Director's Report

Unidata Users Committee Meeting

25 September 2006

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Unidata Program Center
UCAR Office of Programs
Boulder, CO

Rotating Off Committees

❖ Policy Committee
  - David Maidment
  - Steve Ackerman
  - Phillip Bogden

❖ Users Committee
  - Jim Steenburgh, Chair
  - Michael Voss

❖ A big thank you to all of them for all their hard work, dedication, and community service.

New Policy Committee Members

- **Prof. Rich Clark**
  Department of Meteorology
  Millersville University, PA

- **Prof. Rudolph Husar**
  Washington University, St. Louis, MO

  Expertise: Air Quality, Remote Sensing, Information Systems

- **Prof. David Tarboton**
  Utah State University

  Expertise: Hydrology, Information Systems

New Usercomm Appointments

- Gary Lackmann, Chair
  - North Carolina State University
- Elen Cutrim (Reappointed)
  - Western Michigan University
- Eugene Cordero
  - San Jose State University
- Scott Rochette
  - SUNY Brockport

Welcome and Thank you!

Staffing Changes

Departures:

- Joanne Graham, Program Administrator
  - Took a position as Division Administrator in the Climate and Global Dynamics division in NCAR/ESSL.

Arrivals:

- Terry Mitchell, Program Administrator
  - Terry comes to us from UCAR Finance and Administration
  - He has a B. S. degree in Organizational Management, University of Colorado, and MBA in Finance from CU Denver
- Ed Hartnett, Software Engineer
  - After a brief stint at CISL/SCD in the ESMF group, Ed is back full time with the UPC;
  - He is working in the netCDF group

2006 Users Workshop

➢ The Triennial Users Workshop was held July 10-14, 2006, Boulder, CO

➢ Theme: Expanding the Use of Models as Educational Tools in the Atmospheric & Related Sciences

➢ The program included a combination of oral presentations, lab and discussion periods, and a wrap-up panel discussion.

➢ There were 72 registered participants, including nine students who received fellowships

➢ The workshop was a great success; feedback from the exit survey was very positive

➢ The workshop generated many interesting ideas; Gary Lackmann and Linda Miller have prepared a draft white paper for following up on those ideas. (Agenda item for tomorrow)

➢ Well deserved kudos to the Users Committee and UPC staff!

"Fantastic workshop. I have so many ideas for my courses..."

"Learned a lot"; "Very worthwhile..."

"A very useful and thought-provoking workshop with plenty of real-world applications to take home."
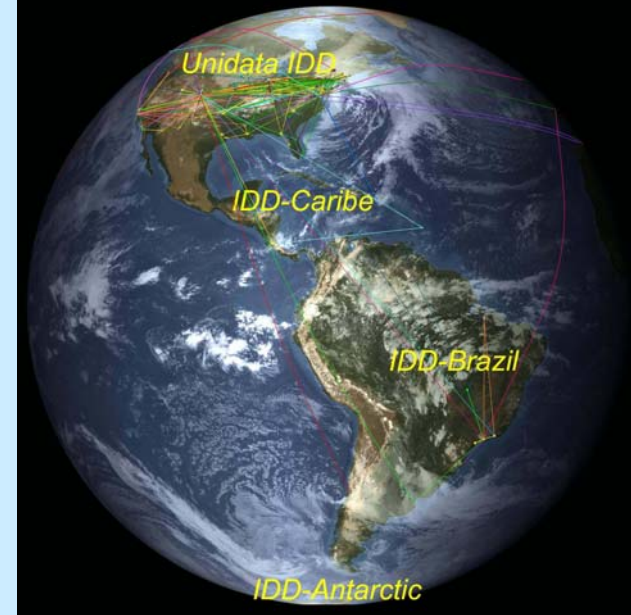
"Many brilliant thoughts and ideas, in addition to the software and projects presented! Some, I am sure, will inspire me personally in my work."

"Sharing data/models, democratization of data and models were the highlight of the workshop."

Data Flows

- About 355 hosts in 182 network domains are now running LDM-6 and reporting real time statistics in the IDD.

- The average volume of data flowing through the IDD has stayed around 3.2-3.4 GB/hour, with a maximum rate of approximately 5.0-5.5 GB/hour. Number of data products averages around 150K/hour

- There are 10 sites running the Unidata DVB-S NOAAPort ingest software, with 6 of them acting as IDD injection nodes.

