Development of alternative communication infrastructure for remote monitoring of Navy sonobuoys

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Abstract

The CEROS Outreach presentation addresses the development of alternative communication infrastructure for the remote monitoring of Navy sonobuoys. Most sonobuoy applications require the use of legacy analog radio receivers typically hosted by P-3 aircraft. Several emerging distributed field and range applications depend on the P-3 to provide support. However, airframe structural fatigue for the aging fleet is such that the Navy needs to restrict flight hours. Given a P-3 is made available, on-station time and cost limit its utility. The long term goal of the development is to build a low-cost COTS sonobuoy receiver with downlink capability portable to a variety of airborne platforms to enable current and new sonobuoy applications (concepts of operations). The downlink connectivity to surface platforms permits unmanned airborne operations. Automation in the airborne system provides the means to reduce high bandwidth input to relevant information output to the surface or ground. Through the use of software defined radio technology developed by BBN, and long-range WiFi (SeaLink) developed by Oceantronics, an initial demonstration is planned for July 2006. The presentation will describe the prototype system being tested and will address future applications for the final product.