

Update on Data and Archiving

DESSC
December 2005

National Deep Submergence Facility Operator's Report

- **NDSF Data Manager – Dr. Vicki Ferrini**
- **Framegrabber/Shipgrabber**
- **DigArch Project**
- **Legacy Data**
- **Summary of Income**



Status of Archiving/Data

NDSF Data Manager

1. Support for DVNav processing software
2. Support for Imagenex sonar processing (*Alvin*) and SM2000 multibeam sonar (*Jason, Alvin*)
3. Assures shipboard support for mapping and data processing
4. Interface with external database efforts (R2K-ISS)



Status of Archiving/Data

Framegrabber - *Alvin* and *Jason*

- Archiving effort extends real-time data collection
- Web access and security
- Data quality assurance needed (e.g. navigation)
- Derived data sets not included (Imagenex sonar)
- Improves efficiency of science program planning

http://www.whoi.edu/marops/vehicles/alvin/alvin_framegrabber.html

http://www.whoi.edu/marops/vehicles/jason/van_cruises.html

Experimental Shipgrabber

<http://4dgeo.whoi.edu/shipdata/index.html>

Presently in operation on *Oceanus* (*Knorr* and *Atlantis* trials)



Status of Archiving/Data

Framegrabber - *Alvin* and *Jason*

Jason Virtual Van example... nominally 30 sec. snapshots with science data, event-logger and search capability for post-processing; *Alvin* - proof sheets, data plots

The screenshot displays the Jason Virtual Control Van interface. At the top, three monitors show underwater footage: MONITOR 1: SubSea1, MONITOR 2: SubSea2, and MONITOR 3. Below the monitors is a data panel with the following information:

DAQ: atlv720.Jason	Time: 2002/09/17 18:37:51	Mtg: 206.460	Alt: 4.020	Depth: 2.014	Live Video
		Lat: 47.57 285083 N	Depth: 2160.686	Cont: 3.142	Live Data
		Lon: 129.5770016 W	Bathy: 2174.000	Salac: -999.000	Live Snd
				S'Val: -090.000	Plot Maps
Type: EVT NavSec: JAB2 AltSec:		X: 5108.890 Y: 6784.448 Z:	MagK: 50600.0	MagY: 309600.0	Daily/hourly
Event: TXT bottle filling		Pitch: -13.960 Roll: 1.740	MagZ: 315086.7	MagT: 507471.3	LocalArea
					Show Results

Below the data panel is a control area with a search bar (containing 'Show All' and 'Find'), a 'show all results only' checkbox, and a 'Go to 7290' button. A 'Refresh Rate' dropdown is set to '5'. A 'CLOSE' button is also present.