- THORPEX-TIGGE data collection is ramping up. The LDM is being used to move operational model grids to NCAR and ECMWF (data from ECMWF, UK Met. Office, and Japan Met. Agency now flowing)

  - NCEP-TIGGE data will begin to flow soon, via the CONDUIT datastream, to NCAR and the university community

INPE´s automatic network: Data Collecting Platforms

- More than 524 automated surface stations from INPE and cooperating Institutions.

- These were the first new data shared through the *IDD-Brasil. The data are now flowing into the MADIS database at NOAA/GSD in Boulder, after they go through QC/QA.*
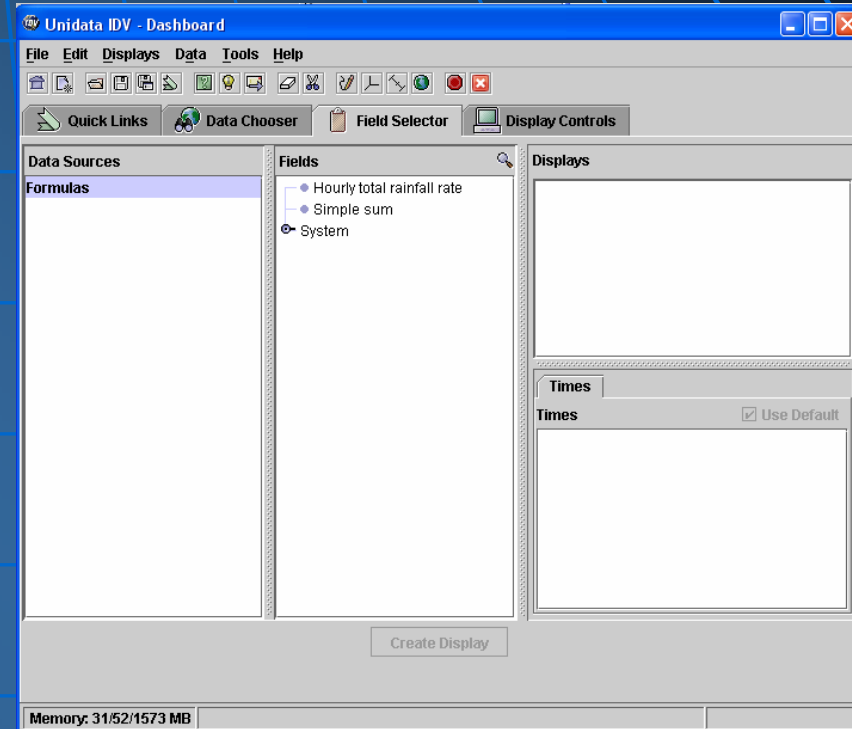
Automated Surface Stations
INPE, Brazil

Hot off the press: As part of the UCAR-AAAS Africa Initiative, radar data from Mali and Burkina Faso may soon start flowing to UCAR using the LDM.

