Director's Report

Unidata Policy Committee

21 October 2010

Boulder, CO

Mohan Ramamurthy
Unidata Program Center
UCAR Community Programs
Boulder, CO

New and Departing
Users Committee Members

- **Incoming**

  – Francina Dominguez, University of Arizona

- **Rotating Off**

  – Bill Gallus, Iowa State University

A hearty welcome to Francina.

A BIG THANK YOU to Bill for his active and enthusiastic participation. We will miss his insights and thoughtful comments.

New and Departing
Policy Committee Members

- **Incoming**

  - Kerstin Lehnert, Lamont-Doherty Earth Observatory, Columbia Univ.
  - Kevin Kloesel, University of Oklahoma

- **Steven Businger has kindly agreed to continue as Polcomm Chair for another term.**

- **Rotating Off**

  - Vanda Grubisic, University of Vienna
 - Paul Ruscher, Florida State University

A kind welcome to Kerstin and Kevin.

And a BIG THANK YOU to Vanda and Paul for all contributions over the years.

Vanda has just been appointed as the next EOL Director. Congratulations to Vanda!

Staffing Changes

- Jeff McWhirter and Don Murray left Unidata in May. Jo Hansen left in July.

- Julien Chastang joined Unidata in August. He comes to Unidata from NCAR/CISL. He has 12 years of experience in software development and has worked with netCDF, THREDDS, VisAD and IDV.

- Last month, Doug Dirks joined UPC as a Writer/Editor. He has spent the last two decades working as a technical writer in the software and telecommunications industries. Doug led the team that creates user documentation for IDL.

- The search for a Technical Project Manager is ongoing.
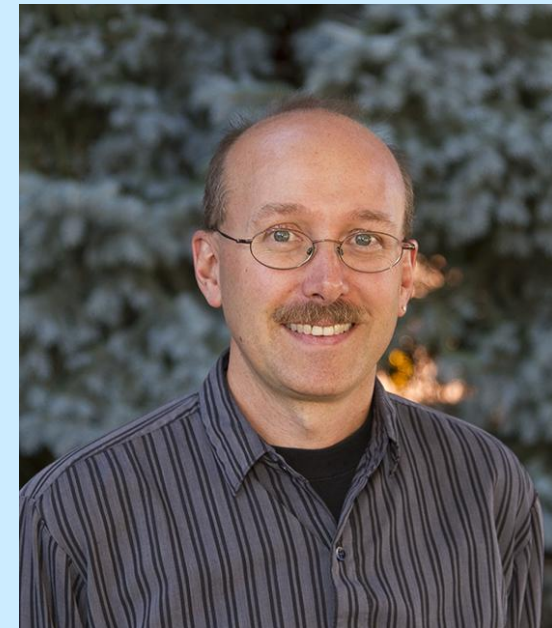
50th Anniversary of UCAR & NCAR

- This year marks the 50th anniversary of UCAR.

- In honor of this milestone, UCAR organized a year-long series of events honoring 50 years of accomplishments and service to the community and service to society

