

# Director's Report

## **Unidata Policy Committee Meeting**

10 October 2013

Boulder, CO

Mohan Ramamurthy  
Unidata Program Center  
UCAR Community Programs  
Boulder, CO



# SHUTDOWN

Head Start Closes... Grand Canyon Closed...  
85,000 M... Fire Management  
Unit C... Staffers... 500 Furloughed At  
Preparations Put On Hold... 3,100  
Search Stalled... Search For Missing  
Employees At Naval Station Turn Over  
Campgrounds... Reduced Staff At Federal  
Education Historic Site Closed... 1,300 National  
Signed... NASA Work Halted... Local OSHA Office  
4,000 Unemployment Benefit Applications Due To  
Employee Union Official: 95 Percent Of Staff Members In  
Signed... State's \$18 Million Per Day Cost... Air Force Reserve  
500 Workers... Social Security, Medicare Card Snags... Glacier,  
Stone Parks Close... Supplemental Food Program Shut Down... 1,100  
Employees At Base Sent Home... 1,000 Shipyard Employees Forced Off The  
... More Than Half Of Base's Employees Furloughed... Widow Of Firefighter  
Killed On The Job Temporarily Denied Survivor Benefits... Lady Liberty  
Closed... 337 Told Not To Show Up For Work... Superintendent Writes Furlough  
Notice For Self... Thousands Of Air Force, National Guard Employees On  
Unpaid Leave... 2,900 Employees At Air Force Base Furloughed... City Federal  
Offices Close... VA Halts Vocational Rehabilitation Services... Naval College  
Instructors Stay Home... 1,200 National Guard Technicians Furloughed... Tribal  
Funds For Foster Care Halted... Can't Pay Taxes At IRS Office... Delays In  
Financial Aid... Hundreds Of Workers Sent Home... Supplemental Nutrition  
Program Could Be Halted For 65,000... 3,600 Furloughed At Navy Shipyard...  
School Trip To DC Upended... 1150 National Guard Employees Furloughed...  
217,000 Pounds Of Food For Hungry Jeopardized Oil And Gas Leases Halted...

But UCAR is Open for Business  
and so are Unidata Operations –  
For NOW

## Policy Committee:

- Steven Businger, Chair
- Kevin Kloesel
- Kerstin Lehnert

## Users Committee:

- Anne Case Hanks
- Stefan Cecelski

I wish to thank all of them for their generous participation, active engagement, thoughtful guidance, and contributions to the Unidata.

# New & Returning Committee Members

## Policy Committee:

- Bill Gallus, Iowa State U., Incoming Chair
- George Young, Penn State U.
- Sepideh Yalda, Millersville U.
- Brian Mapes, U. Miami
- Chris Lynnes, NASA Representative



## Users Committee:

- Sen Chiao, San Jose State U.
- Steven Lazarus, Florida Institute of Technology
- Kimberly Hoogewind, Student Member



**Welcome and Thank you!**

# Unidata 5-Year Proposal

- Proposal submitted on 28 May 2013;
- It is a bold and forward-looking proposal;
  - Provides a vision for transitioning Unidata's data services to a "cloud" environment.
  - Most of the ongoing activities and projects will be continued
- NSF sent us 10 questions from the reviewers to address on 20 September;
- Unidata provided a written response to those questions on 25 September;
- The NSF panel met on 30 September (and the meeting on 1 October was cancelled due to government shutdown);
- Received 8 more questions from the panel – I responded to those questions verbally by phone

# Staffing

- Sheri Ruscetta, Administrative Assistant, joined Unidata in June.
- Shawn Cheeks was hired as an intern this summer. Shawn worked with the UPC developers on a prototype mobile application to display data from the TDS NetCDF Subset Service.
- Jack Swope, System Administrator, left in early September.
- Marcos Hermida, Software Engineer, left on 23 September to take a position at ECMWF.



