



TIGGE LAM European Archive at ECMWF

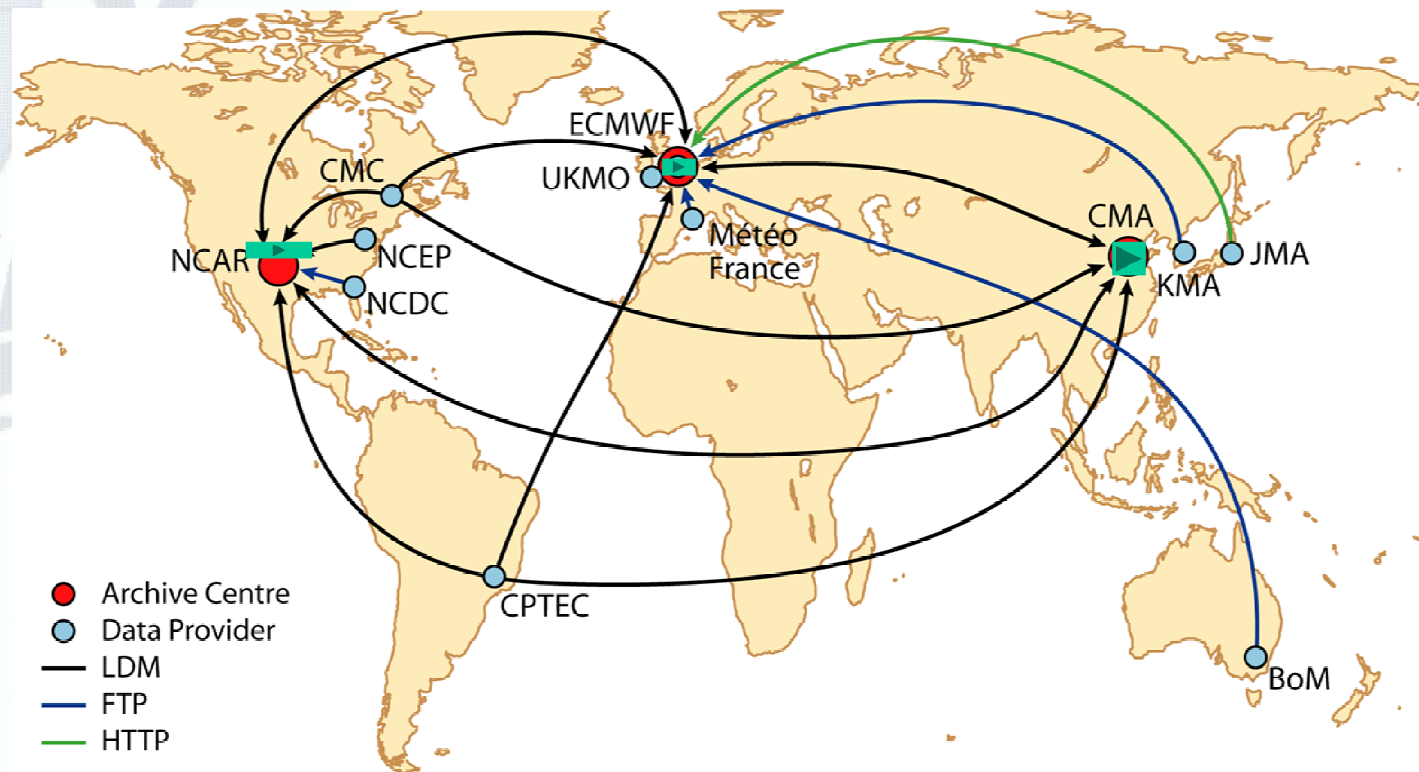
Tiziana Paccagnella
ARPA-SIMC, Italy

- ❑ A major component of THORPEX: a World Weather Research Programme to accelerate the improvements in the accuracy of 1-day to 2-week high-impact weather forecasts
- ❑ GEO task WE-06-03 – “TIGGE and the Development of a Global Interactive Forecast System for Weather”

Objectives:

- Enhance collaboration on ensemble prediction, both internationally and between operational centres & universities.
- Facilitate research on ensemble prediction methods, especially methods to combine ensembles and to correct systematic errors
- Enable evolution towards a prototype operational system, the “Global Interactive Forecast System”

- ❑ Mirrored data collections of global medium-range ensemble forecasts at three TIGGE Archive Centres: **CMA**, **ECMWF**, and **NCAR**.
- ❑ Ten of the leading global forecast centres are providing regular ensemble predictions to support research on predictability, dynamical processes and development of probabilistic forecasting methods.
- ❑ TIGGE data is made available for research after a 48-hour delay. Near real-time access may be granted for specific projects through the THORPEX International Project Office. Data access portals are available at CMA, ECMWF and NCAR.



A TIGGE-LAM Panel was established to coordinate the LAM EPS contribution to TIGGE and to the GIFS system.

