Electronic Systems Support Unit Seattle
US Coast Guard (C4IT)
Polar Science Systems Branch
Polar Icebreaker Support

USCGC HEALY – Actively operating for science missions.
USCGC POLAR SEA – Actively operating for science missions.
USCGC POLAR STAR – No Science Network (SN)

Homeland Security
December 7th and 8th 2009
Editing the footer

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Wide Area Network (WAN)

USCGC HEALY

**VSAT**
- 24/7 connectivity
- At least 256K
- Provides Internet and e-mail connectivity

**IRIDIUM Reachback**
- 24/7 E-mail connectivity
- High altitude connectivity
- E-mail only
Wide Area Network (WAN) HEALY

VSAT Install – January 2010
- ECR Prototype approved
- Satellite Service
  - Contracting Month to Month service for FY10
    - Option for 4 years
  - Testing connectivity to Science Network
  - Spring shake down cruise
Wide Area Network (WAN)
USCGC POLAR SEA

INMARSAT B
- 24/7 connectivity
- At least 64K VPN CGDN
- Provides Internet and e-mail connectivity

IRIDIUM Reachback
- 24/7 E-mail connectivity
- High altitude connectivity
- E-mail only

December 8th and 9th 2009
Wide Area Network (WAN)

IRIDIUM OpenPort

- Tested this summer
- Temporary install (not the best location)
- Permanent install?
  - Will need a Engineering Change Request
  - Identify best location
- Current Access
  - Science missions while underway only
  - For large file transfers
  - For transfer of images
Upgrades
Local Area Network (LAN)

No significant changes scheduled for in port this year
Chief Scientist - Debrief
Science Network
Information Technology

HEALY

HLY-0901 - Debrief - Presented in June

HLY -0902 – Firewall Issue.
  ▪ Blocking excel files
    ▪ Not a firewall issue. E-Mail Anti-virus scanner
  ▪ In general, many compliments on the IT.

HLY -0903 – Cancelled

HLY -0904 – No debrief to date
Debrief - Information technology

HEALY
HLY-0905 – WAN communications
• General Purpose laptops worked.
• Laptop in Chief Scientist stateroom - is erratic and needed some work
• Usual problems of limited bandwidth
• Problem with maintaining robust connection during important press conference (actually failed).
• As always greater bandwidth would be helpful but all in all things were good.

POLAR Sea

PSEA -0901 – E-mail, Communications
• Web site was slow and difficult
• E-mail accounts form the start would have been helpful
• Once up and running this system was fine.
• Good ship board network
• INMARSAT and IRIDIUM – Random and not great
Debrief - Information technology

POLAR Sea

PSEA -0902 – Science Network

- The internal email user accounts were efficiently set.
- User accounts were set up in advance
- Easily configured our computers to work on the local network.
- Learning curve for specifics of the apple based system.
- We had hardly any access to the internet outside the ship email system.
- Unable to log onto my University webmail account in the entire 36 days.
- Able to post her blog on a regular basis.
- Moderate success connecting via Iridium both regular and open port
Science Network - Supports

- Network equipment
  - VSAT and IRIDIUM Reachback
    - Ship to shore connectivity
  - LAN, WLAN, MESH, VLAN
    - Routers and Switches, Ship to ship, VoIP

- Servers
  - Life cycle upgrades

- Workstation
  - Life cycle upgrades

- Printers

- Warranties

- Licenses

- Domain maintenance and services

- Supplies

- Software

- Hardware

December 8th and 9th 2009
Polar Science Systems Branch
Our mission for Science Support

- ESU will collect scientific data during science cruises and transit.
- ESU will provide support for the Science Network, Infrastructure, and scientists during science missions on Icebreakers.
- ESU Supports ship communications. As well as developing future Satellite connectivity where ever the Ice Breakers missions go.
Engineering Division
Polar Science Systems Branch

ESU – 24/7 contact phone number 1-800-982-2564

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December 8th and 9th 2009
Home Port – Seattle, WA

December 8th and 9th 2009