# Other Transitions

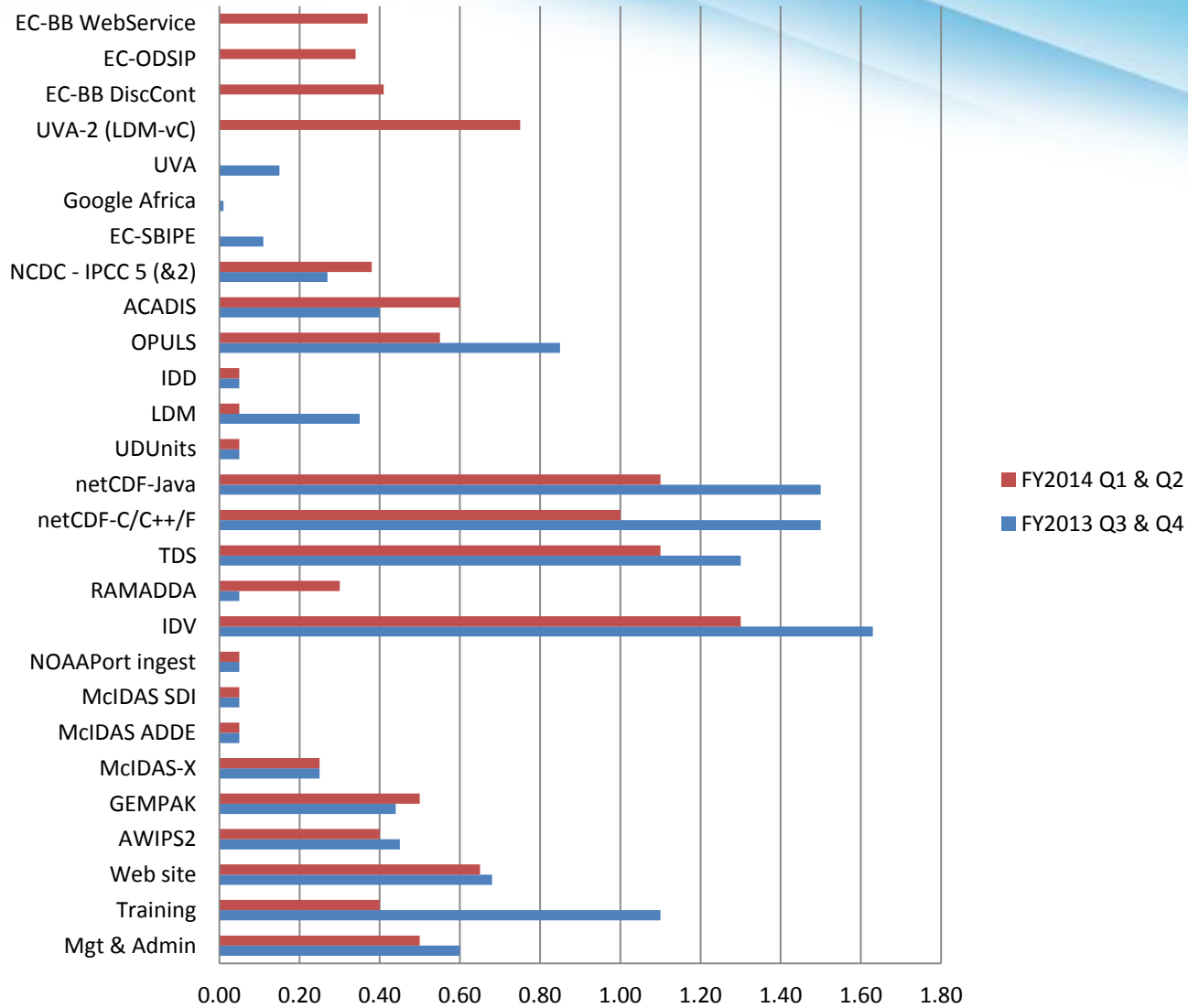
- Russ Rew began his phased retirement on 1 October; He will be working at 50% for up to two more years and then retire.
- Linda Miller is retiring as of 30 November.
- Ben Domenico will be going to quarter time in January 2014.

# Ongoing Searches

- **Two software engineers, an SE II and an SE III.**
- **A System Administrator.**
- **Soon: A Community Services Manager.**
- **There will likely be additional hires depending on the funding-level for Unidata 2018.**



