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**Project report: Global Temperature and Salinity
Profile Programme (GTSP)**

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1. PROGRESS REPORT FOR THE PAST INTER-SESSIONAL PERIOD

The Global Temperature Salinity Profile Project continues to deal in greater volumes of data. The project began in 1990, with the goal of collecting and archiving all profile data from the oceans and providing the highest quality and resolution to users as soon as possible after collection. The last annual report prepared was for 2004. Since then, other work pressures have prevented completion of the report for 2005.

The number of BATHYs reported in 2005 was 32,533 and to nearly the end of 2006 was 27,063. The number of TESACS is steadily increasing. In 2005, we received more than 868,000 and more than 968,000 to nearly the end of 2006. Much of this increase is due to Argo exceeding the 90% level compared to the target of 3,000 floats and some moored platforms reporting profiles hourly. Delayed mode data continued to be added to the archive, which now counts more than 3 million profiles and a significant number exist in real-time form (the delayed mode versions have not yet arrived), particularly for data from more recent years. The timeliness of real-time data delivery continues to improve. Nearly 80% of ship observations are processed within 3 days, and by the end of 2006 Argo was providing almost 90% of its observations to the GTS within 24 hours of collection.

The GTSP collaborates with a number of international programmes. In particular, it is the main support for the SOT/SOOP programme of JCOMM. Additionally, the monitoring that is done to the real-time GTS data is an important contribution to Argo. The GTSP also offers the advantage of combining Argo profiles with all of profile data collected in a common data structure and with common processing. The GTSP is collaborating with the GODAE QC Intercomparison project along with colleagues from Coriolis and the GODAE Data Server in Monterey.

The GTSP has collaborated with JCOMM OPA to develop an easy to understand metric of data collection for temperature and salinity profile sampling. These are updated quarterly, and are available at http://www.jcommops.org/network_status. The most recent update was for the 3rd quarter of 2006. Information for the last quarter will be produced in late January, 2007.

A strategy for attaching a single unique identifier to both the real-time and delayed mode versions of XBT data has been under development at the GTSP, and has been implemented by the US SEAS programme on a trial basis. Preliminary results are very positive. GTSP

will continue to monitor these results to test how well the unique identification scheme performs. Both France and Australia have expressed interest in implementing the same scheme for data originating from their platforms but there is no action to report, yet.

The GTSP has developed a data dictionary to help identify different data and metadata identification schemes. It is hosted by ISDM (Integrated Science Data Management formerly MEDS), and is available at:

http://www.meds-sdmm.dfo-mpo.gc.ca/meds/About_MEDS/standards/login_e.asp.

Contributors to the data dictionary include major oceanographic institutes of Canada, the US NODC, and BODC. Other contributors are welcome. GTSP is also collaborating with the Marine Metadata Initiative in the area of metadata issues.

The GTSP is moving forward in a number of directions. It has developed software to read and write BUFR messages. This is confined at present to the templates that support Argo, but as this is a replacement for TESAC code form, the use is broader than for Argo alone. Project participants intend to regularly reconcile the NODC and Coriolis databases; to provide Argo participants profile data in an Argo GDAC-like format; to provide a hard copy source (DVD) of GTSP data; to continue work on the unique data identifier between real-time and delayed-mode data; to extend the data dictionary; and to continue collaboration with GODAE.

