts that provide precise mounting and cooling of the T/R modules and array elements (the air duct is very time consuming to produce and assemble and thus is very expensive); 2) T/R module packaging, which requires expensive materials and hermetic sealing that reduces yield; and 3) Circulator Isolator Radiator Filter boards, which are required for the T/R modules and which require a multi-step, medium yield manufacturing process.

2. T/R Module Efficiency

The G/ATOR system currently operates at the limit of its primary power source. As the largest aggregate consumer of power, the T/R modules require technologies that increase power efficiency, such as: 1) higher efficiency power amplification; 2) a higher efficiency DC/DC power supply; and 3) greater integration of components.

3. Lightweight Material

PM G/ATOR has started a CEG Shelter Working Group that will finalize the CEG Shelter requirements for the shelter integration. In order to reduce the weight, a technology firm is needed to look at designing lighter weight materials for either the vehicle up-armor, the shelter shell and equipment racks, or all of these.



G/ATOR Operational View (From U.S. Marine Corps Concepts & Programs)



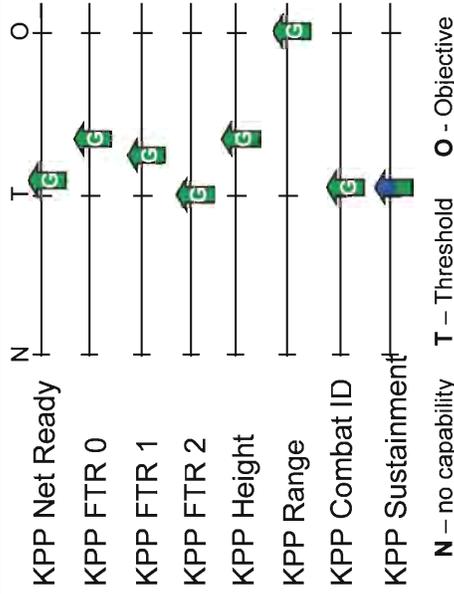
Description: G/ATOR is a 3D, short/medium range multi-role radar designed to detect unmanned aerial systems, cruise missiles, air breathing targets, rockets, artillery and mortars. The system satisfies expeditionary needs across the MAGTF and replaces five legacy radar systems with a single MAGTF solution.

ACAT 1C/Production & Deployment

MS C = 10 Mar 14 **Qty** = 45

GB1 IOC = Feb 17 (O)/Feb 18 (T)

GB2 IOC = Feb 18 (O)/Feb 19 (T) **GB1/2 FOC** = 2024



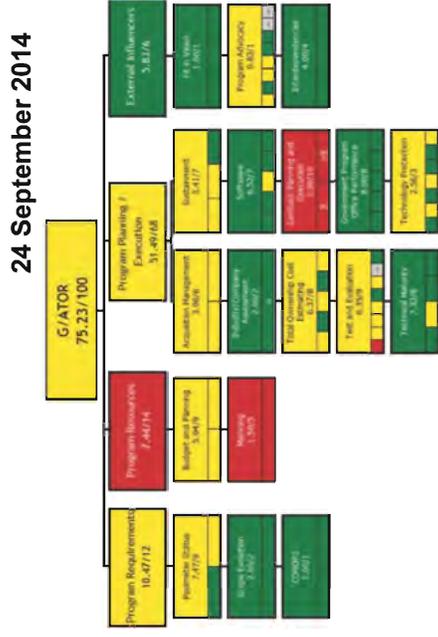
Contract Data - FPIF
Contractor NGSC

LRIP Start – Complete 10/23/2014—10/31/2017

Next Contract: GB2 Proposal received 11/26/2014, LRIP Option Lot 2 2Q 15

DCMA : TBD **(T B D)**
CPI* = TBD SPI* = TBD

Issues: None
*Initial CPR due mid-late Jan 2015



PROGRAM	FY14				FY15				FY16				FY17				FY18				FY19				FY20				To Complete											
	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												
Milestones & Phases				▲ MSC																																				
Reviews				▲ PRR ▲ ILA																																				
Test Events																																								
Contract Events				GaAs LRIP Award																																				
Quantities	4				2				3				3				3				6				6				8											



G/ATOR Technical Issue #3 Lightweight Material