## Software Engineer FTE per Unidata Project (FY2013 Q3 & Q4 - FY2014 Q1 & Q2 Projected)



# Russell L. DeSouza Award

## National Organization Honors UW's Oolman

By Laramie Live Staff March 25, 2013 10:55

PM

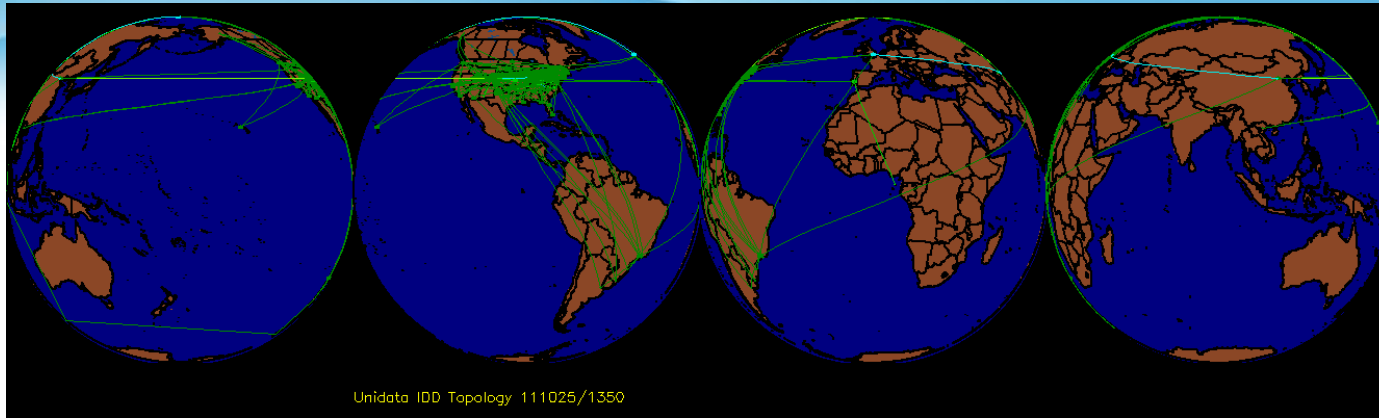


University of Wyoming researcher Larry Oolman developed a website that is an international source for weather information. (UW Photo)

Larry Oolman, a University of Wyoming researcher who single-handedly developed a website that has become a popular weather information source for meteorologists worldwide, has received an award from a national data-sharing research and educational organization.

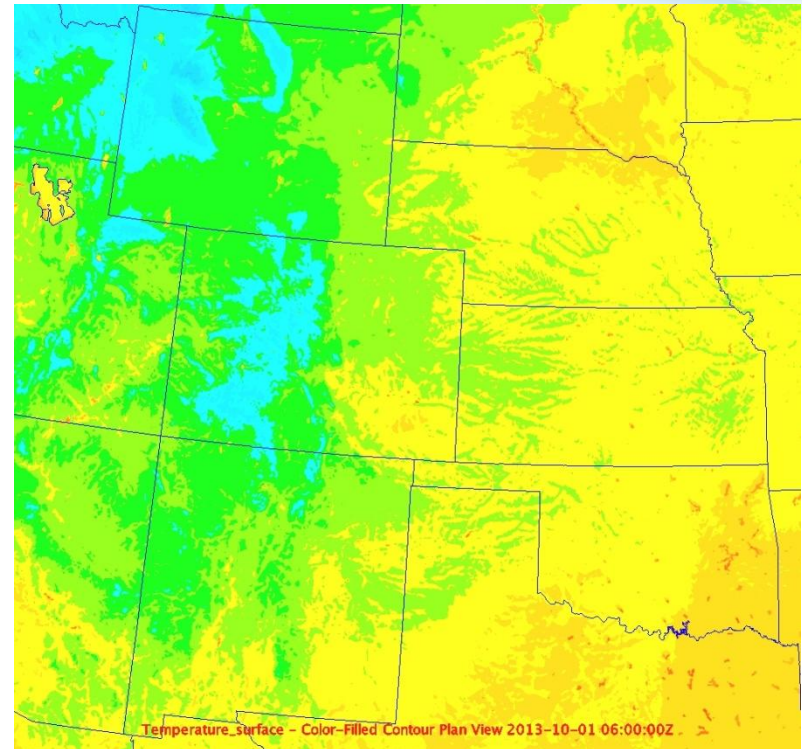
He received the University Corporation for Atmospheric Research (UCAR) Unidata community's Russell L. DeSouza Award. The award "honors individuals whose energy, expertise and active involvement enable the Unidata Program to better serve geoscience. Honorees personify Unidata's ideal of a community that shares data, software and ideas through computing and networking technologies."

*"Among your many contributions is the weather data site, <http://weather.uwyo.edu>, which has grown to 130,000 requests serving 2 to 4 TB of data to over 2,500 unique computers are provided daily. Over a month, requests originate from nearly 100 countries. Your service to the community through active participation on Unidata's Users Committee and the summer triennial workshops has also been notable, for sure."*



- ❖ About 530 machines at ~230 sites are running LDM-6 and reporting real time statistics. These numbers have not changed much in the past 4-5 years, but the volume data ingested keeps growing. Many organizations are using the LDM but not reporting stats.
- ❖ UPC's IDD Cluster relays data to about 680 downstream connections. **Average data output: ~13 TB/day or 1.1 Gbps! Peak rate exceeds 2.2 Gbps!**
- ❖ Data input to the cluster is ~14.7 GB/hr because of WSR 88-D Dual-polarization upgrades and the addition of more model output to CONDUIT.
- ❖ WSR 88-D Level II and CONDUIT remain the top two data streams based on volume.

