2015
Icebreaker Session

RVTEC Annual Meeting
November 3-5, 2015
THE RESEARCH VESSEL
F. G. WALTON SMITH
Rosenstiel School of Marine and Atmospheric Science
R/V Thomas G Thompson

Operational & Logistical Challenges:

- Four 8,000lb surface buoys
- Finding a winch in the last minute
R/V Clifford Barnes

Technical Challenges:

- Wifi cellular data use in Puget Sound
- CTD conducting cable: not just your termination can go bad!
R/V ATLANTIC EXPLORER

2015 Update & Serial Communication troubleshooting
A Telepresence System for the R/V Endeavor
Scripps 2015 overview

Sproul
• Biodiesel
• Active year

Revelle
• Lots of international logistics
• Install of GX system
• Decommissioning:
  – R/V Melville
  – R/V New Horizon

USCG Healy
• Actually breaking ice
• Collaborative effort
• Made it to north pole
Breaking in the New Tech on the R/V Pelican
But it weighs a lot!
But it doesn’t fit over the stern!
But it won’t fit on the deck!
R/V Marcus G. Langseth

Dual Recording systems : Dual Navigation Systems

Primary: P-Cable and NavPoint
Secondary: Syntrak and Spectra
Source: Digishot

Problems:
• Cannot Split: 1 Nav system for 2 recording systems
• Triggering of all systems must match or seismic data will fluctuate

How to trigger everything at once?
• Both Nav Systems using same GPS feed and NRP (to ensure identical positions)
• NavPoint System Triggers Source

Spectra ➔ Syntrak

DigiShot ➔ GeoMetrics
R/V SIKULIAQ
Icebreaker Session
RVTEC 2015
Zabbix
Significant Challenges:

13 of 16 ships delayed – CR Funding
  - still realized an 83% utilization rate

GU – Loss of Automatic Gyro Data
  - installed Lemmings on Serial output ports on Gyro to distro

RB – Installed IRIDIUM Pilot System to support Arctic Mission
  - no loss of VSAT, even with 5-degree look angle
“Gremlins of the North”
- Multibeam software issues above 86N
- Poor multibeam/Knudsen in ice and during ice stations
- XBT issues in ice
- Satellite ice imagery issues
- Equipment vulnerability to cold
Oh My Gosh...
WE FELL OFF THE INTERNET
USAP Icebreaker’s
Icebreaker
- R/V Falkor’s First Seismic Cruise
- Seamount named after the R/V Falkor
- Over a quarter million square kilometers mapped since 2014
- New CTD LARS, new 0.322 wire
- New NEBULA super computer
- SOI’s 4500m ROV development well underway. On track for sea trials mid-2016.
The Encoder, the Winch, & the Wardrobe (Sensorless Vector Mode)

- DESF-4 Winch | 10HP Motor | VF Drive
- Damaged sensor module = no control
- Pulse wheel also misaligned
- Sensorless Vector Mode
  - Allowed operation, albeit reduced
  - Less fine-tune control at near-0 RPM
  - Slower top-speed (35m/m)
Alex Sneddon

Stony Brook University
Tom Wilson added 3 new photos.
January 30, 2014 · Edited

PLEASE LIKE AND SHARE.
HELP TRACK THE GREAT SOUTH BAY DATA BUOY.

The Great South Bay Data Buoy is a project of Stony Brook University's School of Marine and Atmospheric Sciences. Since October 2010, the buoy has provided weather and water quality information to government, researchers, and the general public.

After surviving Irene and Sandy and being dragged around by the ice for three winters with no major problems, the buoy suffered a loss of telemetry on January 25th. Without telemetry we have no GPS position, so we are asking for help to keep track of the buoy until the ice breaks and we can retrieve it for repairs.

The buoy's normal position is 40d 41.96m N, 73d 05.21m W, south of Green Creek in West Sayville. Last GPS position was 40d 41.96m N 73d 1.67m W, south of Blue Point, at 5:06am EST on 1/25/2014.

If you see the buoy, please post or message me with date, time, and position. If you get close enough to take pictures (iceboaters?) that would be great too. If the buoy has broken free of the mooring and is adrift please take all reasonable steps to secure or retrieve it, otherwise a report of position is sufficient.

Thanks for your help!
Tom Wilson
Stony Brook University
Thank you!