50th Anniversary Open House

5 June 2010

Real-time Data Flows

Unidata IDD Topology 101015/1921
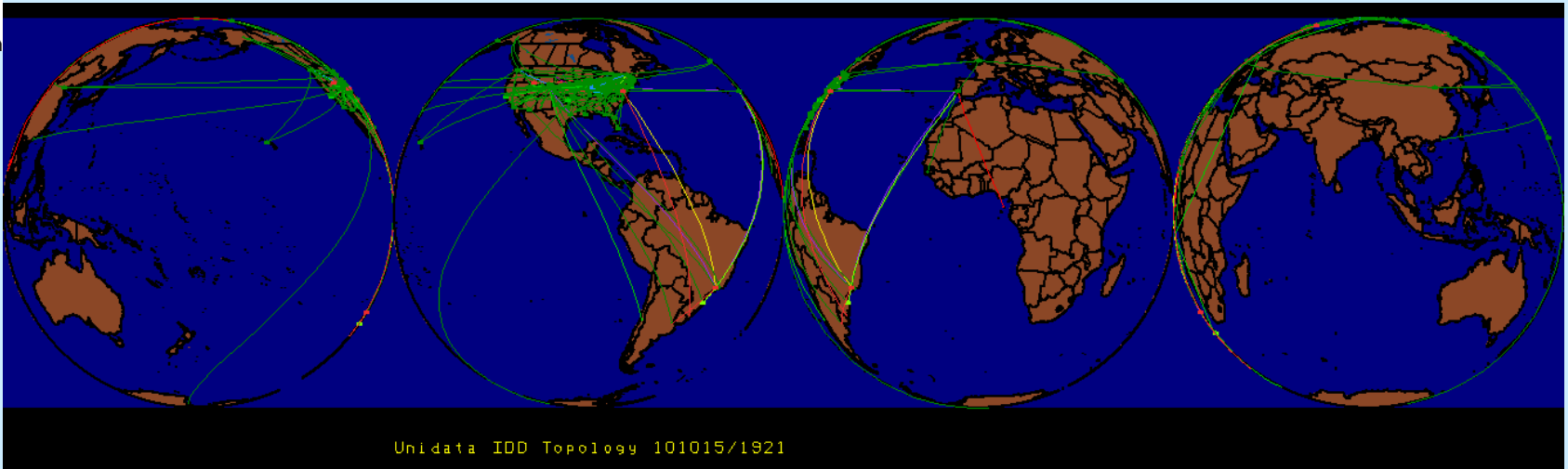
❖ About 500 machines at 250+ sites are running LDM-6 and reporting real time statistics. These numbers have not changed much in the past two years, but the data volume has grown significantly. Many more organizations are using the LDM but not reporting real-time stats to Unidata.

❖ UPC's IDD Cluster relays data to more than 650 downstream connections. Average data output/day: 5.7 TB or 525 Mbps! Peak rate exceeds 1.1 Gbps

❖ Data input to the cluster has increased to ~7 GB/hour.

❖ CONDUIT and WSR 88-D Level II remain the top two data streams based on volume.

THREDDS & RAMADDA

- Continued progress is being made on THREDDS Data Server (TDS) and Common Data Model software.

- TDS/netCDF-Java 4.2 released earlier this month.
  - refactored FMRC aggregation code to simplify configuration
  - improved performance.
  - Improved integration with ncWMS.

- CDM/TDS 4.3 development underway:
  - Improved metadata extraction from datasets for use in catalogs/metadata services
  - New services for Discrete Sampling Features (station, profiler, aircraft track data, etc.)
  - Performance improvement for collection/aggregation of large number of datasets

- RAMADDA development has slowed with Jeff's departure but it continues to be deployed by new users. It is moving into a more collaborative development environment.

NetCDF

- ➢ Two recent releases. Major feature in 4.1.1 was the support for remote data access with the new built-in OPeNDAP client.
  - ➢ More portable and easier to install than a C++-based alternative from opendap.org
  - ➢ Provides users of C-based netCDF software access to Java-based server technologies (e.g., NcML aggregation, access to data in other file formats, and the netCDF subset service)
- ➢ 4.1.2-beta release: Improved documentation, bug fixes, performance improvements, and internal refactoring;
- ➢ Continued progress in advancing CF conventions for point data.
- ➢ netCDF-CF has been proposed as an OGC standard.
- ➢ Unidata staff are working with the GFDL and other groups in the development of GRIDSPEC in libCF, anticipating that this will become part of the CF conventions.
- ➢ **Metrics:** 76 open-source packages, 21 commercial packages, 6,090 entries in Google Scholar, 2,910 books, and 1 Colorado license plate!

OGC & netCDF-CF

OGC Seeks Comments on NetCDF Climate and Forecast Data Encoding Standards

Status:
Please note: This Request is scheduled to close on 7 October, 2010.

Description:
The Open Geospatial Consortium (OGC®) members are seeking comments on three candidate standards – the OGC CF-netCDF Primer, OGC Network Common Data Form (NetCDF) Core Encoding Standard, and the OGC NetCDF Binary Encoding Extension Standard - NetCDF Classic and 64-bit Offset Format.

This is a significant step in gaining broader adoption of netCDF in the geosciencs.

Integrated Data Viewer

❖ IDV version 2.9 released on 27 May 2010. Two updates have been released since then.

