



2010 ONR Naval S&T Partnership Conference

Next Generation Technologies for Today's Warfighter



Revolutionary Research . . . Relevant Results

Delivering ISR Capability

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O F F I C E O F N A V A L R E S E A R C H

Naval ISR Capabilities

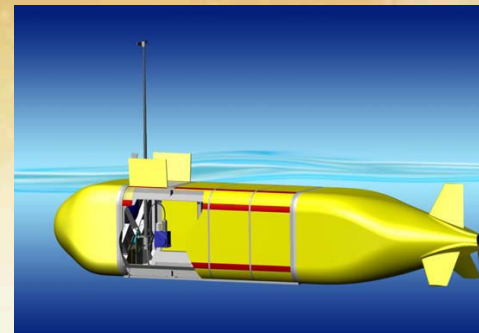
- **UxS provide added capacity and capability “from the sea” to current force structure**
- **Have shown tremendous maturity in UAVs**
- **UUVs are the next challenge**
 - Strong S&T efforts across a number of focus areas
 - Time to “pull it together” both technologically and operationally
 - Need ONR’s help to get the “front end” technology effort mature
 - Not necessarily entire end-to-end solutions, but they must be integrated
- ***Need to keep getting vehicles wet and build reliability!***

High-Level Direction

- Unmanned Vehicles are SECNAV's No. 2 Priority
- **CNO Direction: Move Boldly...**
 - Into Unmanned, machine autonomous technologies
 - Creating a Fully-Integrated Intel, C2, Cyber & Networks Capability
 - Improve sea-based mid-range unmanned ISR capability
 - Sustain PR-11 increases in long-range persistent sea-based unmanned ISR and strike
- **CNO Aspirations**
 - UUV "Fleet" by the end of the decade
 - Fund UUV Power & Endurance first then fund UUV Sensors, C3, Networks and Autonomy

UUV Technology Needs

- **Mission Endurance**
 - Long endurance energy (weeks to months)
 - Reliability
 - Survivability
- **Autonomy**
 - Platform independent (potentially shore based)
 - Threat detection & avoidance
 - Onboard information processing
- **Communications**
 - High bandwidth
 - Connectivity on demand
- **ASW sensors**



**Greatest UUV Technology Need is Energy Sources
Which Enable Multi Week Missions**