



International Collaboration and Development

For a program whose very existence began with a call from the atmospheric sciences community, Unidata is not new at the business of responding to calls from its community. Twenty-five years later as international boundaries thin and international problems multiply, Unidata's expertise is being sought by community members in diverse locales around the globe. Support to international users is not new, of course, and international collaboration has been a part of Unidata's portfolio for several years, but the fairly recent proliferation of requests is somewhat new. The descriptions below are simply thumbnails, and we will expand on them in future issues, but now we offer the following to highlight these most recent international collaborations:

Sahel Conference: Developer Tom Yoksas attended the conference as a representative of UCAR's Africa Initiative. The location was Ouagadougou, Burkina Faso, and the conference's stated goal was to take steps to make it possible to use weather data and forecasts to benefit populations in the Sahel, and at the same time, to strengthen cooperation among the National Meteorological and Hydrological Service (NMHS), universities, and regional centers. Tom's role was providing information in a series of presentations about UCAR's Office of Programs, and how those programs could contribute to achieving, not only conference goals, but long term support in data transfer, education, and infrastructure development. The image at right shows the signing of the MOU between NCAR and the government of Burkina, Faso for the free exchange of data. In the hours leading up to the conference, Tom also used his not-inconsiderable computer know-how to set up equipment to be used in hands-on training sessions held on the final days of the conference. Tom returned with a message from Dr. Abdoulaye Ouedrago, a scientist at Ouagadougou University, who requests advice and assistance in setting up an atmospheric sciences program at the university. You may respond to Dr. Ouedrago directly, or e-mail Tom, who will then compile and forward the messages.



Collaborative Visit to Japan: A few weeks earlier netCDF developer Russ Rew responded to an invitation from Kyoto University colleague, Professor Shiotani, to meet with him and others at the university. Russ met with members of GFD-Dennou, a Geophysical Fluid Dynamics interest group currently developing and making freely available Ruby-based software for accessing and visualizing GRIB, GrADS, and netCDF data. Dr. Takeshi Horinouchi is leading the Ruby developments, and introduced Gdfnavi, a new web-based tool to archive, share, distribute, analyze, and visualize geophysical fluid data and knowledge. Winding up the Kyoto visit Russ presented an overview of the Unidata program entitled "Invisible technologies for the geosciences: the importance of infrastructure." In Tokyo, Russ sat down with JMA Japanese Meteorological Agency members to discuss JMA technologies and later presented a talk about a Unidata perspective on improved infrastructure for scientific data as well as thoughts on the future of scientific data management. Finally, Russ travelled to Yokohama to visit JAMSTEC (Japan Agency for marine-Earth Science and Technology) and to repeat the earlier presentation first given at JMA. This last leg gave Russ the opportunity to exchange some ideas with Hadley Center scientists working on the TIGGE project.

CMA (Chinese Meteorological Administration): IDV developers Don Murray and Yuan Ho accepted an invitation from the Guang Dong Meteorology Bureau to demonstrate the IDV and THREDDS to its research division. While there, the developers successfully worked with the Chinese researchers to incorporate their research datasets into the IDV. In the following days, they met with representatives of the National Meteorological Information Center in Beijing where they provided an overview of Unidata tools and services (See Photo Highlight image.) They met with several people to fix some problems they were encountering while using the LDM to supply data for the TIGGE project.

EGU: For the second year running Unidata co-sponsored a Union program at the European Geophysical Union's spring meeting held in Vienna, Austria. The three conveners, Mohan, Stefano Nativi, and Mike Jackson co-chaired the program which took place in the ESSI (Earth and Space Science Informatics) session. Ten invited speakers participated. There are indications that interest in this topic is growing, and Mohan, together with Stefano Nativi and Bernd Ritschel will prepare a proposal to move this into its own stand-alone session.

Rutherford Appleton Laboratory: Staff members John Caron, Ethan Davis, and Ben Domenico were invited to Rutherford Appleton Laboratory (UK) to meet with representatives from the British Atmospheric Data Center (BADC), the British Met Office, and experts in the ISO/OGC standards. The trip's purpose was to discuss harmonizing the data models used in CDM, CSML, and OGC/ISO. The participants agreed to work towards a common view within the framework of the OGC Abstract Feature types. The main conclusion for Unidata is that the Common Data Model (Scientific Data Types) should be formally associated with the ISO19123 coverage model. The CDM can then be serialized to netCDF-3, netCDF-4, NcML or GML Application Schema.

Viewed as an aggregate these visits serve to underscore Unidata's enhanced visibility in the international arena, a direction requested specifically by its governing committees and in line with NSF's goals, and also they deliver the message that Unidata's data delivery and software packages have the potential for universal applicability.