- Smoothing of grids
- New grid diagnostics
- Support for point cloud and CDM profiler data, as well as support for WSI NOWrad images

• Ongoing development

– Support for GEMPAK surface and upper air data as well as additional GEMPAK grid diagnostics

– Support for CDM Trajectory feature type

– Support for Dual-pole NEXRAD dataset

– Improved access to and display of COSMIC data

Display of Point Cloud data in the IDV
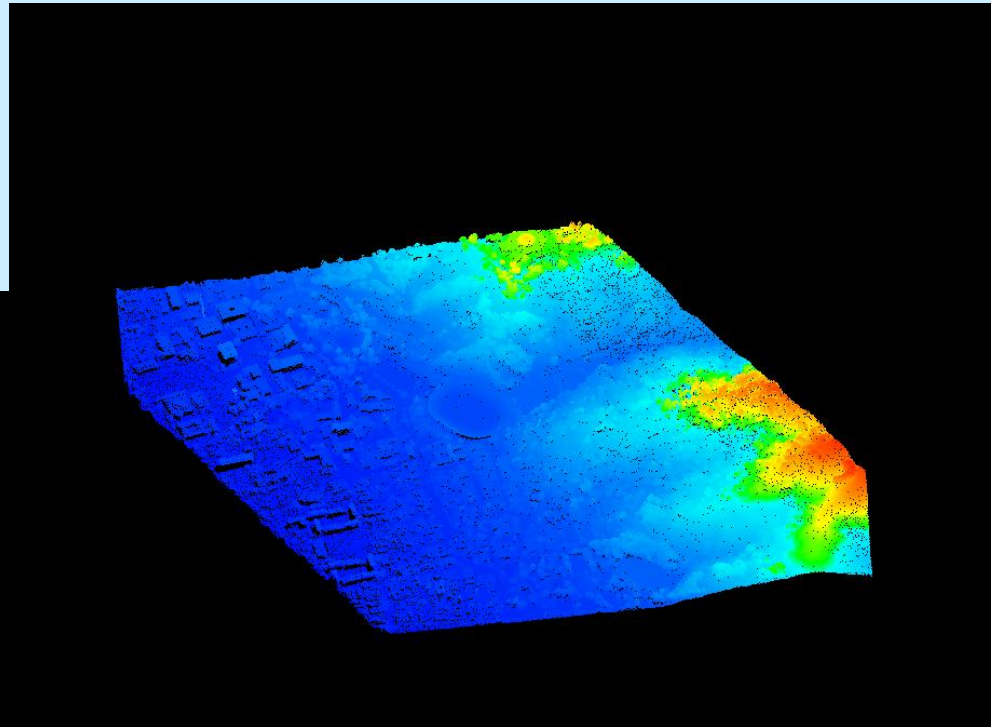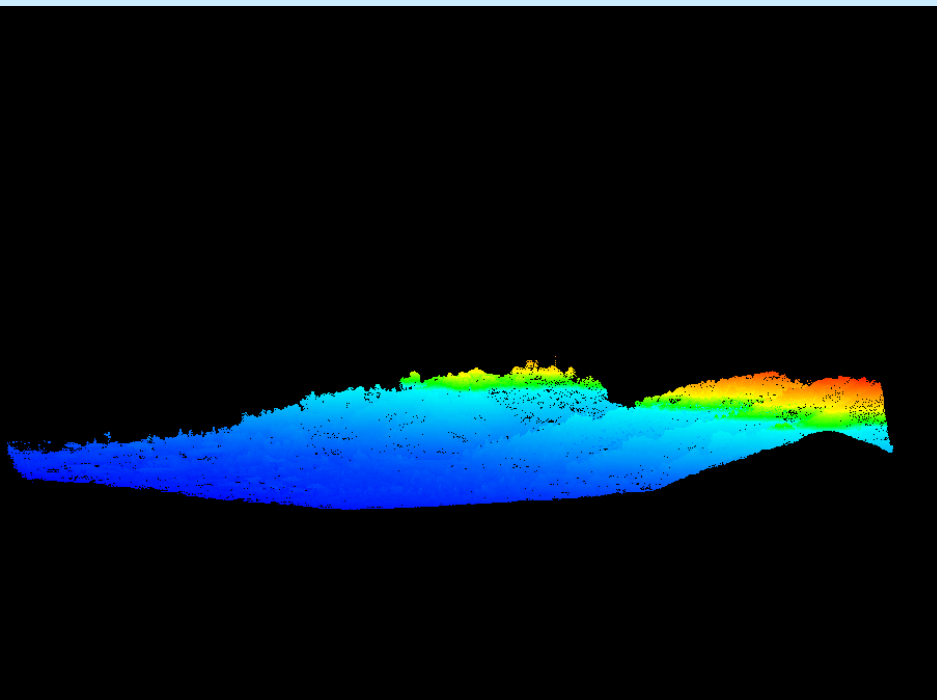
IDV use in CMA
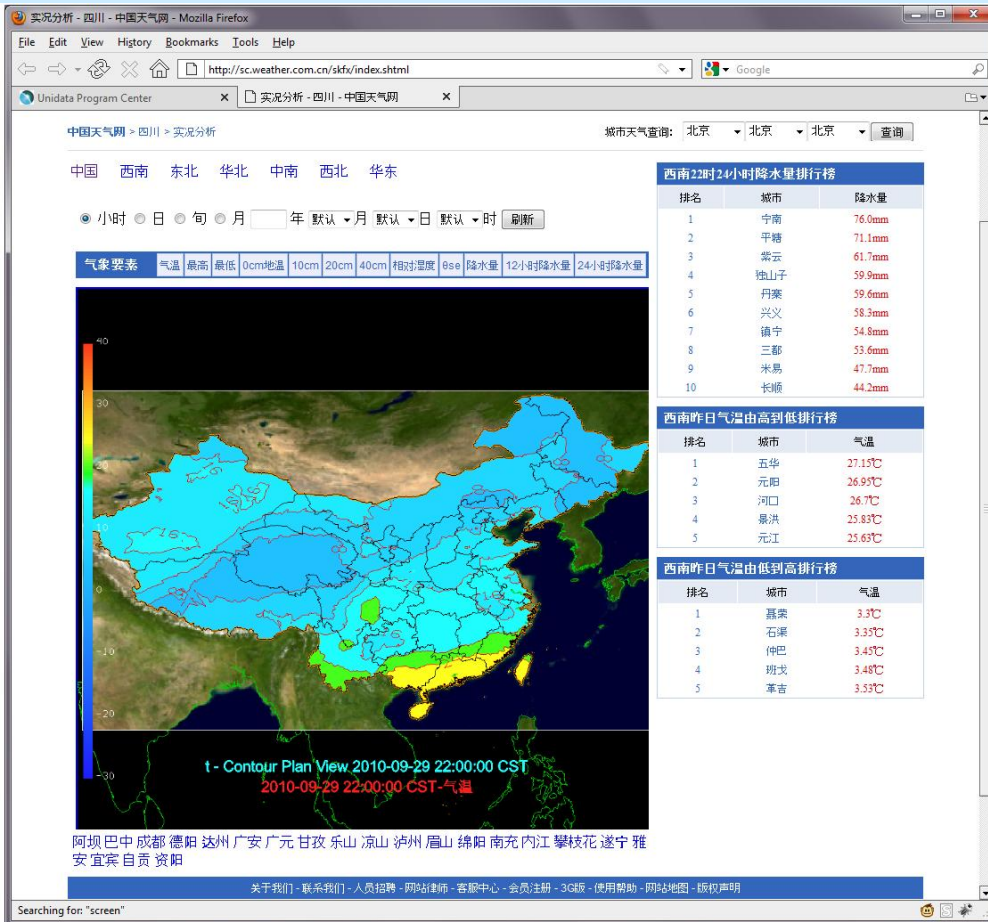
XiangFeng He, CMA:

"In four months, our staff was able to develop a system that runs every hour, generating more than 600 PNG image files from current weather data in less than 6 minutes."

IDV Downloads and Usage

Monthly summary

Month	Count	*5	10	20	30
2010_10	125	3	1	0	0
2010_09	14035	394	208	109	69
2010_08	14415	368	189	94	65
2010_07	14172	371	206	103	59
2010_06	15207	410	212	103	54
2010_05	12023	407	204	89	54
2010_04	14746	459	241	118	80
2010_03	10617	340	180	94	58
2010_02	4838	156	75	32	19
2010_01	13897	378	202	99	74
2009_12	12971	399	189	89	60
2009_11	13129	367	198	96	67
2009_10	10705	337	177	91	57
2009_09	13859	364	193	96	65
2009_08	12185	331	160	81	53
2009_07	10199	326	162	82	46
2009_06	12986	357	195	98	65
2009_05	11508	353	178	82	52
2009_04	12573	379	199	101	70
2009_03	12371	355	204	113	71
2009_02	11114	325	187	99	59
2009_01	9883	301	168	84	58
2008_12	9448	262	147	96	59
2008_11	12200	260	158	96	67
2008_10	11449	248	153	87	61
2008_09	10740	264	159	92	57
2008_08	9274	252	147	75	53
2008_07	9611	261	164	88	51
2008_06	4224	129	73	41	22
2008_03	7131	201	115	58	44
2008_02	9583	256	156	100	68
2008_01	7217	218	122	65	51
2007_12	781	32	22	8	4

* - Count of unique sites that have used the IDV at least N times in a month

There is continued growth in the number of IDV downloads and its usage.

