Unidata's International Activities

Policy Committee Meeting

September 22, 2005

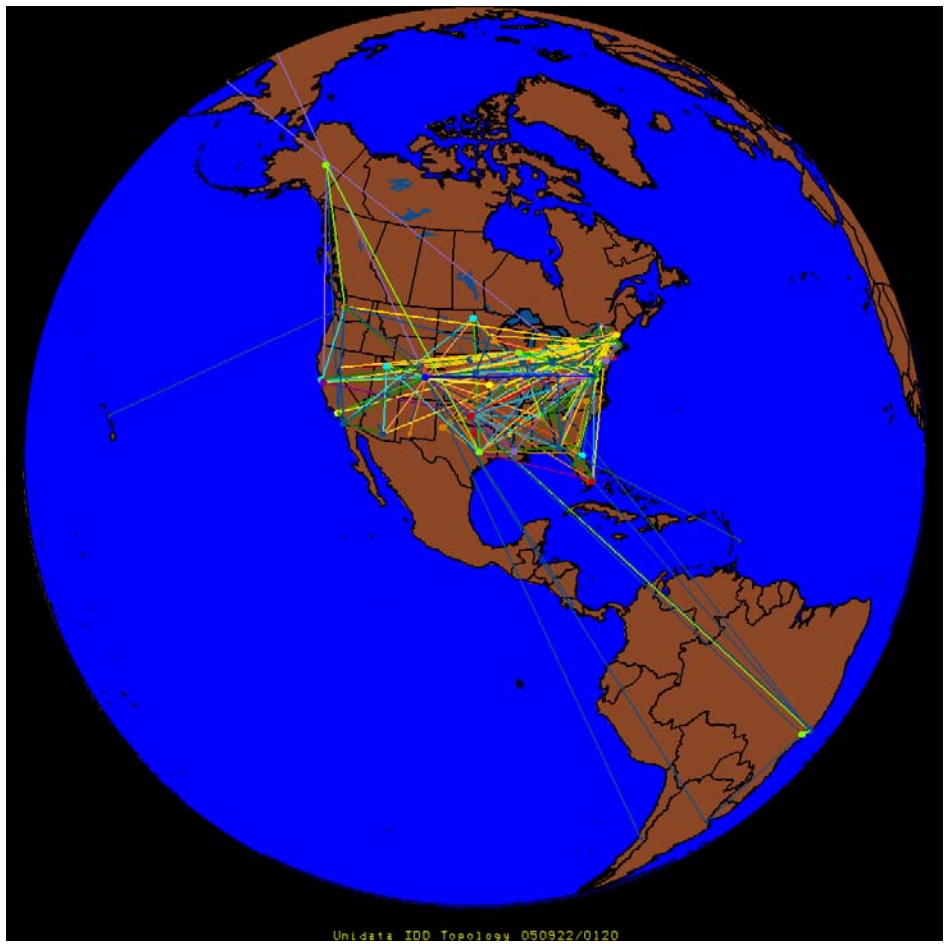
Arlington, VA

Motivation for this discussion

- Unidata's international community is growing;
- The highly successful MeteoForum pilot effort is coming to a close (Project is running out of funds).
- There is great interest in implementing the "Unidata concept" in other countries:
  - Today, many countries are where the U. S. academic institutions were during the early days of Unidata;
  - Participation in our Training Workshops from international users is growing rapidly;
  - For three years in a row, we have received proposals to the Equipment Awards program from International universities;
- Programs like THORPEX are creating even larger global communities and generating greater interest in collaboration

Internet Data Distribution

- International participation in the IDD is growing;
- Currently 27 sites are receiving real-time data via the IDD
  - Represents approximately 10% of all hosts
- Brazil ranks second only to U. S. in IDD participation;



MeteoForum

- A pilot program developed jointly by Unidata and the COMET® programs of UCAR. Began in 2002-03.
  - PI: Tim Spangler, COMET
  - Unidata principal: Tom Yoksas
- Funded by UOP Director's office using "STORM" funds.
- Concept: an international network of Regional Meteorological Training Centers (RMTCs) working collaboratively with universities to enhance their roles of training and education through information and educational technologies.
- Enables free access to rich data resources, software for data analysis, and training and reference materials.
- At present, 4 of the 5 RMTCS in Latin America and the Caribbean and co-located universities are participating in the MeteoForum project.

