



# Navy SBIR/STTR Success



## Extended Frequency Range Wide Band RF Distribution System for Shipboard Systems

Out of the Fog's unique system meets the Navy's need for effective EMI mitigation technology to reduce co-located interference, common battle group generated interference, and jamming signals.

**Topic Number:** N07-149

**SBIR Investment:**  
**\$1,700,000**

**Phase III Revenue:**  
**\$10,300,000**

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## About the Technology:

Electromagnetic Interference (EMI) impacts military missions by reducing available data rates and preventing signal interception in some channels entirely. Since most channels are shared, this interference impacts many users simultaneously. Removing this interference without impacting signal detection would greatly increase the utility of the channels. Out of the Fog Research LLC responded to this need by building upon a hardware system designed for lower frequencies. OFR's hardware, which is easily mounted into the radome of the antenna, provides an extra capability without having to overhaul the entire system. The hardware conditions the signal so that the interference is removed and the signal users want to listen to can be intercepted.

## Naval Benefit

Current shipboard SIGINT systems cannot mitigate interference blocking the detection of Signals of Interest (SOI) in the extended frequency band. SOI detection is limited due to insufficient cancellation of EMI. The Navy needs effective EMI mitigation technology to reduce co-located interference, common battle group generated interference, and jamming signals. By removing this interference, the probability of detecting Signals of Interest (SOI) is increased, which is critical to the warfighter, as well as an increase in detection range. This capability is expandable for mitigation of future EMI sources.

## Transition

After being awarded a Phase II.5 contract with SPAWAR, Out of the Fog won a Rapid Innovation Fund worth \$1.5 million through ONR, which resulted in a full prototype delivered to the Navy. This led to a Phase III contract with a major prime contractor. Currently, the lead system integrator is working with the Navy to purchase production versions of the hardware. They hope to achieve their goal of delivering 10 systems a year by 2015. The Navy Cryptological Carry-on Program (CCOP) has purchased numerous units of the lower frequency units that preceded this technology over a multi-year order, and the company has delivered 46 systems under a Phase III production contract. Out of the Fog is unique in its business strategy in that it aims to provide superior technology to the military and intelligence end-user customers exclusively.



# Out of the Fog Research LLC

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