Telephonics Research with Vortex

Telephonics Corporation is a US Government Defense Contractor and manufacturer of advanced avionics and communications equipment including ITAR Controlled maritime surveillance radar systems. Telephonics would like to continue the work initially authorized under STA File Number 0320-EX-ST-2015 so that we can complete testing the full capabilities of the Vortex data link. This will implement the capability on our Flight Test Aircraft to transmit radar imagery in real time permitting continued research and development into additional capabilities for our family of radar products.

Telephonics intends to use L3 Communications' Commercial Off The Shelf (COTS) VORTEX Airborne terminal as a transmission tool for radar and associated video imagery from our company leased King Air B-200 to a portable ground station located at our Technical Support Services (TSS) Integration and Repair Facility located in Elizabeth City, North Carolina. The intent is to use the transmitted data in near real time for engineering research and training, customer demonstration and /or marketing purposes. Approval of this STA will allow direct transmission of data from the aircraft to the base station without the need for the recording of data or landing of the aircraft for subsequent transmission.

Telephonics constantly strives to improve the performance of our radar products and provide additional capabilities. In-flight testing has proven critical during development of both new radar products and performance and capability improvements to existing products. We have ongoing improvement to several of our radar systems, and providing real time imagery to multiple engineers at our design centers will optimize and streamline our ability for design and testing.

Many times, these capability enhancements are requested by the customer. Once recent example is from the US Coast Guard, Contract Number HSCG23-12-C-ADH007. In this particular contract, specific functional enhancements were requested to be incorporated into their current radar system. Unfortunately, the Vortex data link system was not yet implemented so real time radar imagery was not available. Telephonics believes that the Vortex data link would have greatly enhanced our development and delivery timelines.

Telephonics is the current supplier of radar for the US Navy MQ-8B unmanned VTOL system and intends to compete for the radar on the MQ-8C. An essential feature of unmanned systems is the use of data links to provide sensor data to the UAS operator and mission payload operator. This VORTEX installation will allow Telephonics to conduct research into and develop improved techniques for processing and transmitting radar data from unmanned systems.

In addition to the design and research development of our radar products, we see potential market research opportunities through demonstration of real time video imagery to potential customers who can view radar performance that is data linked to the ground and piped through the internet. Having this real time demonstration capability is expected to prove invaluable.

Currently, VORTEX is the only data link that we have to provide real time video imagery for our design and development research. Without the use of this capability, we will not be able to transmit real time radar data from our Flight Test Aircraft.