

Task Team on Data Management Report

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Real Time Distribution of Data

AOML/DAC:

- All of AOML drifters' data are promptly disseminated on the GTS upon deployment. Data are monitored and taken off the GTS as soon as bad data are detected or reports from the monitoring centers are received.
- During this period the DAC oversaw the distribution of more than 7.3 million observations on the GTS.
- DAC also manages all of Korea's drifter data distribution on the GTS per they request.

Real Time Distribution of Data (continuation)

AOML/DAC:

- A problem reporting battery voltage on the GTS templates from drifters was recently discovered. CLS fixed the templates to have battery voltage reported as both, sensor: voltage in volts and HK_1 (House Keeping 1) in tenths of volts.
- It was recently reported that 49 SVP drifters with GPS were transmitting temperatures about $\sim 2^{\circ}\text{C}$ cooler than the models. The problem was found to be in the accuracy of the a and b coefficients indicated in the XML files for the GTS templates. (These coefficients had been truncated from the full accuracy provided by the manufacturer). DAC/AOML created new XML files and a,b coefficients with 5 decimal places, calibrations were reapplied at CLS America and the drifters then reported accurate SST.

Real Time Distribution of Data (continuation)

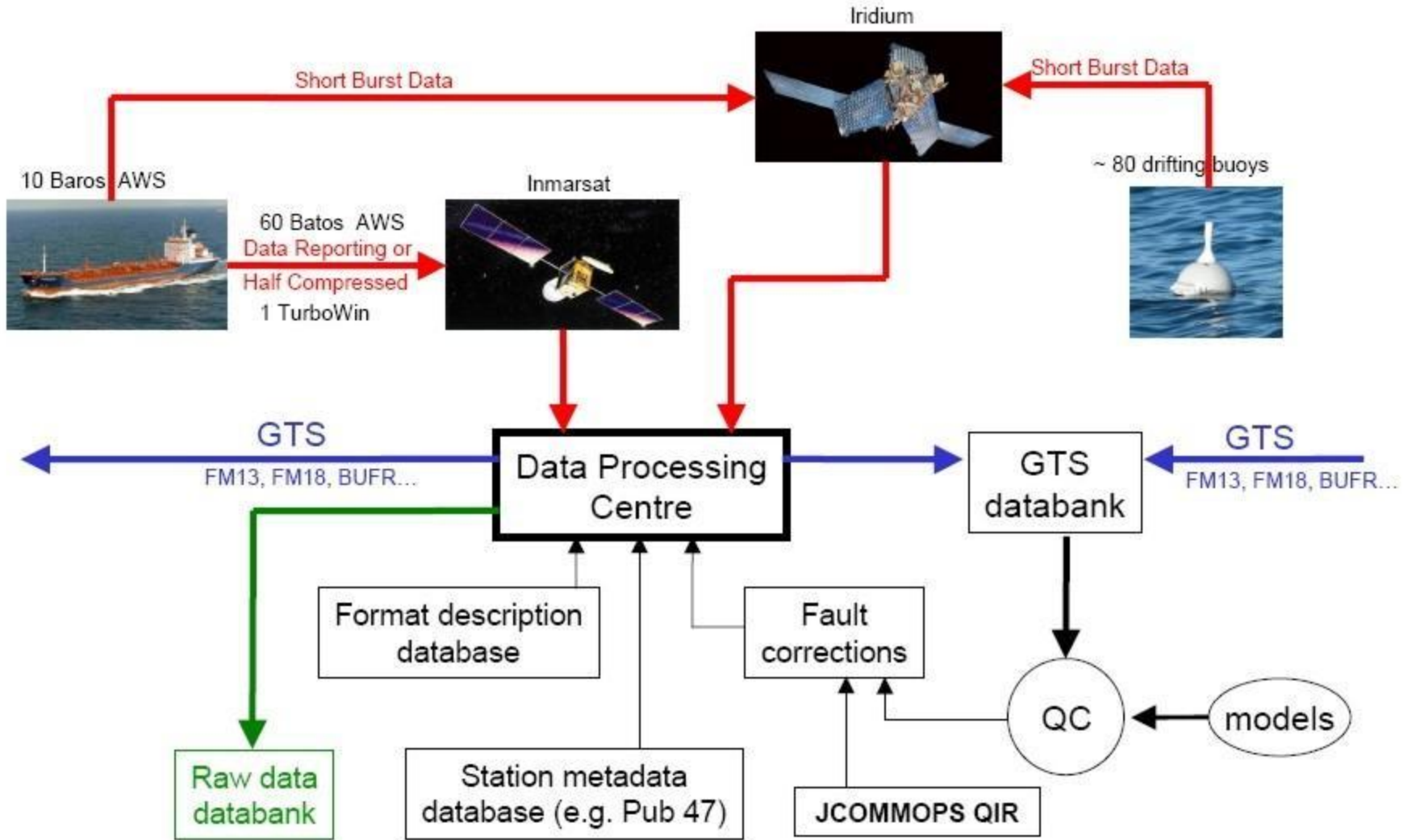
Meteo-France:

- Focused their developments during this intersessional period on a processing chain of procedures for Iridium SBD data.
 - Defined formats for the raw buoy data for DBCP Iridium Pilot Project, and also for Automated Weather Stations(AWS) reporting through Iridium SBD.
 - Developed a chain to produce GTS reports for those platforms.
 - FM13-SHIP and FM18-BUOY reports have been transmitting on the the GTS for several months.
 - The chain is now producing FM94-BUFR messages (buoy and ship BUFR templates). GTS distribution has not started yet.
- Iridium SBD appears to be the most suitable communication system for drifting buoys and ship borne AWS,(very cheap, reliable, no need to use redundancy, checksums, easy to handle).

