

Summary TIGGE 4th meeting

TIGGE at CMA

- Presentation by Dr. Jiao Meiyan:
 - Recent improvements of CMA global EPS, horizontal and vertical resolutions increased, 15 members instead of 33, BGM method
 - TIGGE data essentially ready
 - Bias correction is helpful
 - CMA will work in the near future on multi-model ensemble assessment based on TIGGE archives

TIGGE at CMA (Contd)

- Presentation by Dr. Shi Peiliang
 - Infrastructure upgraded (Linux Cluster IBM X3850 with GPFS acquired)
 - Internet connection has been upgraded and data transfers now occurs at sufficient speed
 - LDM under test for data exchanges with several centres. Data being lost during transmission: problem under investigation with help from NCAR
 - GRIB2 encoding/decoding OK
 - Management and storage system for the archive not yet decided (could be MARS or a CMA proprietary system)
 - Full TIGGE service expected to open 3Q2007

Status of Phase 1

- Presentation by Steve Worley:
 - LDM working well for data exchanges at NCAR (172 Gbytes/day and will accommodate more)
 - Data from 4 centres received routinely
 - NCAR processes and retransmits most NCEP data
 - Data access: the Internet portal already offers many possibilities to explore the archive and download data
 - NCAR has already registered about 30 users and some data are being downloaded (only global fields at this stage)
 - NCAR already offers a number of software solutions to process the data at the users' site
 - NCAR will now put priority on developing the access to interpolated data on limited area domains
 - Activity is still very much dependent on funding requests

Phase 1 (Contd)

- Status at ECMWF
 - Data are received routinely from 4 providers, most other providers have started tests of data transmission, expect to have 5/6 providers routinely very soon, 10 by end 2007
 - Occasional data gaps very limited (not a problem)
 - Monitoring data updated routinely
 - Many remaining issues with single fields from some providers, but nothing considered as blocking problem – data base should become nominal soon, except for fields not delivered by some users
 - Data access currently possible only for MARS-registered users, which is very limitative (only 3 or 4 users currently)
 - Interpolation on limited area lat-lon grids available through MARS
 - ECMWF will now put priority on developing the Internet data portal and the connection between this data portal and MARS – This should be ready in 1-2 month

Phase 1 (contd)

- Status by data providers:
 - ECMWF nominal except 3 missing fields
 - UKMO: nominal except 3 missing fields
 - JMA: nominal except 10 missing fields, will move from http to LDM soon
 - NCEP: all specific humidity fields missing plus some single level fields missing, but this should be solved by september 2007 (subject to funding)
 - CMA: on-going transmission tests, production starts soon
 - KMA: on-going transmission tests
 - Canada: on-going transmission tests, production expected mid-June for the essential data and all fields by end 2007
 - BMRC: GRIB2 encoding now resolved – essentially ready to start transmission tests
 - Meteo-France: transmission tests should start in May
 - CPTEC: on-going work on GRIB2, transmission tests with LDM

Conclusions on Phase 1

- Very good progress towards building the data archive – last issues now being resolved – expect to have all 10 data providers and most fields by end 2007
- Excellent collaboration between the 3 archive centres
- NCAR has the lead in data distribution, ECMWF needs 2 more months to start a service, CMA service expected to start in 6-9 months
- Priority will now be put on tools to access and manipulate data (interpolation to limited area lat-lon grids and further developments of the data portals)
- Metadata contents has been agreed. Some more work is needed to check whether it is possible to comply with WMO WIS standard formats for metadata

BeiJing Olympics RDP

- Real time access to existing TIGGE data will be requested through the IPO and should be granted. CMA will develop its own products for early warnings of severe weather based on TIGGE data
- Support for LAM EPS BCs: Not possible with current TIGGE data
- Some TIGGE data providers may want to provide special datasets to support the RDP. A precise request needs to be formulated by the groups operating LAM EPSs for the BeiJing RDP towards specific data providers. Use of TIGGE formats is recommended. Liaison between the BeiJing RDP and the TIGGE-LAM panel of experts is recommended
- CMA will undertake to archive all special datasets provided for BeiJing RDP using a system fully compatible with its TIGGE archive