- The High Resolution Rapid Refresh (HRRR) output is now flowing from NOAA/ESRL/GSD to Unidata.
- Currently, we have two beta sites to test the ingestion of such HRRR output, one in the educational sector (Iowa State U) and the other in the commercial sector (Media Logic).
- **The data volume is large: ~ 9GB/Hour**
- The visualization of HRRR output stretches the capabilities of most high-end desktop machines, so subsetting and striding approaches will be needed.
- **We are planning to receive the Flow-following finite-volume Icosahedral Model (FIM) output as well as we work through the challenges of making this high resolution model output available.**



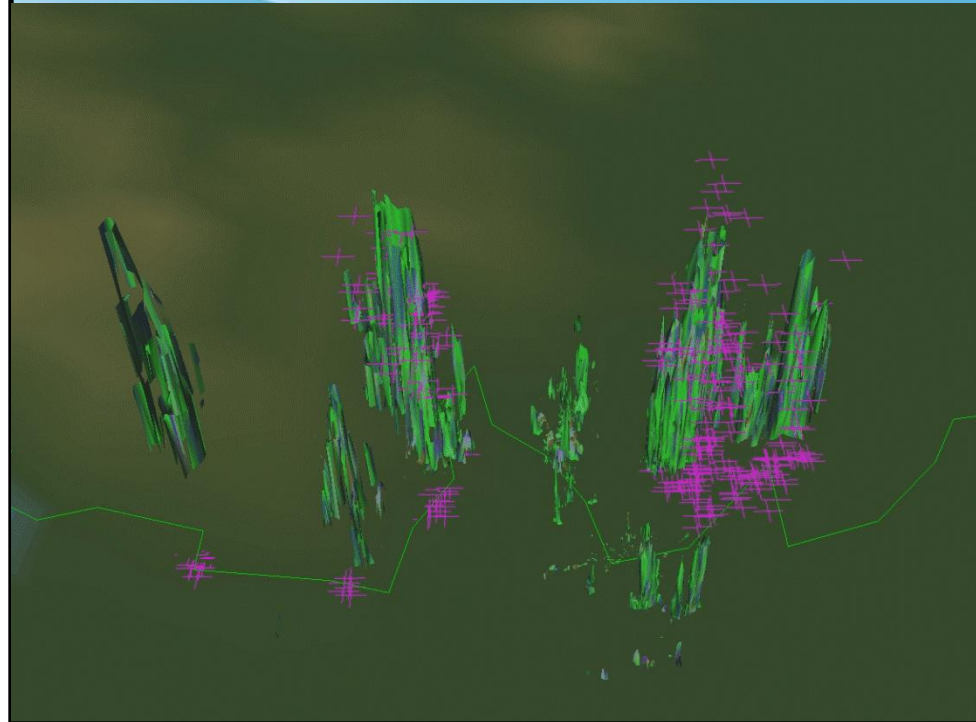
# A Community Resource at NCEP Supercomputing Facility

- An initiative to result from the Open Weather and Climate Services concept/white paper
- Endorsed by NOAA, NWS, and NCEP
- Bringing processing to model-generated data
  - Server-side processing is needed to effectively use high-volume model output
- A time-limited experimental data processing center co-located at the new NCEP supercomputing facility in Reston, VA
  - It will connect directly with NCEP supercomputer file system via high-speed fiber cable, enabling mirroring of more complete model data sets
  - Computers installed by participating community members will be able to connect directly to the mirrored data file system, allowing value-added processing to occur in the new facility and thereby lowering the volume of data moved to participants' home organizations.

# Integrated Data Viewer

❖ IDV version 4.1 was released in early August.

- A new version of the netCDF-Java library (4.3.18) is included in this release.
- The IDV now has a mechanism to alert users of a new available version of the IDV.
- There is now a quicker way to save zidv bundles with the "Save All Displayed Data" option.



**IDV use by the community has remained nearly constant over the past year, averaging about 550 sites using it at least 5 times a month, and 90 sites using it 30 times a month.**