Taking the Measure of the Unidata Program

Prompted by a recommendation from a review panel and framed by questions posed by the National Science Foundation, the Unidata Program Center (UPC) initiated a comprehensive, independent evaluation of the program in late 2005. NSF asked if Unidata has been a successful investment, and if so, why. Additionally, it asked if Unidata has been transformational in the way community members conduct both teaching and research.

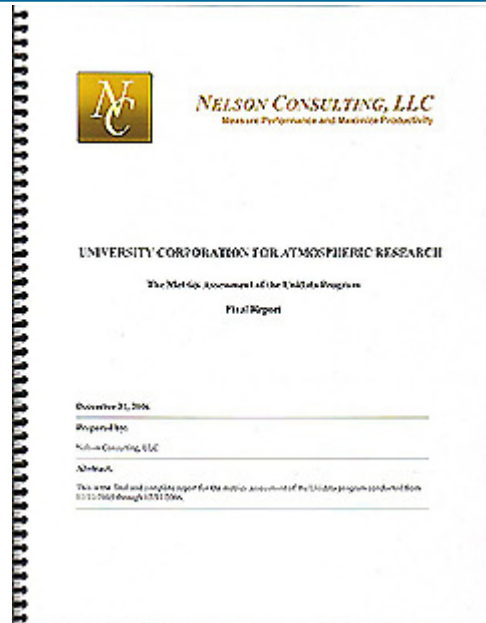
An independent consulting group, Nelson Consulting, LLC, a firm experienced in conducting program evaluations and led by Dr. Sarah Nelson, Ed.D. and Dr. Christopher K. Nelson, was commissioned to conduct the study. The year-long and multi-part evaluation process included a detailed community survey (found in the assessment report), focus group sessions, individual interviews of long-time Unidata community members, and a few exemplar case studies. Participation in the study was far and wide: 432 participants in 37 countries took part in the survey that included 57 questions. Several dozen community and governing committee members and UPC staff participated in the focus groups and interviews. The study provided ample opportunity for the consultants to evaluate Unidata's impacts and the organizational activities reflected in its day-to-day operations.

The study concludes that Unidata is an irreplaceable national facility for the atmospheric sciences community and that its establishment is among UCAR's most important accomplishments. As explained by study participants, without the data, software and support provided by Unidata, atmospheric science programs would be severely limited in their ability to carry out their mission. The study was unequivocal in its overall conclusion: Unidata has indeed been a worthwhile investment for NSF, and it has noticeably transformed the way universities conduct education and research in the atmospheric and related sciences.

Another key finding is that Unidata's activities are in alignment with then NSF's strategic goals: Ideas, People and Tools. [NSF strategic goals have since been revised as follows: Discovery, Learning, Research Infrastructure and Stewardship.] The report suggests that there are myriad reasons for the success of the Unidata enterprise, but foremost among them are: a dedicated and well-informed staff, a highly engaged community, and an energetic community-based governance structure. One community member described Unidata's significance as follows:

The Consortium of Universities for the Advancement of Hydrologic Science (CUAHSI) is an organization representing more than a hundred USA universities – it is the Hydrology equivalent of UCAR. In recent years, with NSF support, CUAHSI has been working on providing hydrologists with better access to hydrology data. Most hydrologists would agree that the ultimate goal is to have an equivalent of Unidata for hydrology.

In addition to assessing the program, the report also provided a set of recommendations based on staff and community input. All have merit and will be folded into deliberations about future directions. Of particular interest is a recommendation for Unidata to be involved in filtering climate model output through the weather prism. Unidata is in an excellent position to facilitate this endeavor, which is highly relevant in this decade of enhanced sensitivity to the changing climate and its implications. This highly positive report will not only inform Unidata's operations, but will guide its future plans and proposals.



News Briefs

Training Workshop: Unidata's annual training workshop has been announced by e-mail and on the web page. In keeping with policy this workshop will take place during the summer, alternating with a fall schedule next year. If you're new or an established user of Unidata products, we would look forward to welcoming you to Boulder for one or more of the workshop sessions.

Users Committee Meeting: The Unidata Users Committee meets for a day and a half in Boulder May 14-15. The committee connects the Program Center with to the program center, and its members represent you. If you have any questions or concerns, don't hesitate to contact one of the members. The May meeting participants include a student representative who will be attending for the first time. Student readers: you may want to contact Sean Arms with your questions. He will have a different perspective from other committee members.

Please send comments to support-eletter@unidata.ucar.edu

This Community E-letter Editor: Jo Hansen

