

Healy Science Systems Overview

Status from 2006

Plans & Options for 2007+

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Status from 2006

- Shakedown
 - Test of ultrashort baseline navigation system
 - Improvement in understanding ADCP issues
- Successful science systems operation
 - Some problems with the network disk store
- Significant improvement in mapserver performance (w/ new server & code)
- Resolved Xserver display errors
- Improvements to Watchstanders Workstation

Plans & Options for 2007 and beyond

- Improved Multibeam
- Supporting the existing multibeam
- Communications
- PAR sensor
- Seawater Systems
- FO 0.680" wire
- Dual 0.322" wire operation
- Terascan
- ADCPs

Multibeam improvements

(As we plan for 2010, don't overlook the impacts of change)

- What are the needs for survey
- Does Healy have a 'freeze-in' mission profile?
- Interfaces to existing resources (position, attitude, heading, sound speed, data archive, real-time displays, error logging, alerts,)
- Plan for effective FAT*, HAT*, and at sea acceptance tests: protocol development, execution and review.
- Training AND education of support personnel

* FAT = Factory Acceptance Test, HAT = Harbor Acceptance Test

Multibeam Support

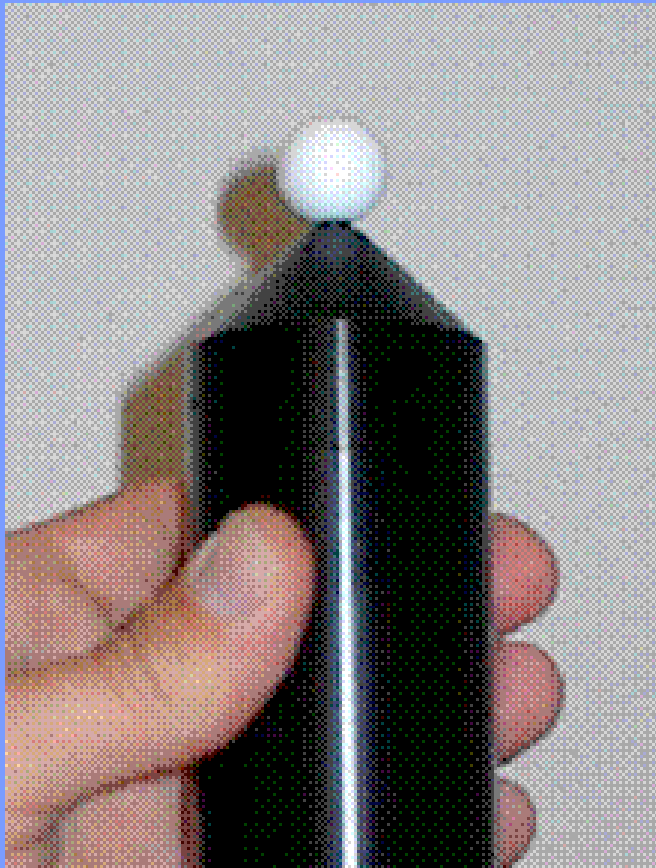
What it will take to keep the 2112 running through 2009

- Spares: underhull
 - We have all of the known hardware (ex-Palmer)
- Spares: electronics
 - The US academic fleet has a pool of hardware
 - Are updating the inventory and the sharing agreement
- Computers and networking hardware
 - Not an immediate issue
- Vendor support expertise is fading

Communications

- Iridium email and file transfer not expected to change in 2007
- CGDN+ upgrade to 128bps
 - Removes easy “switching cables” access as in the past
 - If “tunneling plan” is approved could retain science access
- Science Inmarsat (F77) through LDEO budget
- Try to lease/purchase a VSAT

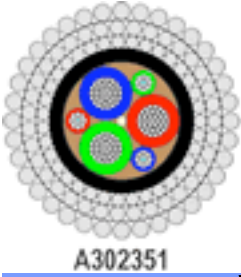
PAR sensor



- Needed for BEST
- Plan to install Biospherical QSR-2200 in collaboration w/ ODF.
- Integration w/ CTD and w/ routine underway data acquisition

Seawater Systems

- Didn't get the new TSG into this year's dockyard
- Definitions of water needs & interactions
 - Incubators
 - Wash
 - Sampling
 - TSG/Flour....



Fiberoptic 0.681" tow cable

- Why: we've installed temporary winches three times in the last three years at great expense, effort and lost deck space.
- Rochester A30235
 - 3 single mode fibers plus 3 11AWG conductors, Breaks at 46,000 pounds, 10km ~ \$275K
- When needed? (not 2007 (yet?))
- Limitations: very expensive, relatively fragile
- Issues: not just the cost of the wire, have to include: spooling, termination, slip rings (and spare) and leader.
- Consider buying one for the UNOLS pool and letting the wire pool manage it?

0.322" wire on two winches (both A-frames)

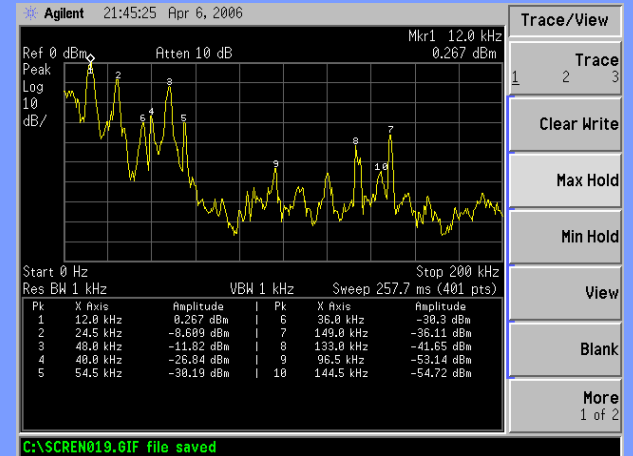
- Needed for BEST (2007)
- Issues
 - Changing drums
 - Sheave upgrades
 - Winch grounding
 - Deck leader
 - Slip rings

Terascan

- 2005
 - Antenna pointing problems
- 2006
 - Upgrade to 1.5m dish
 - Two antenna failures
 - Lot of down time & a lot of effort
- We need to consider other options: Dartcomm
www.dartcom.co.uk/index.php?pageID=11&systemID=2



ADCPs



- Performance history (not great)
- 2006 shakedown summary
 - EMI interference (from long, unprotected cable runs)
 - Acoustic interference (perhaps from SeaBeam)
 - Mechanical coupling in ADCP 75 mounting rings
- Plan for 2007 shakedown
 - Further work on acoustic interference

LDEO computer updates

- Experiment during fall underway achieved >2X improved performance for *mapserver*.
- Upgrade our general purpose Linux server
- Provide an on board spare for the Linux-based logger and *mapserver*
- Additional server-hosted disk space to reduce dependency on network disk
- Improved displays in AftCon and AloftCon
- Improve tape backup capability

Lab Space Renovation(s)

- Pending input from AICC

Healy 2007 (onboard) Science Support Personnel

Leg	LDEO	ESU	ODF	Other
Shakedown	Chayes, Roberts, Bolmer, Arko	Wilson, Hassilev, Cohoe, Luna, +2 IT	Hiller	
BEST	Roberts, Bolmer	Hassilev, IT	Hiller + 1	
Grebmier, Lovvorn	Roberts, Bolmer	Hassilev, IT		
Open	TBD	TBD	TBD	
Mayer	Chayes, Roberts	Doramus, IT		