# Unidata Channel on YouTube



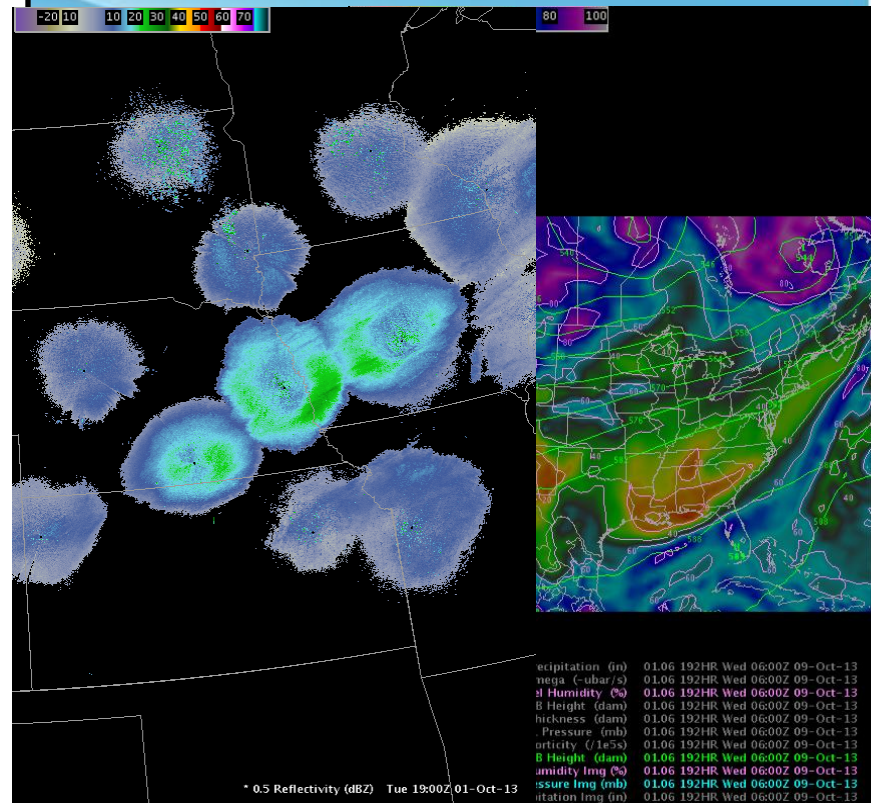
The image shows a YouTube video player interface. The main video area displays the title "Unidata IDV Screencast 4" with the subtitle "How to Navigate in the IDV". Below the title are the Unidata logo on the left and the NSF logo on the right. The video player controls at the bottom show a progress bar at 0:01 / 6:02. To the right of the video is a playlist with five items, all by Unidata:

- 1 Unidata IDV Screencast 1 - Simple Gridded Data ...
- 2 Unidata IDV Screencast 2 - Subsetting Gridded M...
- 3 Unidata IDV Screencast 3 - Subsetting Gridded M...
- 4 Unidata IDV Screencast 4 - How to Navigate in t...
- 5 Unidata IDV Screencast 5 - Save and Restore you...

Following suggestions from our Users and the IDV Steering committees, Unidata has begun creating short video tutorials designed to introduce viewers to different aspects of our software.

We plan to create more videos (and update existing ones) as time and resources allow.

- Unidata is continuing to receive major releases of AWIPS II, including source code and Eclipse development environment, from the National Weather Service. Current version is 13.2.1.
- Work is continuing to port and test AWIPS II software on computers that will be typically available in university departments.
- **The UPC has successfully increased the number of threads available for each decoder (threads run in parallel with each other) for high-volume feeds.**
- We have begun the Thin-client investigation; Currently running CAVE 13.5 Windows thin client.
- **The UPC has expanded the beta testing program to all U. S. universities.**
- Source code is now available via a github repository.

