Rolling Deck to Repository (R2R)

Annual Report

rvdata.us
Program Goals

- Migrate all routine “underway” data to long-term repositories
- Create catalog of cruises and standard products
- Assess data quality and provide timely feedback to operators
Fleet Online

Cruise Catalog

- 26 RVs (21 UNOLS +5 allied)
- 1,960 cruises cataloged
- 6.5+ million files archived

Oct. 2008
- Langseth (Healy)
- Kilo Moana
- Melville
- Revelle

2009
- Thompson
- Sharp
- Atlantis
- Knorr
- Oceanus (Ka’imikai)
- Barnes
- Walton Smith

2010
- Point Sur
- Wecoma (Cramer)
- (Seamans)
- Endeavor
- New Horizon
- Sproul (Polar Sea)
- Pelican
- Savannah
- Explorer
- Hatteras
- Blue Heron

Oct. 2010
(Searchable inventory of underway instruments on each vessel: device type, make, model, and location.)

http://www.rvdata.us/operators/profiles
“Sailing Orders” Form

Harvest from UNOLS scheduling database + NSF award database.
Event Logger

- 2010: Developed and tested prototype ELOG-based application (v.1) on 5 cruises.

- 2011: Version 2 will incorporate user feedback + Web-based configuration generator.

- Ongoing vessel recruitment, testing, and vocabulary development.

<table>
<thead>
<tr>
<th>R2R Cruise ID</th>
<th>Ship</th>
<th>Dates</th>
<th>Chief Scientist</th>
<th>Affiliation</th>
<th>Type of Cruise</th>
</tr>
</thead>
<tbody>
<tr>
<td>OC462</td>
<td>R/V Oceanus</td>
<td>2010/05/20 to 2010/05/30</td>
<td>Chris Obenhaus</td>
<td>NOAA</td>
<td>DART Mooring</td>
</tr>
<tr>
<td>OC467</td>
<td>R/V Oceanus</td>
<td>2010/07/29 to 2010/08/02</td>
<td>Dennis</td>
<td></td>
<td>CTD/Floats</td>
</tr>
<tr>
<td>OC468-02</td>
<td>R/V Oceanus</td>
<td>2010/08/21 to 2010/09/02</td>
<td>McGillicuddy</td>
<td>WHOI</td>
<td>CTD/MOC</td>
</tr>
<tr>
<td>EN484</td>
<td>R/V Endeavor</td>
<td>2010/10/22 to 2010/10/01</td>
<td>Joseph Montoya</td>
<td>GI-T</td>
<td>CTD/MOC</td>
</tr>
<tr>
<td>EN487</td>
<td>R/V Endeavor</td>
<td>2010/10/27 to 2010/11/05</td>
<td>Gareth Lawson</td>
<td>WHOI</td>
<td>CTD/MOC</td>
</tr>
</tbody>
</table>
SAMOS / Real-time

2010 Development
- Focus group (OSU, URI, FSU, LDEO) drafted real-time metadata and data transfer protocol; provided sample files.

Current vessels
- UNOLS: Atlantis, Knorr, Oceanus, Atlantic Explorer, Kilo Moana
- Other: NOAA (17), USCG (Healy, Polar Sea), RPSC (Palmer, Gould), Australia (2)

Feedback
- Finalize vessel coordinate system metadata spec.
- Consider developing software package for installation on vessels.
Geophysical Data

• Draft quality assessment (QA) criteria and minimal+optimal metadata requirements for multibeam data; vet with community.

• Move to routine production of “final navigation” products.

• Develop standard data reduction (DR) routines for gravity and magnetics.
NOAA Collaboration

• Working with NODC to establish submission protocols (parallel to NGDC) – ADCP priority.

• Jointly developing standard (ISO 19115) metadata templates.

• “NOAA R2R” kickoff meeting July 2010 – established Working Group, targeted shared vocabularies.
ADCP data > NODC Ocean Archive System (OAS)
Reciprocal Linking
Reciprocal Linking (cont.)
Reciprocal Linking (cont.)