Real Time Distribution of Data



Surface Marine Observations
Data flow and data processings at Meteo-France



Real Time Distribution of Data (continuation)

NDBC:

- Provided data analysis and quality control support 24x7x365 for different types of platforms, (moored buoys, coastal marine stations, water level stations, deep-ocean tsunameters, etc.), and provided over 8 million quality controlled data to the GTS in real time.
- Fifty percent of the active weather buoy drift detectors have been converted to the ARGOS 6-hour on/6-hour off reporting schedule. All should be converted in FY2010.

Delayed mode distribution and archiving of data

AOML/DAC:

- Data from the period January 2006 – June 2007 were submitted to the RNODC (ISDM), a new batch for the period June 2007 – March 2009 will be submitted before the end of October.
- Interpolated drifter data is available through March 2009 and can be downloaded from the AOML web site:

<http://www.aoml.noaa.gov/phod/dac/dacdata.html>

ISDM:

- Modifications to the processing systems required to handle new submissions were completed. All data are now available for download from ISDM web site:

<http://www.meds-sdmm.dfo-mpo.gc.ca/isdm-gdsi/drib-bder/svp-vcs/index-eng.asp>

Delayed mode distribution and archiving of data

Meteo-France:

- The purpose for Meteo-France to handle delayed mode data is mainly for quality control.
- Daily surface marine observations data from the GTS databank and model data at the position and time of the observations are collected and compared to:
 - Issue black lists and monthly statistics
 - Produce plots of the data and differences with model outputs over the last 2 weeks
- All products are available on the web:

<http://www.meteo.shom.fr/qctools/>

Delayed mode distribution and archiving of data (continuation)

Meteo-France:

- Quality control procedures were improved during the intersessional period to include other models for comparisons, new parameters (humidity, sea surfaced salinity), and better interpolation methods to be applied to model data.
- Archived data are also used to produce weekly surface currents from drogued drifter's positions to satisfy centers that need near real-time products. The files are sent to Coriolis. They only contain currents obtained from SVP drogued drifters, SST, salinity and the wind and wind stress vectors provided by ECMWF interpolated at the buoy's position.

Delayed mode distribution and archiving of data

(continuation)

NDBC:

- NDBC Published their latest edited edition of a quality control handbook: Handbook of Automated Data Quality control Checks and Procedures of the National Data Buoy Center.
- NOAA/NDBC Integrated Ocean Observing System Data Assembly Center (IOOS DAC) and OceanSITES have agreed to make the NDBC IOOS DAC a global DAC , providing a share and more secure capability together with the Ifremer//Coriolis GDAC in France.
- These GDACS will provide quality assurance/quality control, provide virtual access to data, maintain a global time series dataset and synchronize catalogues on a periodic bases.

Delayed mode distribution and archiving of data

(continuation)

Technical Coordinator:

- The OceanSITES program has progressed on its data management and metadata sharing in recent months, which relates to DBCP members wanting to access moored buoy data and metadata.

➤The data will be available, with full metadata descriptions at the following Global Data Assembly Center web sites:

<ftp://ftp.ifremer.fr/ifremer/oceansites/>

<ftp://data.ndbc.noaa.gov/data/oceansites/>

Format Issues

- NDBC expressed concerns with respect to the Argos System switch to a 6-digit ID number that will take place in early 2010, and that will affect the different data distribution formats. This action will severely impact NDBC.
- AOML/DAC is aware of this change, and will create and/or change existing routines to handle the new formats.
- Manufacturers should also be aware of this change.
- WMO numbers will also be increased to 7 digit numbers, but they can only be used with BUFR as BUOY reports do not accept them. This should be OK for drifters, but this issue should be addressed and the TT-DM asks the Panel for a recommendation.
- ISDM reports that RNODC processing and archival systems will be able to manage 7-digit WMO numbers.

Format Issues (Continuation)

- There are concerns that a lack of standardization in Argos data formats still exists and that is creating excessive work at times to decode the data. It is recognized that in some cases new formats are required to suit particular needs of some users, there might be other cases where new formats may not be necessary.
- It is encouraged that manufacturers try first to see if an existing standard format would meet the user's requirements before a new format is designed.
- In the case that additional data is needed in the message, it would be most desirable that the message has the "standard" data in the front portion of the message and the user-specific data behind that. This practice has been already implemented by some manufacturers and it has worked quite well.

Meta-T Project

- NDBC and the National Marine Data and Information Service (NMDIS,China) will develop and maintain two mirror servers for the META-T project.
- The action is to obtain “real-time” water temperature metadata and begin providing the information via national servers in China and the U.S

Actions from last year's proposed recommendations

- The TC reported that CLS is currently extending its Delay and Timeliness Monitoring Tool to include analyses over ocean basin areas of interest (as defined by the DBCP TC).
- There has been a good response by buoy operators to the Iridium Pilot Project. All data archiving centers should check to see if they are receiving all GTS data and can access delayed mode data from all buoys in the project (which are not being processed by CLS).
- Meteo-France reports that the BUFR template for buoy data already includes wave spectra data. The processing has been fully operational for several months.
- NDBC is not providing wave data at this time. The plan is to provide tsunameter data via BUFR within the next year.

Review roles of archiving centers

- Progress has been made towards this action item. A community white paper on the Data Management System for Surface Drifters has been prepared and submitted by Bob Keeley, Bruce Bradshaw, (ISDM) and Mayra Pazos (AOML) to OceanObs09.
- This CWP and a similar document from SOC will be used for identification of potential overlaps and opportunities for improved data management between RNODC and SOC.

Many thanks

to all team members and
to all who participated in
the discussions and
provided inputs to this
report