MeteoForum: Unidata's Role

- Facilitating data access to a broad spectrum of observations and forecasts (most in real time);
  - IDD-Brazil is the result
  - Unidata helped to install a NOAPort-DVB-S receiver in Costa Rica
- Providing tools to visualize, analyze, organize, receive, and share data;
- Supporting faculty who use Unidata systems at colleges and universities;
- Building a global community where data, tools, best practices in education/research are shared. To that end, Unidata coordinates a data-relay network that collects and distributes data in near-real time, at no cost to educators and researchers in South America and the Caribbean.

Unidata LDM Use

- Meteorological services in Spain, Australia, South Korea and Taiwan are using the Unidata Local Data Manager for their internal data distribution within their intranets.
- SuomiNet, an international network of 75 GPS receivers, configured and managed to generate near real-time estimates of precipitable water vapor in the atmosphere, total electron content in the ionosphere, and other meteorological and geodetic information, is using the LDM for collecting and disseminating GPS observations from and to all its sites.

Other Software Use

- Almost all Unidata software packages are used by the international community;
- NetCDF used in nearly 70 countries;
- About 25% the IDV downloads are from international sites;

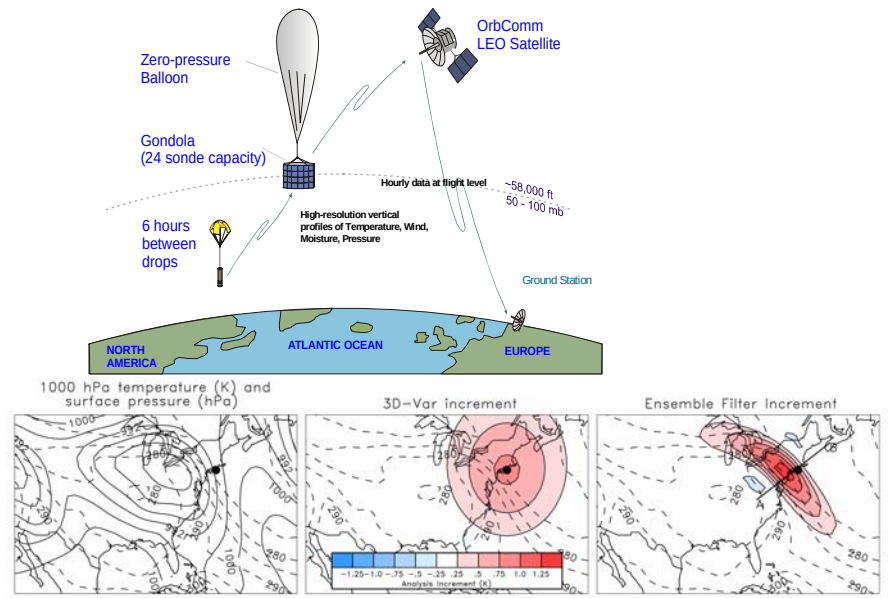
Community Building Activities

- Unidata, working with international community members, organized a special focus session on Earth System Science Data Access and Distribution at the 2005 European Geosciences Union meeting in Vienna in April 2005.

THORPEX

- A highly complex, multi-year Global Atmospheric Research Program with myriad goals and objectives.
  - Predictability and Dynamical Processes;
  - Observing Systems;
  - Data Assimilation and Observing Strategies;
  - Societal Impacts and Economic Applications;

To combine basic and applied research to benefit operational forecasting and decision support systems



NCAR has agreed to be a global repository for TIGGE data products to be received from more than 10 international data centers. Unidata will likely distribute the data in real-time.

Closing Remarks

- There is a growing recognition of the importance of global collaborations in the advancement of science.
- Technological advances, coupled with the immediate availability mature tools and systems, presents great opportunities to advance education and research globally.
- In addition to the obvious benefits to educators and researchers in other countries, the U. S. science enterprise will also greatly benefit as data, tools, and ideas start flowing in the other direction (i.e., toward the U. S.).
  - Tropical cyclone Catarina, possibly the first of its kind observed in the southern Atlantic. (Problems with content in today's text books)
- As the atmospheric science community gets ready for THORPEX, the timing may be good to take the next steps!