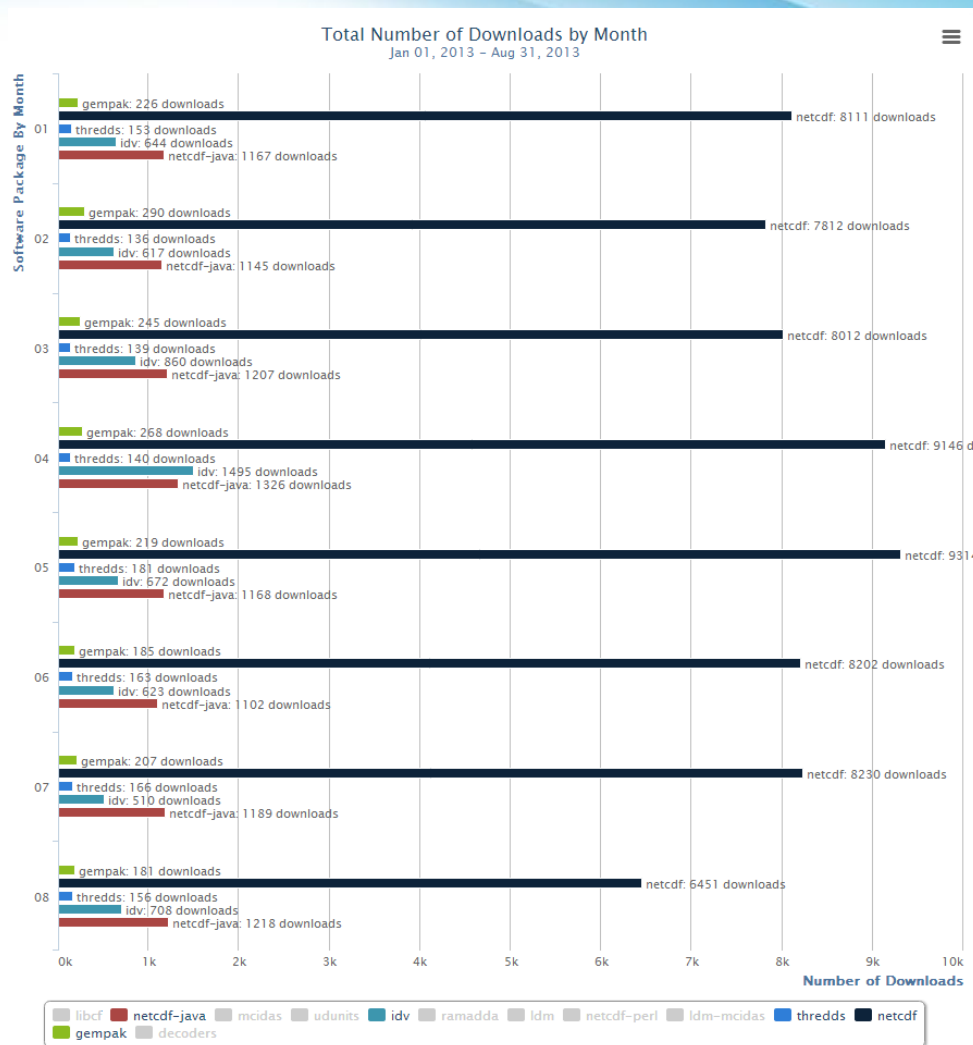




# Unidata Community Composition

Affiliation Type	Number of Sites
EDUs, COMC, UCAR Institutions	2625
GOV Institutions	302
ORG Institutions	984
MIL Institutions	43
RLAB Institutions	82
COM domains <sup>+</sup>	5535
NET domains <sup>+</sup>	2205
Miscellaneous domains I was unable to determine an affiliation type <sup>+</sup>	5048
Unresolved IP address networks	13066
<b>Total # of separate entities:</b>	<b>29890</b>

# Downloads – Top 5 Software





# EarthCube

[main](#) [my page](#) [members](#) [groups](#) [blogs](#) [background reading](#) [charrette](#)

- Unidata is continuing to be actively involved in EarthCube.
- Unidata, in partnership with other organizations, was involved in the submission of five EarthCube Building Block proposals.
- Three of those proposals have been funded.

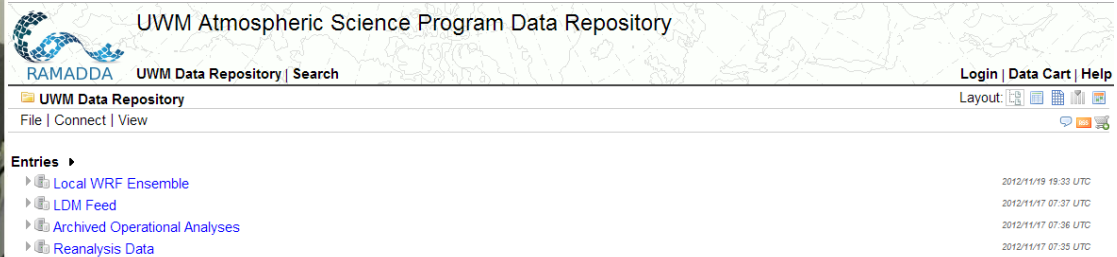
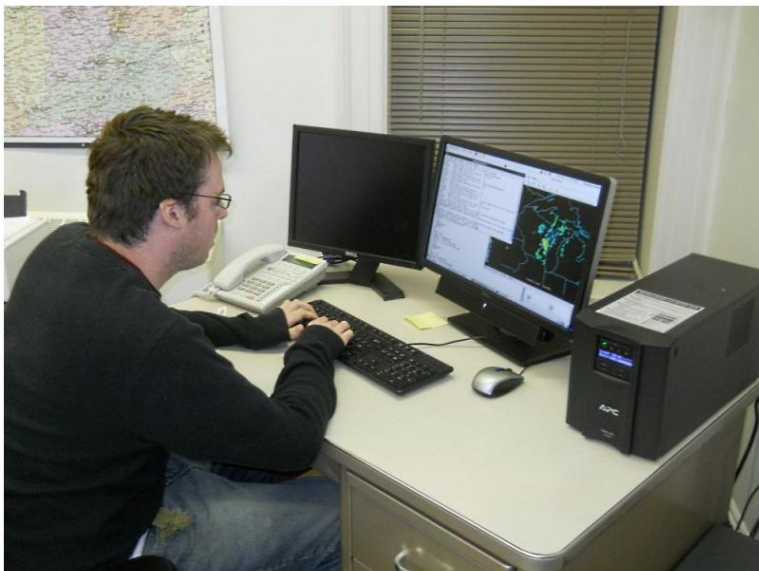
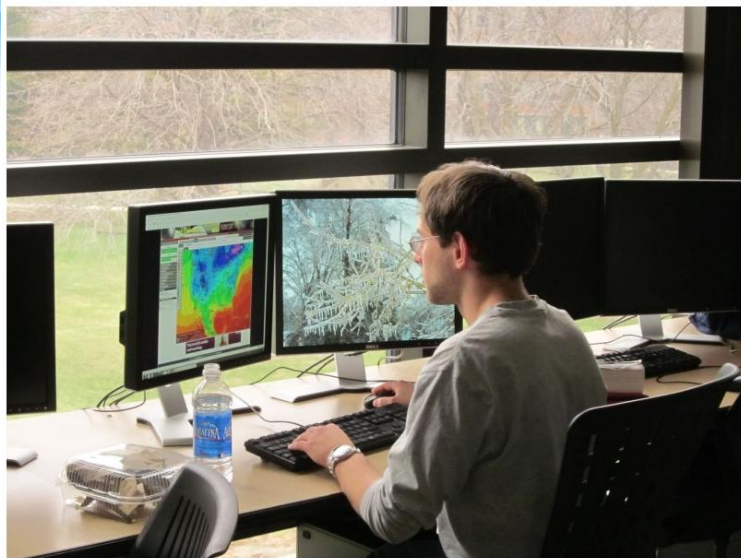
- The ACADIS project had a site visit by an NSF-appointed panel to review the progress of the project.
- Following the site visit, there was some restructuring of roles, but project received continuing funding for another year.
- ACADIS now holds metadata and data, or metadata alone (with link to external data), for about 30 AON projects
  - ~30,000 files
  - ~125 Gigabytes of data

