REGIONAL CLASS RESEARCH VESSEL (RCRV)

Update on Datapresence Innovations

Clare Reimers, OSU
ACKNOWLEDGEMENTS

• NSF
• Glosten Assoc.: Liz White, Dave Larsen
• Project Manager: Demian Bailey
• RCRV Technical Team: John Comar, Marc Willis, Don Hilliard, Fred Jones, Daryl Swensen, Katie Watkins-Brandt, Chris Romsos, Jasmine Nahorniak
• Science Oversight Committee
**RCRV PROJECT TIMELINE**

- **Phase I**
  - Design Refresh
  - 12/13/12-12/31/15

- **Phase II**
  - Shipyard Selection
  - 1/1/16-6/30/17

- **Phase III and IV**
  - Construction, Transition to Operations, Closeout MREFC
  - 7/3/17-10/31/21
  - Hull 1 – West Coast Region
  - 7/1/18-10/31/22
  - Hull 2 - TBD

- **CRITICAL MILESTONE:** FY17 NSF MREFC budget appropriation
  - Second OI selection 11/1/2017

- **UNOLS Designation**
Regional Class Research Vessel

Coming to an Ocean Near You
VESSEL PARTICULARS

- Length Over All: 192’ 10”
- Beam: 41’
- Design Draft: 12’ 6”
- Science + Tech Berths: 16
- Crew Berths: 13
- Endurance: 21 days
- Range: 5400 nm
- ~1500 T displacement
LARGE AFT DECK, VAN MATING & LABS

2160 ft² total aft and side decks

510 ft² Main Lab

365 ft² Wet Lab

175 ft² Computer lab
O1 LEVEL DATAPRESENCE LAB

215 ft² data presence center directly above computer lab
Regional Class Research Vessel

Real-time data streaming from ship to shore...

...enables virtual participation and enhances science at sea.

For details about the RCRV project, please contact:
Demian Bailey (Project Manager) dbailey@coas.oregonstate.edu
or Clare Remmers (Project Scientist) creimers@coas.oregonstate.edu

Datapresence questions may be directed to:
Christopher Romso (Datapresence Systems Engineer) cromso@coas.oregonstate.edu
RCRV DATA PRESENCE SYSTEM
TECHNOLOGICAL COMPONENTS

• Connectivity
  • SATCOM via HiSeasNet Ku-band and Inmarsat FleetBroadband
  • 3G & 4G Broadband nearshore

• Data Sources:
  • Database backend: see handout

• User focused services:
R/V OCEANUS PROTOTYPE

- An Oceanus prototype will trial key technologies.
- Improvements to the shipboard networked data broadcast/aggregation, data visualization and access.
  - Specifically, a hardware replacement for the sensor/network interface will be tested as well as competing data aggregation and storage approaches using SQL and noSQL database types. The prototype will provide the Oceanus with a web interface to monitor data system status (real-time performance and alerting). The prototype will also provide example data visualizations (real-time charts, plots, and mapping tools). Feedback will be solicited from various user groups, academic/research and operators.
- Later phase prototyping will focus on shoreside replication and data distribution to enable remote participation.