During the last 12 months, the IDV was downloaded 5 times more than GEMPAK and 60 times more than McIDAS.

UPC AWIPS II Update

- AWIPS-II DR11 acquired from NCEP and installed and tested at Unidata.

- LDM is being used to file unprocessed IDD data into AWIP-II scouring hierarchy.

- Unidata AWIPS-II system currently can display near real-time surface, upper-air, and lightning data.

- Michael James attended AWIPS-II Migration/Developers Workshop at NCEP in August.

- Further details and a demo after lunch.
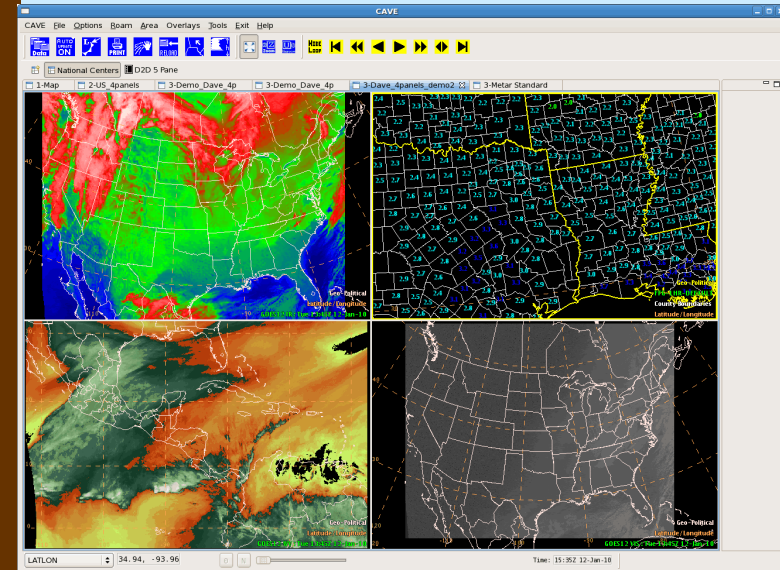
Downloads in the last 12 Months