- A proposal to develop a multicast version of the LDM, using virtual circuits, has been funded by NSF/CISE- ACI. Steve Emmerson and Prof. Veeraraghavan, Virginia Tech, are collaborating on the proposed effort.
- In addition to UCAR, it will be deployed at several universities, including U of Virginia, U of Wisconsin, Rutgers U, Boston U, U of New Hampshire, Colorado State U, RENCi, and Texas Tech U. to assess its performance and usefulness.

# 2013 Community Equipment Awards

- This year special consideration was given to proposals that:
  - **Plan to share their data by installing THREDDS and RAMADDA servers.**
  - **Install, test , and provide feedback on *prototype* AWIPS II/EDEX servers.**
- **Unidata received 12 proposals this year.**
  - **There was a great deal of interest in AWIPS II deployment;**
  - **We funded five/six proposals**
    - Colorado State University
    - Stony Brook University
    - Texas A&M International University
    - University of Miami
    - University of Wisconsin at Madison (Funded two separate proposals but they were asked to combine their efforts)
- **Over the past 10 years, Unidata has funded a total of 70 proposals.**

# 2012 Equipment Award Examples



UWM Atmospheric Science Program Data Repository

RAMADDA UWM Data Repository | Search

UWM Data Repository

File | Connect | View

Login | Data Cart | Help

Layout: [Icons]

Entries ▾

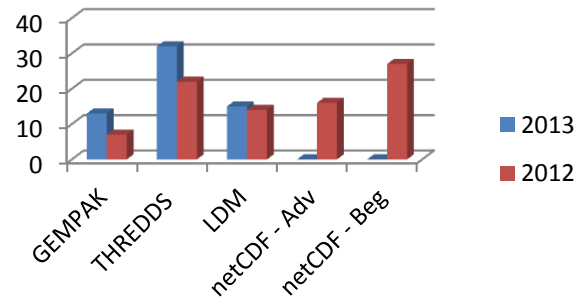
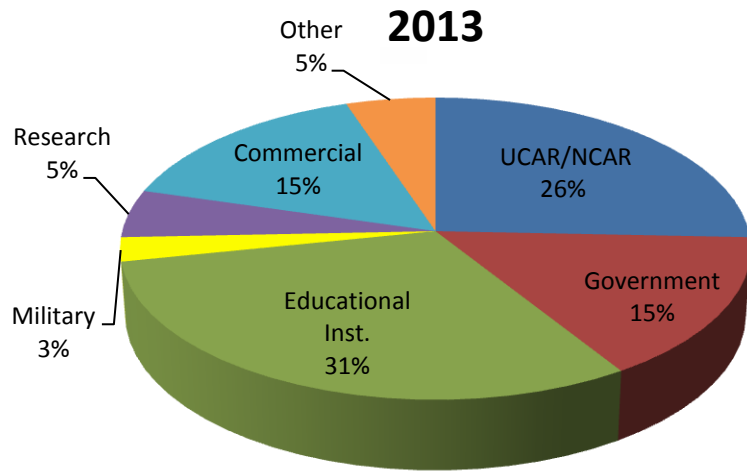
- Local WRF Ensemble
- LDM Feed
- Archived Operational Analyses
- Reanalysis Data

