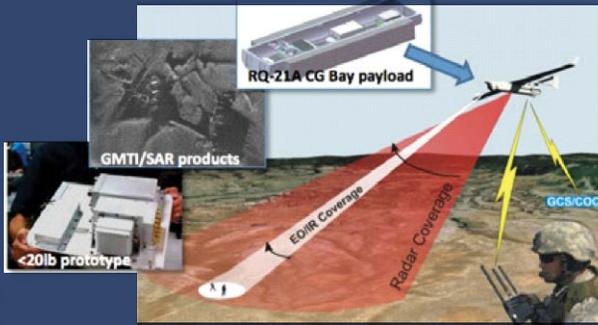




# Navy SBIR/STTR Success



## Digital Cellular-Phone Transceiver-based Foliage Penetration Interferometric SAR for EO/IR Sensor Fusion ATR

MicroRAPTOR is transforming the DoD radar community by uniquely providing all of the capabilities of high performance major systems at a fraction of the size, weight, power and cost.

Topic Number: N01-136

SBIR Investment:  
**\$834,318**

Phase III Revenue:  
**\$18,503,010**

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## About the Technology:

The original "interferometric synthetic aperture radar" (IFSAR) was developed for automatic target recognition on Unmanned Aerial Vehicles. Following a successful flight test and additional awards to modify its design for dismount and vehicle ground moving target detection and tracking, the microRAPTOR (Reconfigurable Adaptive Programmable Tactical Open Radar) technology was born. MicroRAPTOR is a small, lightweight, open architecture radar system designed specifically to support the warfighter with Ground Moving Target Indicator data and high resolution Synthetic Aperture Radar (SAR) imagery for identifying and tracking vehicles and dismounts.

## Naval Benefit

The high performance, portable, compact and high-speed digital radar system is fully reprogrammable and supports all classes of UAVs and satellites. SAR images produced by the microRAPTOR can be generated in visually obscured environments caused by weather or sand/debris, giving the warfighter an edge in less than ideal situations and greatly increasing the effectiveness and timeliness of ISR information at the Tactical Edge. The technology greatly enhances airborne video systems by providing a rapid message stream to point optical systems and can increase area coverage by more than 70 times over stand-alone optical systems.

## Transition

Based on its initial success of detecting dismounts and vehicles during rigorous ground and flight testing, Trident was awarded a Rapid Innovation Fund (RIF) project in 2012 to modify microRAPTOR for the Small Tactical Unmanned Aircraft Systems (STUAS) program. Additional military and commercial applications include the incorporation of maritime surveillance modes and transition onto many other small Navy UAS applications.



# Trident Systems

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