uniData

Integrated Data Viewer

- Version 2.0 was released in August
  - New Dashboard Window was added;
  - Significantly changed the user interface and experience
  - Major performance improvements were made in reading data & display generation
  - A plug-in architecture for customization (specialized code and resources) – was used in T-REX project and now by GEON
  - Initial response to version 2 has been highly positive:
    - "I like v2 – much easier to use and it does seem quicker…the 'plug-in method is straightforward"
    - "I like the dashboard controls…makes the process of using IDV simpler…"
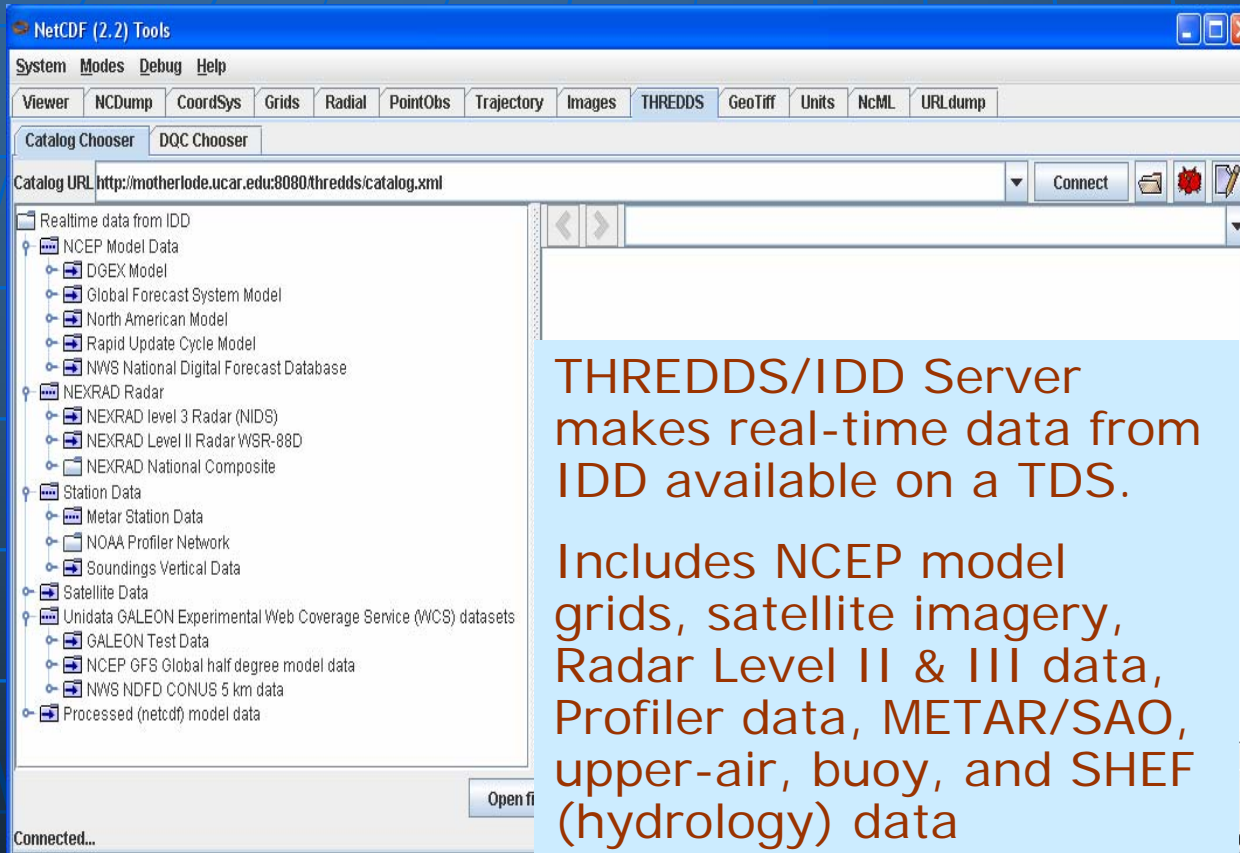 - IDV has been downloaded by users in 65 countries, an impressive figure for a relatively new package!

THREDDS Data Server (TDS)

THREDDS/IDD Server makes real-time data from IDD available on a TDS.

Includes NCEP model grids, satellite imagery, Radar Level II & III data, Profiler data, METAR/SAO, upper-air, buoy, and SHEF (hydrology) data

Next version of OPeNDAP servers will have integrated THREDDS catalogs; OAI harvesting added; metadata exported to GCMD and DLESE

THREDDS OPeNDAP Aggregation Server also will also be built-in;

THREDDS deployment by data providers continues to see steady growth;

UPC developing a TDS installation package for real-time (IDD) data streams;

GALEON: Geo-interface to Atmosphere, Land, Earth, Ocean, NetCDF

GALEON Objectives:

1. Determine suitability of WCS interface for serving model data to GIS community (4D vs 2D)
2. Examine possibility of extending WCS to add netCDF to current blessed encodings:
   - GeoTIFF (TIFF with geospatial tags)
   - HDF-EOS (HDF4 plus NASA metadata)
   - DTED (NIMA/DOD digital elevation)
   - NITF (NIMA/DOD images)
   - GML (OGC XML data encoding)
3. Experiment with GML (Geography Markup Language) dialects and netCDF files
4. Make recommendations to WCS 1.1 spec

- **Phase 1 Accomplishments:**
  - WCS 1.1 version includes several modifications; netCDF-CF application profile is included (based on Interoperability Experiment)
  - Replaces the list of 5 acceptable binary encoding formats in favor of an "application profile".

Metrics and Assessment Study

- The Metrics and Assessment study is continuing to make excellent progress;

- The community survey was completed in May;

- Five focus group sessions were conducted during the Unidata Users and COMET Faculty Workshops;
  - The feedback from both the survey and focus groups has been highly positive;

- Interviews were also conducted with a group of UPC Software Engineers to document Unidata's approach to software development;

- Interviews with long-time community members were concluded this week;

- Case-study "nuggets" are being selected for inclusion in the study;

- More details will be provided this afternoon;

Community Services

- UPC staff continue to be actively involved in the organization of special sessions on earth science/geoscience informatics at AGU, AMS and EGU meetings.

