

Development of an Iberian IDD Network

G. Chagas¹, M. D. Orgaz¹, V. Homar², R. Guilabert², R. Romero², J. Weber³ and T. Yoksas³

¹Departamento de Física, Universidade de Aveiro, Campus Santiago, Aveiro, 3810-193, Portugal

²Meteorology Group (Dept. de Física), Universitat de les Illes Balears, Cra. de Valldemossa, km 7.5,
Palma de Mallorca, 07122, Spain

³Unidata Program Center University Corporation for Atmospheric Research, P.O. Box 3000,
Boulder, CO 80307, USA

In response to an academic need to improve regional mesoscale modeling efforts throughout Spain and Portugal, it was conceived in 2003 the Iberian MM5/WRF Network (*Red Iberica MM5/WRF*), coordinated by the Universidad de las Islas Baleares (UIB). Focusing at the development of thematic workgroups and trans-national research cooperation, this network counts with over 40 participant groups, and has led to a consistent improvement in mesoscale modelling research among its members.

The constant need of near real-time forecasts and the general adoption of the Global Forecast System (GFS-NCEP) 0.5 degree model products has created a major challenge, as the standard data acquisition methods were proven to be inadequate to transfer the vast amount of data needed. Therefore, it was created a new data distribution scheme, based on the Unidata Local Data Manager (LDM), using the already established Internet Data Distribution (IDD) connectivity at University of Aveiro (UA) at its foundation.

The IDD, developed by the Unidata Program of the University Corporation for Atmospheric Research (UCAR), consists of a system for distributing near real-time hydro-meteorological data. One of the datasets included is the CONDUIT, containing NCEP Model Data of key interest to mesoscale modeling. This network provides greater interoperability and reliability, since it operates on a decentralized architecture and with the cooperation of over 150 institutions over the Americas.

Consequently, the newly developed Iberian IDD Network strives to provide optimum conditions for the advancement of mesoscale modeling research, distributing initially the GFS model data among its peers. It is envisioned that many participants will also take advantage of the wide range of meteorological datasets provided and the data sharing capabilities of LDM to further enhance cooperation and research.