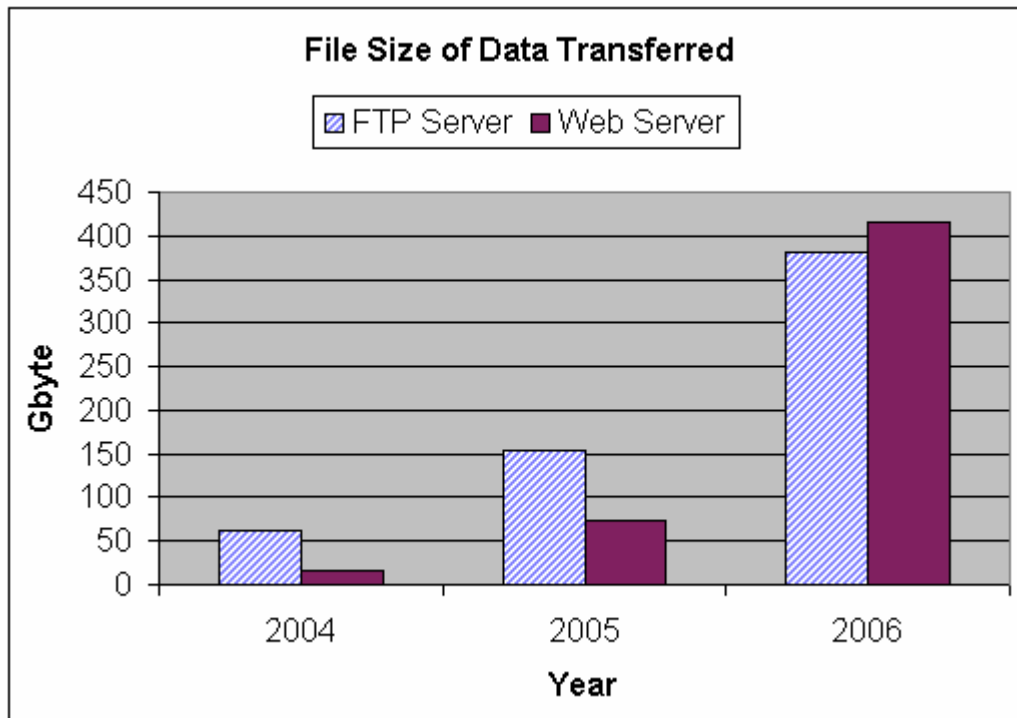
The GTSP is seeking assistance from the Argo Data Assembly Centres to fix the confusion of some profiling floats reporting pressure as depth in the TESAC code form on the GTS.

The GTSP is also cooperating with the National Institute for Fisheries Research and Development to exchange the GTSP QC software developed by Dr. Norman Hall at the NODC.

The most serious setback in GTSP operations has been the withdrawal of centres from performing scientific quality assessments of the data. The project has been discussing with possible alternative organizations, but no final commitments have been made. On 9 August 2005, Dr. Charles Sun of the NODC met with Dr. Peter Hacker of the International Pacific Research Center (IPRC) and invited IPRC to participate in the GTSP as a Pacific Regional Science Center for QC of the Pacific data. Dr. Hacker accepted the invitation and agreed to continue the QC editing until December 2007. The IPRC has Science QC'd the Pacific Ocean data for year 2000.

The chair of GTSP is looking for a successor. Part of the reason for the delay in the production of annual reports has been the increased workload associated with developments both in Canada and commitments to JCOMM. This has reduced his attention to GTSP and the project has suffered. **Interested participants are invited to notify the chair.**

The Web usage statistics of the Global Temperature-Salinity Profile Program (GTSP) data transferred for 2006 increased to 415.254GB from 74.354GB in 2005, a 558% increase; while the number of file size downloaded over the GTSP FTP server increased from 152.982 GB in 2005 to 381.554 GB. The following figure shows an increasing trend of the GTSP data usage from 2004 to 2006.



2. WORKPLAN FOR 2007, 2008-2009

The tasks in 2007 listed as continuing are activities that are expected to continue into the future. They are listed in activities of year 2007 only.

Activities listed in 2007 may spill into 2008-09 depending on competing work pressures.

Year: 2007

Tasks	Planned action	Assistance required from IODE
1	Continue to acquire, process and make available real-time and delayed mode profile data.	None
2	Complete annual reports for 2005, 2006	None
3	Continue to collaborate with Argo in making profile data from other instruments available in Argo format	None
4	Continue to collaborate with GODAE QC comparison	None
5	Continue production of metrics in support of JCOMM OPA and support of SOT	None
6	Evaluation of efficacy of CRC in real-time and delayed mode duplicates identification	None
7	Continue discussions to find a Science centre that will take over scientific QC	Assist in identifying candidates
8	Reconcile the depth-pressure confusion in GTS reports from Argo floats	None
9	Set up stronger links to QC developments in SeaDataNet and US QARTOD programmes	None

10	Install a new chair for GTSPP and hold a meeting	Assist in identification of candidates, some financial assistance to attend meeting (\$10K)
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Year: 2008-2009

Tasks	Planned action	Assistance required from IODE
1	Implement a BUFR read-write capability for ocean profile data	None
2	Complete annual reports for 2007, 2008	None

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