The Panel has been recently re-organized in regional sub-groups:

- Better coordination with the Thorpex Regional Committees
- Better link with regional initiatives
- Better focus on scientific issues, actions/activities

TIGGE LAM Panel

TIGGE LAM Panel – March 2011

<u>Tiziana Paccagnella</u>	ARPA-SIM / Italy	Chair
<u>Tiziana Paccagnella (FP)</u>	ARPA-SIM / Italy	TIGGE – LAM Panel Europe Sub-group
<u>Jose A Garcia Moya</u>	INM / Spain	
<u>Yong Wang</u>	ZAMG / Austria	
<u>Ken Mylne</u>	MO / UK	
<u>Trond Iversen</u>	Univ Oslo / Norway	
<u>Laurent Descamps</u>	Meteo-France / France	
<u>Marco Arpagaus</u>	MeteoSwiss	
<u>Andrea Montani</u>	ARPA-SIMC	
<u>Jan Barkmeier</u>	KNMI	
<u>Xiao Hua Yang</u>	DMI	
<u>Susanne Theis</u>	DWD Germany	
<u>Máté Mile</u>	HMS Hungary	
<u>Inger-Lise Frogner</u>	MetNO	
<u>Chiara Marsigli</u>	ARPA-SIMC	TIGGE – LAM Panel N. America Sub-group
<u>Josh Hacker (FP)</u>	UCAR / USA	
<u>Brian Etherton</u>	Renaissance Comput. Inst.	
<u>Bill Gallus</u>	Iowa State U.	
<u>Fuqing Zhang</u>	Penn State U.	
<u>Ming Xue</u>	Univ Oklahoma	
<u>Xuguang Wang</u>	U. of Oklahoma	
<u>Ryan Torn</u>	SUNY Albany	
<u>Greg Hakim</u>	Univ Washington / USA	
<u>Brian Colle</u>	SUNY Stonybrook	
<u>Jun Du</u>	NWS/EMC	
<u>Steve Mullen</u>	Univ Arizona / USA	
<u>Xuguang Wang</u>	NOAA / USA	TIGGE – LAM Panel ASIA Sub-group
<u>Martin Charron</u>	MS / Canada	
<u>Isidora Jankov</u>	CIRA, NOAA/ESRL	
<u>Jing Chen (FP)</u>	CMA / China	TIGGE – LAM Panel S. America Sub-group
<u>Jiandong Gong</u>	CMA / China	
<u>Vo Van Hoa</u>	Vietnam Weather Service	
<u>Kazuo Saito</u>	Japan Met. Res. Institute	TIGGE – LAM Panel AFRICA Sub-group
<u>Chou Sin Chan</u>	CPTEC / Brazil	
<u>Celeste Saulo</u>	Univ. Buenos Aires	
<u>Stephanie Landman</u>	WeatherSA South Africa	TIGGE – LAM Panel AFRICA Sub-group
<u>Galebonwe Ramaphane</u>	Botswana Weather Service	

Archiving/ TIGGE LAM data base(s)

- ☐ Output parameter list defined
- ☐ Sub-set of HP parameters defined for verification/research/end users (i.e. hydrological applications)
- ☐ GRIB2 coding should be adopted following TIGGE directives
- ☐ GRIB2 specifics defined
- ☐ HP parameters should be archived at the three TIGGE Archiving Centres, NCAR, ECMWF and CMA
- ☐ As regards the data access, the same policy adopted by TIGGE will be proposed with a reduction of the delay from 48 hours to 24 hours.

LAM EPS contribution to the TIGGE Archive

During the first period , the proposal was to archive
“high priority” parameters on regular lat/lon grids.



European groups agreed about this proposal but
the archiving of European products at ECMWF has
been slowed down due to other priorities at
ECMWF (lack of resources).



- GEOWOW (GEOSS interoperability for Weather, Ocean and Water) is an EU-funded FP7 project that will begin in September 2011.
- GEOWOW will propose and validate a multi-disciplinary, distributed architectural model federating Earth Observation and other Earth Science data holdings and put this model forward as the European contribution to the Global Earth Observation System of Systems (GEOSS) Common

GEOWOW

- The GEO Capacity Building Strategy focuses on three elements: human, institutional and infrastructure.
- The Weather component of the GEOWOW project will address all three by improving the access to THORPEX Interactive Grand Global Ensemble (TIGGE) data and developing and demonstrating products using this data in collaboration with users in developing countries, including providing education and training.
- GEOWOW will significantly enhance the accessibility of the TIGGE archive at ECMWF for the wider user community, in particular the ability to efficiently access long time series of forecast data at user-specified locations.

3 years Projects:
September 2011-
August 2014

Coordinated by ESA

For Weather:

ECMWF

Met Office

Meteo France

Karlsruhe Institute of
Technology

TIGGE LAM archiving has been included as a Task of GEOWOW

After the agreement with the European LAM EPS providers, products will be archived at ECMWF on their original grid (full resolution)

ECMWF will provide a full integration of these products in the TIGGE archive; all the SW necessary to manage and retrieve products will be also developed.

A formal request to contribute to the archive will be sent to the LAM EPS groups by TIGGE-LAM/TIGGE/THORPEX