A log window at the bottom left shows the following entries:

```

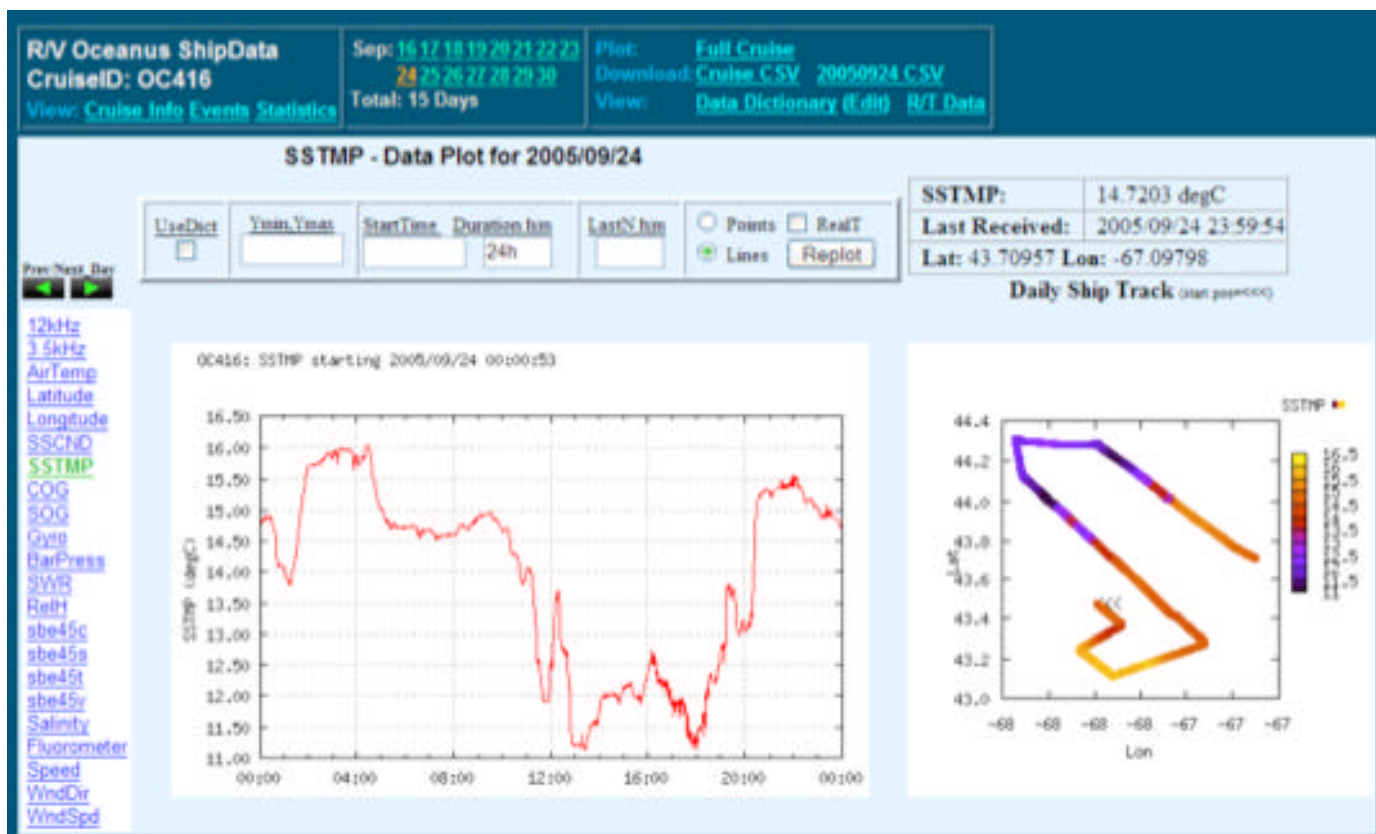
7290. 2002/09/17 18:37:51 EVT bottle filling
7291. 2002/09/17 18:38:09 EVT sample done
7292. 2002/09/17 18:38:56 EVT major 15 at 212 degrees
7293. 2002/09/17 18:44:52 EVT going to the base to look for a long sampling site
7294. 2002/09/17 18:55:59 EVT no location here for the long sampler
  
```

At the bottom of the interface, the text 'atlv720 - Juan De Fuca' is on the left, 'CRUISE INFO | SELECT ANOTHER CRUISE' is in the center, and 'Jason Virtual Control Van' is on the right. A 'Help' button and 'Control Panel Searching' text are also visible.

Status of Archiving/Data

Shipgrabber

Real-time display of underway data. Web-based access. Online archive access after cruise has ended. Data file download capability. Experimenting with station data display, archive, etc.



DIGARCH Project

WHOI, SIO and the San Diego Supercomputer Center are working together on a digital data archiving and preservation project including both shipboard and deep submergence vehicle data.

Funded by NSF/CISE and Library of Congress

Project Goals

1. Combine digital library architecture and search/display tools of SIOExplorer with *Alvin* Framegrabber and *Jason* Virtual Van;
2. Test notions of scalability to handle vast volumes of digital video and camera data collected by NDSF vehicles;
3. Establish interoperability between existing data repositories at SIO and WHOI;
4. Develop prototype system to retrieve selected shipboard and *Alvin* data from the Galapagos region for cruises from 1977 to 2005

See AGU presentations:

IN44A-07 Detrick et al. (Thurs PM)

IN51A-0306 Helly et al. (Fri AM)