Yearly total represented for all packages download data: Oct 1 2009 to Sep 30 2010
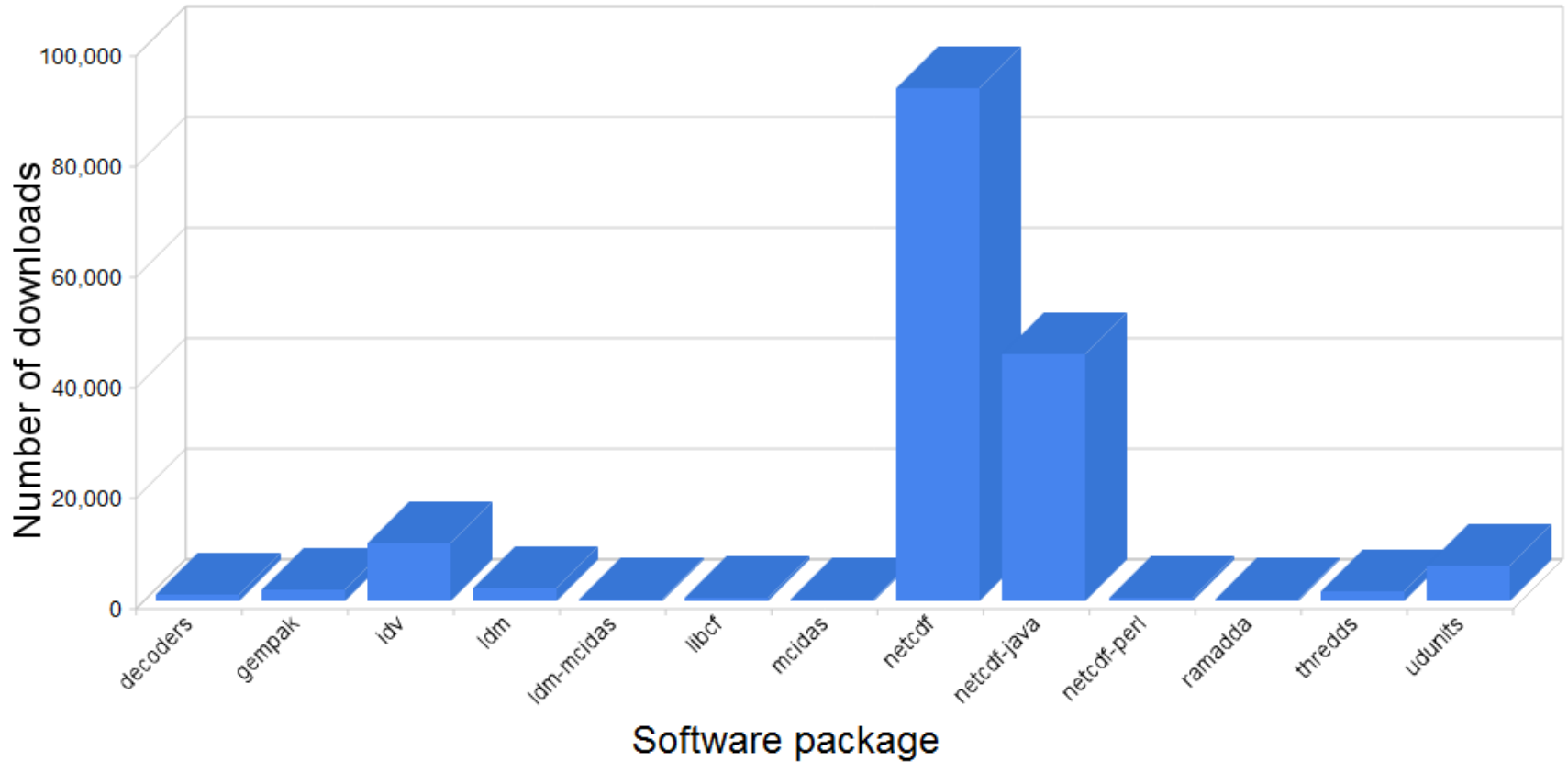
Community Equipment Awards

- Over the past 8 years, Unidata has awarded 53 equipment grants and given $800K to universities to upgrade their classrooms and weather labs so that they can benefit from Unidata tools and systems.

- This year, the UPC made eight awards, totaling $100K, to the following universities:
  - University of North Carolina at Chapel Hill
  - University of Albany, SUNY
  - University of North Carolina, Asheville
  - Louisiana State University
  - Iowa State University
  - Pennsylvania State University
  - Millersville University
  - Central Michigan University

Diversity Activities

Working with AIHEC

Hosted visits by DINE College, University of Oklahoma REU students, and Tribal College and University of Alaska Distance Education professors.

SOARS Student

- SOARS Student Vanessa Vincente conducted a case study of Hurricane Wilma, a Category 5 hurricane that hit the Atlantic basin in 2005 using Unidata tools.

- Jeff Weber was a science mentor for Vanessa.

- She applied the IDV and RAMADDA to generate a case study that can be a collaborative activity with others in the community.

A New Website

A new version:

v3.unidata.ucar.edu

It is 95% complete; Will go live next month.

In addition to a new look and feel, there are many changes under the hood.

2010 Training Workshops

~~57~~ 71 Total Registrants from eight countries.

This figure is less than last year's total of 91.

Participants will come from all sectors (Government, universities, research labs, and other organizations.

2010 Community Survey

- Conducted by the Usercomm subcommittee; Closed on 8 October.
- 240 people started and 214 completed the survey.
  - In 2001, 148 people completed the survey
  - Announcements via targeted mailing helped
- High level of overall satisfaction with the program.
- Research use of Unidata data services and tools has gone up significantly.
- Broad international participation.
- GEMPAK received the most comments.
- Community quite anxious about AWIPS-II; would like to see more communication.
- Many users still don't know of many of IDV's capabilities.
- GIS use and importance mentioned by many

State of the Program: A Snapshot

- Community relations : Green
- Data flows : Green
- Software development : Yellow
- Collaborations : Green
- Staffing : **Red**
- Support : Green/Yellow
- Finances : Green

Questions?