

# **Department of Ocean and Resources Engineering**

## *Seminar*

### **Expendable Line-of-Sight Communications for Undersea Distributed Network Sensors**

By

**Mr. Andy Coon**

BBN Technologies, Arlington, Virginia

<p>Wednesday, October 10, 2007, Holmes Hall 242 3:00-3:30 pm Coffee Hour 3:30-4:30 pm Seminar</p>
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**Please join us for the coffee hour near the seminar venue a half hour before the seminar, 3:00 – 3:30 pm**

### **Abstract**

The presentation addresses the development of an expendable line-of-sight communication solution to permit remote monitoring of existing Navy sonobuoys and future distributed sensors. The project is funded by the National Defense Center of Excellence for Research in Ocean Sciences (CEROS) which is located in the state of Hawaii and receives Congressionally directed appropriations for research and development activities of interest to the Department of Defense through a cooperative agreement with the Defense Advanced Research Projects Agency. The communications development is centered on developing a low-power light-weight receiver, processor, and digital downlink for use with unmanned airborne nodes. With emphasis on low-cost COTS solutions, lighter-than-air and other expendable solutions are being considered. The initial receiver design is focused on using the standard sonobuoy VHF uplink. The intermediate processing is designed to reduce data rates significantly to permit robust long-range energy-efficient downlinks. An initial demonstration was conducted in July 2006.

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