



National Facility Operator's Report

Data Management



USBL on *Atlantis*

- *Atlantis* now has a permanently installed Sonardyne USBL system
 - In use since Sept 2009
 - *Jason* and *Sentry* have portable systems
- Advantages:
 - Time savings vs. transponders
 - Digital comms between ship and beacon-carrying vehicle
- Disadvantages:
 - Less accurate as depth increases
 - Usage requires ship remain above beacon
- By April 2010, *Alvin* at-sea group has:
 - Improved integration of *Atlantis* systems with Sonardyne
 - Software that mimics LBL to DVLNav in Top Lab *and* sub
 - Provision for display of 2+ beacons simultaneously
 - Example: *Sentry* and Towcam



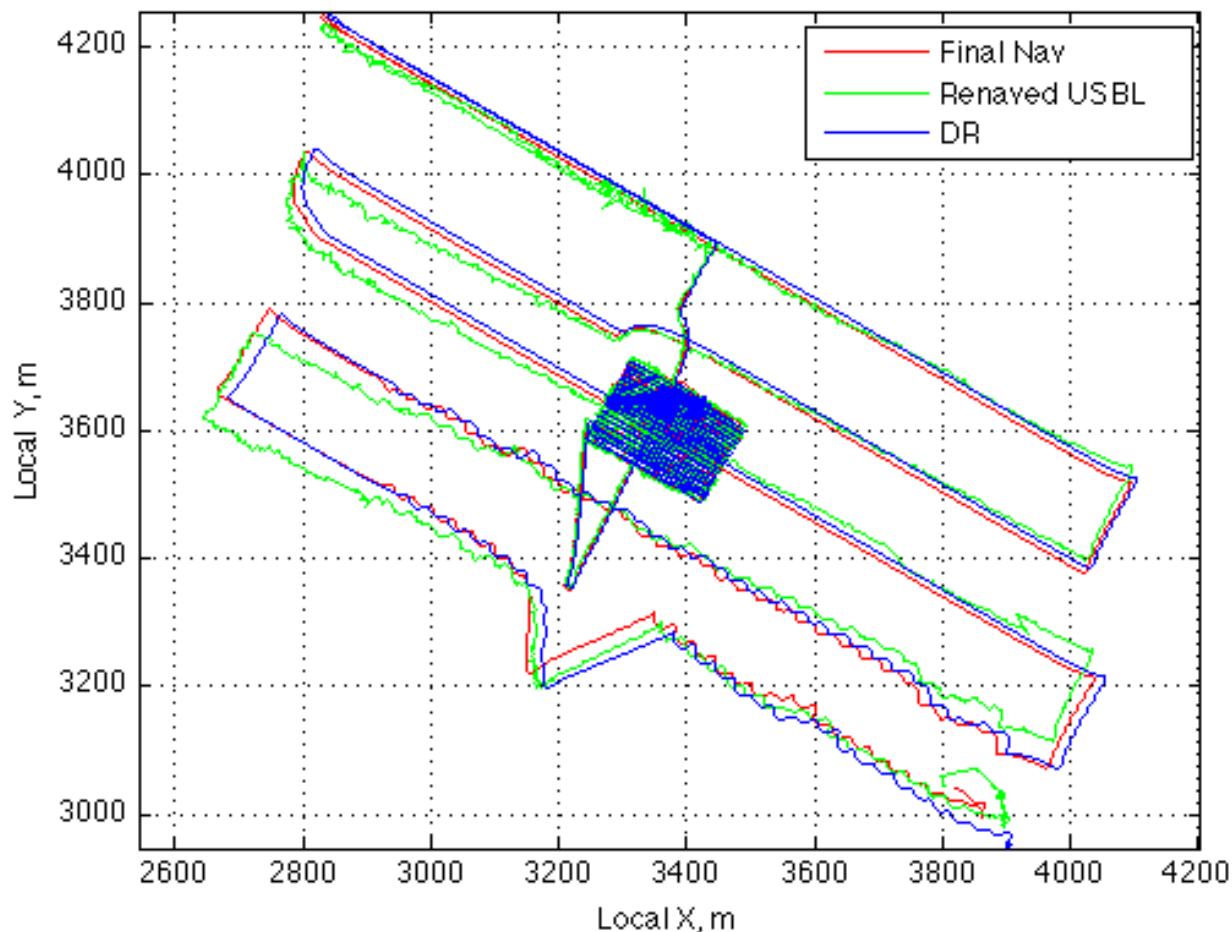
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USBL on *Atlantis*