2012/11/19 19:33 UTC

2012/11/17 07:37 UTC

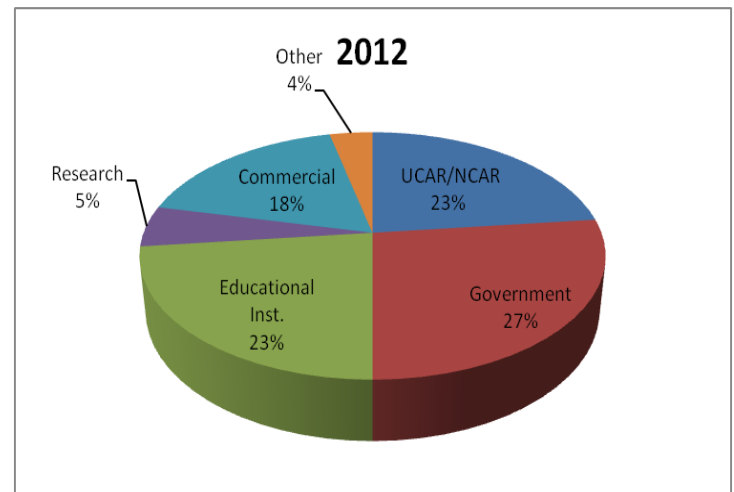
2012/11/17 07:36 UTC

2012/11/17 07:35 UTC



**We had 39 participants this year, the fewest number in more than five years.**

**Many of the participants attended multiple workshops. The inaugural Python workshop was the most popular one.**





WunderMap® | Interactiv... Regional Workshop at Mill... 2013 Unidata Equipment / ...

www.unidata.ucar.edu/blogs/news/entry/regional\_workshop\_at\_millersville\_university

WunderMap FL Obs Boulder Radar CO Sfc CO Vis CO Obs West IR East IR NSF2018 - Google D... Unidata Users World...

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« Unidata is looking... | Main | After the Flood »

## Regional Workshop at Millersville University

16 September 2013

Millersville University is pleased to sponsor and host a Unidata Regional Workshop on **October 21-22, 2013**. The purpose of this workshop is to provide introductory and advanced training in the use of Unidata's Integrated Data Viewer (IDV), and to present use cases of IDV and other Unidata services (data and tools) in the classroom.

The workshop will also include a presentation and hands-on session showcasing the GEOScience Probe of Discovery (GEOPOD), a National Science Foundation funded project that leverages Unidata's IDV to create an interactive 3-D learning environment where students can navigate a virtual probe through real geophysical data and actuate devices to explore and discover the atmosphere. More information on GEOPOD can be found at <http://millersvillees.github.io/geopod/>.

In addition to the training opportunity, Dr. Mohan Ramamurthy (Unidata Program Director) will open the workshop with a discussion of the Unidata Strategic Plan. Dr Ramamurthy will be here to gather community input. There will be both formal and informal opportunities to participate in the discussions concerning the Unidata Strategic Plan at the workshop.

Registration is free and limited funding to help defray travel expenses will be available to the workshop participants. Lunches, coffee breaks and a reception on the evening of Sunday, October 20, will be covered by Millersville University. We would greatly appreciate if you would please share this with your colleagues. We encourage those interested to register by **October 11** since space is limited.

### Unidata Regional Workshop Agenda

**Sunday, October 20**  
6:00 - 8:00 Reception and presentation by Unidata Director, Dr. Mohan Ramamurthy

**Monday, October 21**  
9:00 - 10:30 Unidata Strategic Plan - input from the community  
IDV overview (IDV portion of the workshop will be presented by Unidata's Sean Arms and Yuan Ho)  
11:00 - 11:30 General IDV workflow with model output as demo  
12:00 - 1:00 Lunch  
1:00 - 2:00 Working with Gridded Data (2D/3D displays)  
2:00 - 2:30 Saving Images/Movies and Sharing with Bundles  
2:30 - 2:45 Break  
2:45 - 4:00 Working with Observational Data (Surface Data, Upper Air)  
Time Matching, Example Forecast Error Analysis by Integrating Model Output and Observations  
4:00 - 5:00

News@Unidata  
News and information from the Unidata Program Center  
Welcome  
FAQs  
Developers' blog

Browse By Topic

- All Entries (316)
- Community (121)
- Unidata (46)
- Software (135)
- Data (14)

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java ramadda release  
software sun tds thresholds  
training unidata topic workshop wrap-up

Blog Search

« OCTOBER 2013

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20	21	22	23	24	25	26
27	28	29	30	31		

Today

Login



**Please get the word out.**

# 2014 AMS Annual Meeting



- Unidata will be conducting a UPC-sponsored short course on the IDV at the 2014 AMS Annual Meeting in Atlanta.
- Please encourage your colleagues in the university community to register and attend the short course.
- Seats are limited, but priority will be given to attendees from academia.

**We will also have a booth at the meeting**

# State of the Program: A Snapshot

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

Questions?