Cruise Catalog: KN192-05

Operator: Woods Hole Oceanographic Institution
Vessel: Knorr

<table>
<thead>
<tr>
<th>Cruise ID</th>
<th>Start Date</th>
<th>Start Port</th>
<th>End Date</th>
<th>End Port</th>
</tr>
</thead>
<tbody>
<tr>
<td>KN192-05</td>
<td>2007-11-16</td>
<td>Natal</td>
<td>2007-12-13</td>
<td>Walvisbaai</td>
</tr>
</tbody>
</table>

Inventory

- Project: Interactions of Cobalt and Iron with in situ Cyanobacterial Physiology in the South Atlantic
- **SCIENCE PARTY**
  - Shta, Mak
  - Scientist, Chief
  - Woods Hole Oceanographic Institution

- **RELATED DATA**
  - Shipboard Automated Meteorological and Oceanographic System (info: Data)

SAMOS

Shipboard Automated Meteorological and Oceanographic System

**Data Availability**

The purpose of this page is to allow the user to get a rough idea of the quality of data for a particular day and ship. In some cases, multiple files may exist for a single day and ship. In these cases, quality is calculated for the overall day, meaning an overall quality for the pieces as a whole are calculated. To see the quality of each piece individually, click on the colored box aligning the ship and day desired.

For more information on cruise KN192-05, you can visit the Rolling Deck to Repository page.

- **Good Data** (0-5% flagged as suspect)
- **Use with Caution** (5-10% flagged as suspect)
- **Use with Caution** (>10% flagged as suspect)
- **No Data Available**

Data Sheet:

<table>
<thead>
<tr>
<th>Date</th>
<th>Data Availability</th>
</tr>
</thead>
<tbody>
<tr>
<td>11/16/2007</td>
<td>Good Data</td>
</tr>
<tr>
<td>11/17/2007</td>
<td>Good Data</td>
</tr>
<tr>
<td>11/18/2007</td>
<td>Good Data</td>
</tr>
<tr>
<td>11/19/2007</td>
<td>Good Data</td>
</tr>
<tr>
<td>11/20/2007</td>
<td>Use with Caution</td>
</tr>
<tr>
<td>11/21/2007</td>
<td>Use with Caution</td>
</tr>
<tr>
<td>11/22/2007</td>
<td>Use with Caution</td>
</tr>
<tr>
<td>11/23/2007</td>
<td>Use with Caution</td>
</tr>
</tbody>
</table>
Directory Structure

cruise-id/

reports/ – personnel list, operations summary, etc.

r2r/

eventlogs/ – produced by, and/or formatted for, R2R Event Logger

devicetype[ [make][model]][location]/ e.g. adcp, ctd, multibeam, subbottom, xbt,..
docs/ – manuals, photos, calibration sheets, etc.

raw/

proc/

(where devicetype is a standalone system that logs independently)

system/ e.g. uhdas, scs, calliope, lds, chud, midas, sms, suds, udas, vids,..
docs/

raw/

devicetype[ [make][model]][location][mnemonic]–dateTtimeZ (file)

proc/

(where system is a serial multiplexing/timetagging acquisition system, and mnemonic allows further differentiation of files)

science/ – “dropbox” for files created by science party

photos/ – intended for public release
The PII Issue

Problem: Cruise distros may contain Personally Identifiable Information (PII).

Interim Fix: Distros transmitted to NOAA via secure network connection and stored in segregated space.

Solution: Operators exclude “Sensitive” PII from distros.

SENSITIVE
- Social Security Number (even truncated to last 4)
- Place of birth
- Date of birth
- Mother's maiden name
- Biometric information
- Medical information, except brief references to work absences
- Personal financial information
- Credit card or purchase card account numbers
- Passport numbers
- Potentially sensitive employment information
- Criminal history
- Any information that may stigmatize an individual

NON-SENSITIVE
- Work, home and cell phone numbers
- Work and home addresses
- Work and personal e-mail addresses
- Resumes where SSN is redacted
- General background information about individuals found in resumes+biographies
- Positions and performance plans

Full description: http://ocio.os.doc.gov/
2011 Goals

1. Revise and extend “vessel profiles” to include –
   • Device subcomponents (e.g. CTD)
   • File formats
   • Data types
   • Installation date
   • Vessel reference frame

2. Event Logger and SAMOS/Real-time development goals.

3. Deploy standard cruise directory structure on pilot vessels –
   Wecoma
   Endeavor