REGIONAL CLASS RESEARCH VESSEL (RCRV)

Update on Datapresence Innovations

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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

CRITICAL MILESTONE: FY17 NSF MREFC budget appropriation

Second OI selection 11/1/2017

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

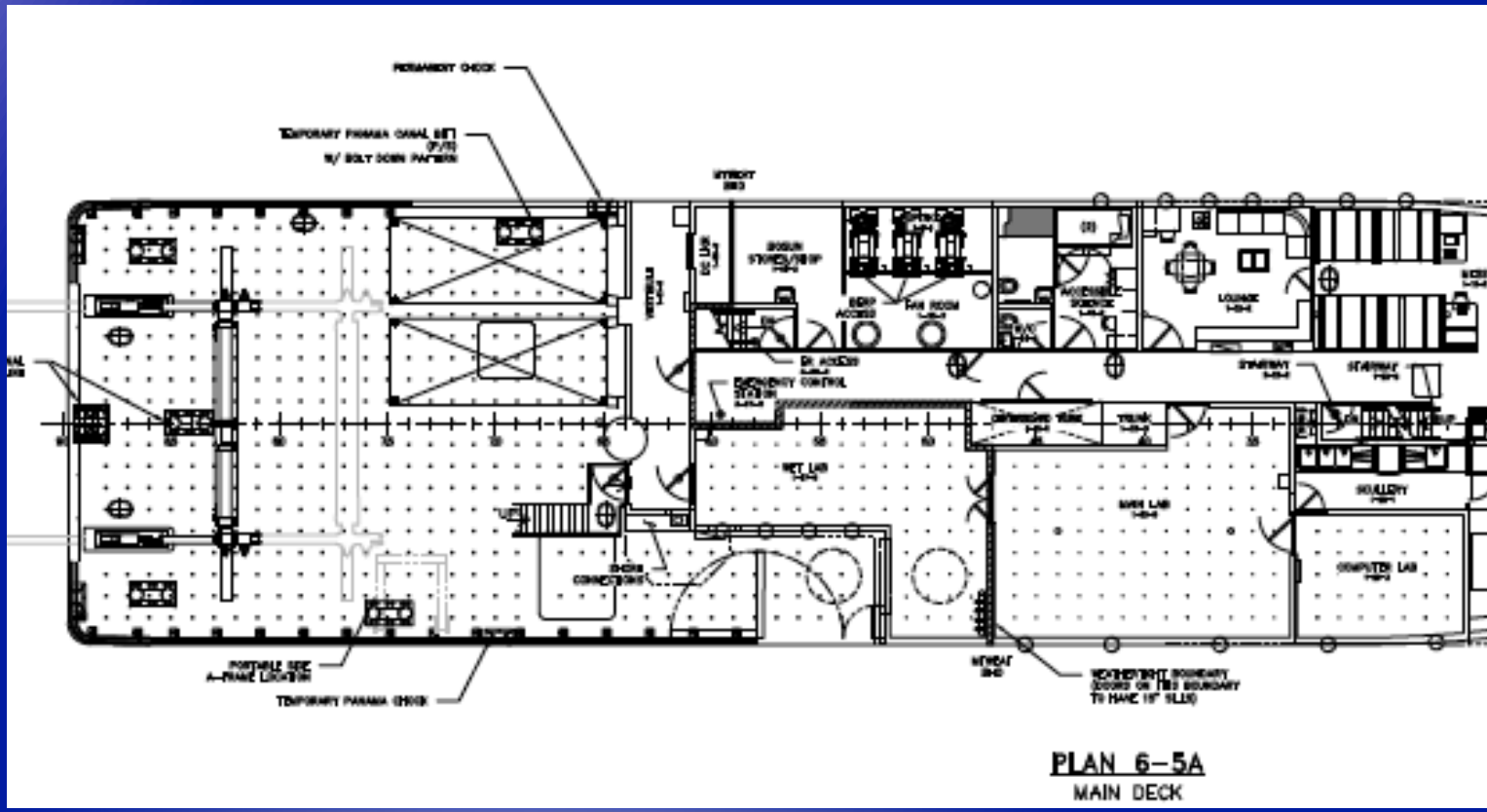
LARGE AFT DECK, VAN MATING & LABS

2160 ft^2 total aft and side decks

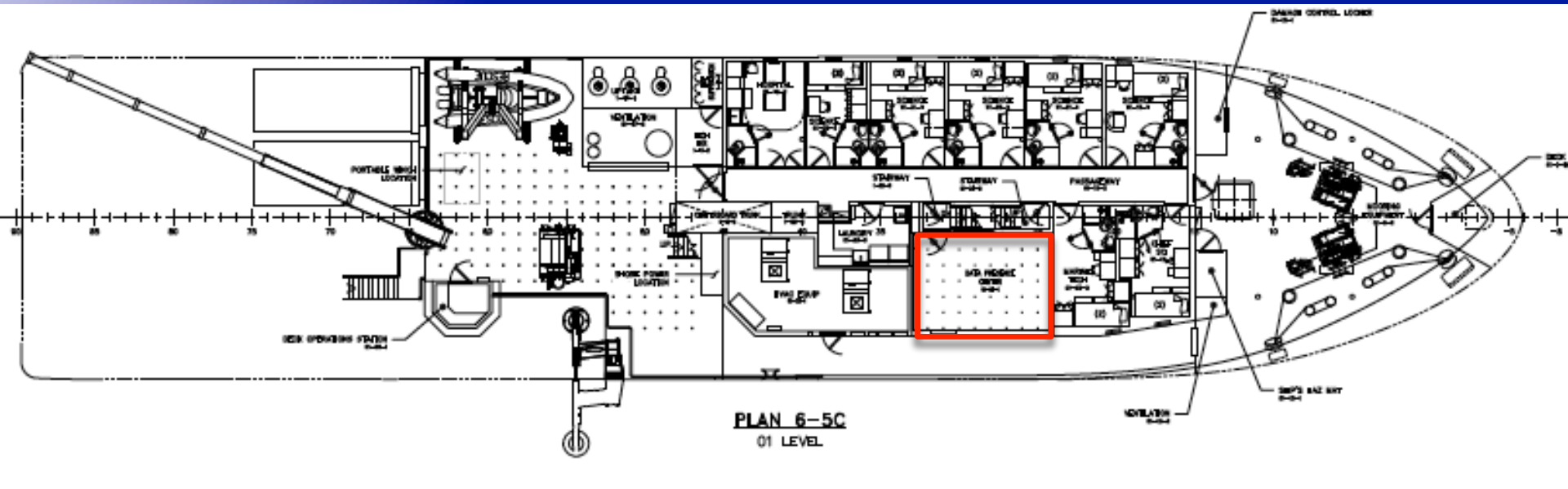
510 ft^2 Main Lab

365 ft^2 Wet Lab

175 ft^2 Computer lab



O1 LEVEL DATAPRESENCE LAB



215 ft^2 data presence center directly above computer lab

Datapresence

Regional Class Research Vessel

Data

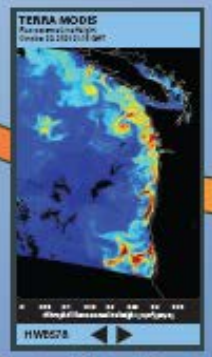
Schedule

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

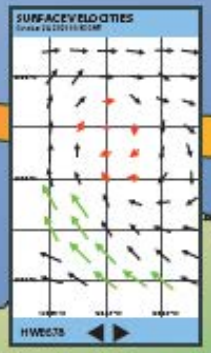
Status

Video

Communication



Satellite Data



Model Results

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

Tech support
Science
Outreach
Collaboration
Quality Control
Monitoring

Christopher Romsos, Jasmine Nahorniak, Katie Watkins-Brandt
College of Earth, Ocean, and Atmospheric Sciences
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For details about the RCRV project, please contact:
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Datapresence questions may be directed to:
Christopher Romsos (Datapresence Systems Engineer) cromsos@coas.oregonstate.edu

RCRV DATAPRESENCE 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.