Sentry Dive 36 Navigation Components



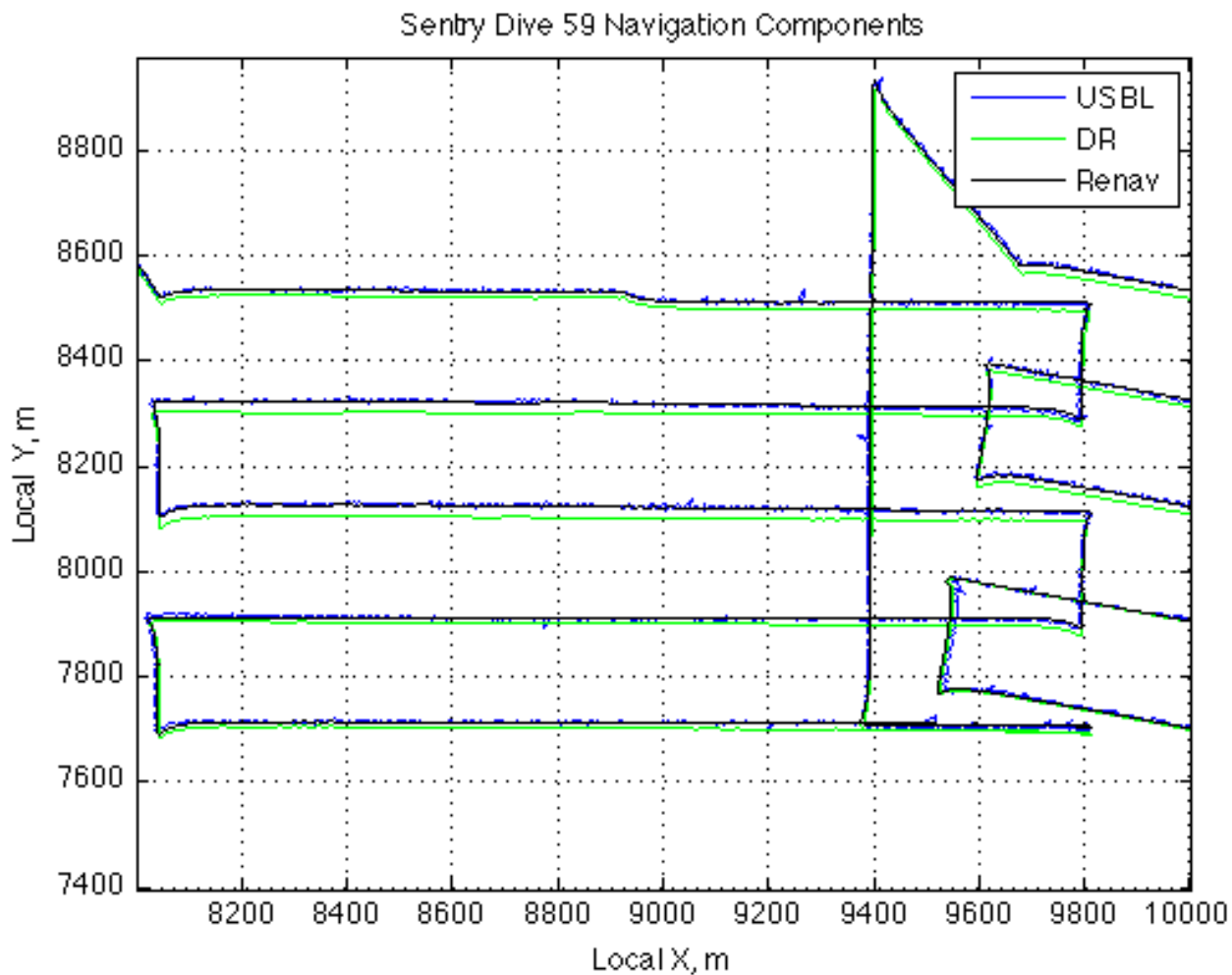
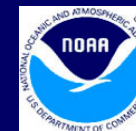
Deviation RMS = 14.8m, depth = 800m

DESSC
May, 2010



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Deviation RMS = 10.9m, depth = 1,630m

DESSC
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Multibeam Status on *Alvin*

Many activities in progress:

- Development of automatic multibeam processing scripts
- Treatment of USBL information
 - Update of navigation processing pipeline
 - LBL is currently supported
- Survey of sonar head position and attitude/heading
- Relation of sphere and frame dynamics during survey
- Education of users
 - SJM exercised system on Dive #4607
 - Draft of primer completed
 - Published version by July
- Bottom classification tools
 - License for Fledermaus Pro (Geocoder) for science use



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Overlays on *Jason* Video Feeds

- *Jason*'s current overlay system supports composite and S-video signals
- This is sufficient for current and near-future standard recording pipeline
- HiDef cameras may eventually compel an upgrade of recording pipeline
- We have started developing a prototype SDI/HD-SDI overlay system for that time
- Should be usable before recording pipeline changes, and will then be available for science parties who bring specialized equipment



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Metadata Search Engine

- Vicki Ferrini's group at LDEO developed a prototype metadata search engine, as reported to DeSSC in May, 2009
- A WHOI-based port of this engine has been completed, currently local access only
- Now working on data ingestion tools prior to going public
- Collaborating with WHOI Ocean Informatics group to develop more functionality, e.g., semantic web



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RAID Mirror of Archived Data

- All cruise data files (not video) since April 2008
- Redundant mirror was assembled and populated with data in 2009
- Mirror hardware was moved to WHOI Quissett campus in 2010
- Connection across campuses was unreliable for several months
- Incremental improvements by WHOI Computing & Networking led to reliable connection May 2010



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Revenue Report

- The imagery of most interest is of:
 - Hydrothermal vents
 - 1985/86 *Titanic*
 - One expedition to East Pacific Rise (HD video)
- Invoiced: \$54k
- Received: \$47k
- Income from HD video: \$19k

- per Stephanie Murphy, Mgr of WHOI Public Information and Internal Communication