- The organization of these sessions to bring the community together to address cyberinfrastructure/informatics issues, especially in the data & tools area, is becoming an important activity for Unidata.

- These sessions have been well attended and are gaining prominence.

AGU Joint Assembly Special Session

- With funding from NSF (ATM and OISE) and in collaboration with Prof. Elen Cutrim, a special session was organized at the AGU 2006 Joint Assembly that was held held in Baltimore, MD on 23-26 May:

  - *Earth and Space Science Cyberinfrastructures: Data, Tools, Distribution and Forecast Systems for International Collaboration*

- **Goal:** to help build a stronger and broader space and Earth science cyberinfrastructure community through international collaboration.

- 22 abstracts received, including 4 invited talks, 11 contributed talks, and 7 posters. Abstracts received from Argentina, Brazil, Costa Rica, Jamaica, Venezuela, and the People's Republic of Boulder.

  - This session was the second most popular section of the *Earth and Space Science Informatics* program of the Joint Assembly.

2006 Training Workshop

2006 Training Workshop for Unidata Software

Click Here To Register

- Announcement
- Logistics
- Contact Us
- Instructors Only

The Unidata Program Center is pleased to announce its 2006 Software Training Workshop. The workshop features old favorites such as McIDAS, GEMPAK, and LDM; our newest visualization package, the IDV; and three sessions newly developed for the 2006 workshop—netCDF for Developers, netCDF Java Developers, and THREDDS Data Server Administration.

Unidata's training workshops are developed and presented by the software developers and support staff for each package, so you can be sure to get your questions answered.

Workshop Dates

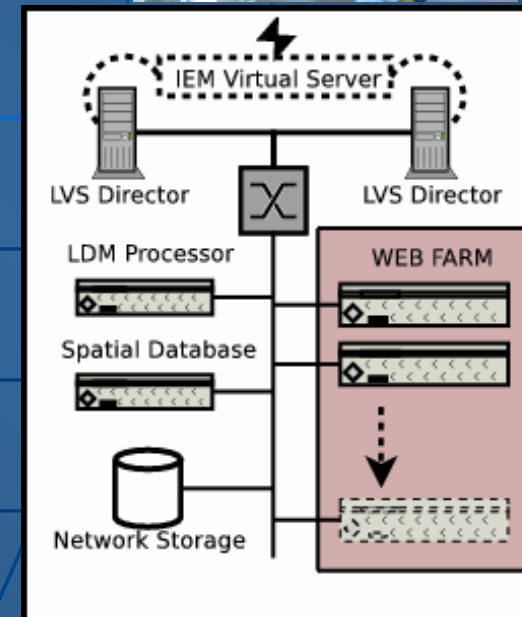| Date	Course		
October 23 - 24	LDM A	course description	LDM homepage
October 25 - 27	GEMPAK	course description	GEMPAK homepage
October 30 - November 2	McIDAS	course description	McIDAS homepage
October 30	netCDF for Developers A -- session full!	course description	netCDF homepage
October 31	netCDF Java A	course description	netCDF homepage
November 1 - 2	THREDDS Data Server A -- session full!	course description	THREDDS homepage
November 3 - 4	LDM B	course description	LDM homepage
November 6 - 8	IDV B	course description	IDV homepage
November 9	netCDF for Developers B	course description	netCDF homepage
November 10	netCDF Java B -- session full!	course description	netCDF homepage
November 11 - 12	THREDDS Data Server B	course description	THREDDS homepage

- UPC Training workshops continue to be very popular;

- So far, we have 65 registered participants; 16 of them are from nine countries outside the U. S.

- For the first time, training on netCDF and THREDDS are offered; Those sessions are fully subscribed.

2006 Community Equipment Awards

- Received eight proposals this year

- Proposals to broaden participation from other disciplines were encouraged

- Total request: $142K (or $186K with UCAR overhead); Available funds: $100K

- Funded four projects:
  - University of Alaska-Fairbanks, Automating Volcanic Ash Forecast System with improved visualization tools
  - University of Nebraska, Integrating Meteorology Data in Hydrology Research and Education
  - George Mason University,   Fire and Remote Sensing Data Processing and Distribution
  - University of Northern Colorado, Advancing Education and Research in Meteorology
  - The Users Committee members are contacting and assisting the recipients

- Over the past four years, the UPC has made 30 awards totaling $460K

State of the Program:
A Snapshot

- Community relations : Green
- Data flows : Green
- Software development : Green
- Collaborations : Green
- Staffing : Green
- Support : Green
- Finances : Green