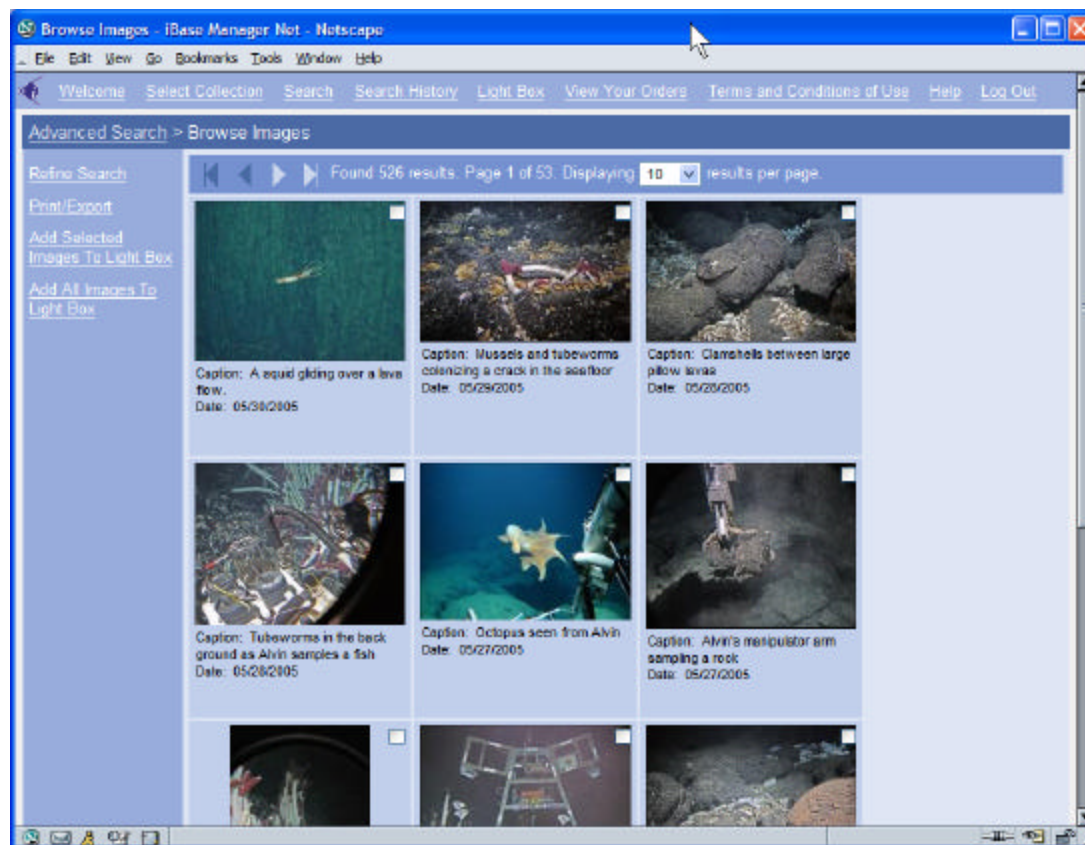
Status of Archiving/Data

Legacy Data - WHOI Image Management System (IMS)

Contains ~70,000 *Alvin* and *Jason* images.

Images are mostly *Alvin* shots, but IMS database includes vehicles, people, and “classic” images.

<http://www.whoi.edu/ims/>



Status of Archiving/Data

Summary of Income

NDSF Vehicle Imagery/Data and WHOI Outreach

- 2500 external requests for visual or deep submergence information in 2005. Examples include National Geographic Magazine, Geo Magazine, Houghton Mifflin, Dorling Kindersley, Scholastic, Oxford Univ. Press, Pearson Education IRC, museums, planetariums, and marine scientific associations.
- ~500 press kits plus media events such as the Visions' 05 cruise, media activities related to NOAA cruises, Naval Command college presentation
- Science and educational materials for museum exhibits, television e.g. Discovery Channel, BBC, TLC, History Channel, PBS, and radio broadcasts.
- Material and information also provided to educators and authors for books and classroom activities, student competitions like the MATE ROV and LEGO Challenges and outreach websites such as Dive & Discover and Extreme 2005.

FY 2005 total income received is \$22,989.46