TIGGE LAM

- Provisional report by Tiziana noted and endorsed
- We expect a proposal will be made for the concept of a general coupler
- TIGGE-LAM will need a physical meeting – funding to be sought from IPO
- We recommend to involve the THORPEX regional committees in the work of the TIGGE LAM panel
- We recommend that TIGGE LAM takes BeiJing RDP as a concrete example to develop its proposals

Phase 2 and the GIFS

- Reaffirm that GIFS is a long-term objective for THORPEX/TIGGE
- Some aspects of the GIFS will need input from other THORPEX groups before GIFS-TIGGE can work on them (e.g. adaptive data assimilation needs research from DAOS, products presentation needs input from SERA)
- Phase 2 (a distributed data base system offering fast real-time access) is a necessary technical step
- There are many issues to address (data policy issues, how to best share developments, how to organize production, e.g. where should de-biasing, or products be done, etc...) NAEFS can be used as a model for some of these
- Phase 2 in itself will take several years to develop, so planning needs to start soon in order to secure funding
- Several centres will need to see results from Phase 1 before anything else can be started
- What can be done now? Zoltan proposed to initiate a subgroup on this and report to TIGGE WG at its next meeting (Beth, Richard, Warren, Zoltan)

Observations

- It is anticipated that many users will conduct verification against observations
- Standard verifications of TIGGE forecasts are desirable, in priority with surface conventional observations (2mT, 10m wind, precip, RS)
- There is consensus that TIGGE does not have the resource to build its own observational dataset
- The TIGGE portals should direct users towards existing datasets
- Verification software should be shared
- Systematic verifications at the archive centres are an option, but all 3 centres felt it is too early to commit – the issue will need to be revisited soon
- NCAR can offer a global observational dataset and computing resources to conduct verification activities

Verifications

- It is desirable to have systematic, standardized verifications for all ensembles and for the multi-model ensemble
- Standardized means: fair use of the various analyses (e.g. verify against each analysis), common set of high quality observations, common algorithms
- Consensus to use JMA verification Internet site to display results of TIGGE verifications
- Consensus to rely on guidance of WGNE-WWRP verification WG and ET-EPS to improve standardization of verification algorithms and their application
- Need to seek CBS help to identify a set of reliable surface observations
- Work will continue at each forecasting centre to verify individual ensembles, with increased standardization
- A place to develop verification for the multi-model ensemble is not yet identified. Although interest exist in several centres, no centre can already commit workforce
- Special effort for TC forecasts verifications. Beth will explore format of TC forecasts, then data providers and archive centre to examine the possibility to add this information to the TIGGE archive. If possible use this during T-Parc (Summer 2008)

GEO - SERA

- GEO support to TIGGE is strongly appreciated and TIGGE will try to meet GEO expectations – contribution at GEO ministerial conference if requested
- TIGGE is involved in several GEO tasks – request help of IPO to establish/maintain liaison
- Maintain a list of demonstration projects where TIGGE is used (B08 RDP, T-Parc, E-TREC, Winter 2010 olympics, SWFDP in South-Eastern Africa) – a contact point has been appointed for each of these
- Re-establish contact with HEPEX and make presentation at the 3rd HEPEX workshop
- Liaison with SERA: Laurie

User workshop

- Best time frame: second half 2008
- Perhaps 2-days joined with 3rd Thorpex science symposium – this will be revisited after ICSC-6
- SERA and GEO to be closely involved in preparation
- Feedback from Shanghai EPS workshop will be provided by Chen De Hui

WG Membership

- Implement THORPEX rules for regular rotation of members
- Strong case to maintain one member by data providing centre – choice of member left to the centres – Meteo-France should join as a full member
- KMA rep has changed recently
- Only one rep by organization (Roulston to transfer to SERA and Hamill to DAOS)
- Put more effort in having THORPEX science WGs represented at meetings: invite systematically the chairs of all WGs to send a representative and suggest reciprocity
- Request from CMA to have one observer from NMC
- Continue using observers to complete the panel