

Learning. It isn't just for students anymore!

Unidata Equipment Award funds have provided the students in our meteorology program here at Northern Illinois University (NIU) significant benefits, and we also are able to share what we have with the rest of the educational and research community.

I had to make an unexpected and drastic decision shortly after the arrival of the two PCs purchased with the funds. I learned that Red Hat Linux would no longer support its generic operating system. I sought and received advice from several quarters. Fedora Core 1 was the most frequently recommended OS which has worked well and facilitated the transition. All Unidata and other software pretty much ran right out of the box.

Next, I installed LDM, McIDAS, and then WXP on the new machines. Shortly the systems were up and running, two NIU meteorology students, asked if they could do an internship using the new equipment. I gladly brought them aboard and taught them about the various data feeds Unidata provides and how to use them in an operational and educational setting. Shortly afterward the students used the machines to research a snow event that struck central Illinois on February 11-12, 2003. It was a very intense convective snowband that raced across the region producing damaging straight-line winds. The National Weather Service even issued severe thunderstorm warnings for the event, and large "snowrollers" were found in the areas that were struck. My current intern has been using the machines for similar purposes, and we use them quite heavily here for developing student interest in the science of meteorology.

This story has an interesting twist. Because processing the paperwork at NIU required a significant amount of time, by the time the funding arrived, we suddenly had enough to purchase *two*. A price drop and an increase in processor speed, along with the new Intel(r) HT technology meant that I could do more with my award money than I had expected. The primary purpose of the award was to allow NIU to continue to serve as an IDD node to relay NOAAPort and other data feeds, while continuing to serve as an ADDE server for McIDAS products. Our old Pentium 2 and low-end Pentium 3 were struggling with the ingestion of the high-speed feeds, and because of their performance, I was forced to send some downstream nodes elsewhere for data. Now, however, I could think big! Two Pentium 4, 3 GHZ machines with Hyper Threading(tm) could do not only what I had wanted, but much more as well. Again, I contacted Unidata to see if there were more I could do to help the academic and research communities. Tom Yoksas put me in contact with Unidata's Yuan Ho who, because Fedora Core 1 was so new, had not yet made a binary for FC1. Soon, however, Yuan made the required binary for FC1 which has resulted in one of my machines (weather2.admin.niu.edu) becoming a THREDDS server, distributing near-real-time wind profiler data to the research community with a 30-day archive of surface and upper air data.

Although the award funds have been spent, our progress has not stopped. This winter, Northern Illinois University is expected to join on the Abilene "Internet 2" network. It is likely that I will be able to peer with other universities to transfer the data via A2 sometime late this winter or this spring, bringing high-quality research-grade data to NIU, our students and to others.

Additionally, I set up audio servers on the new machines, and I am now relaying our local All-Hazards Radio broadcasts directly to the Internet. You can listen right here:
<http://weather.niu.edu/liveaudio/>.

I hope the data we're sending with our new equipment has allowed other Universities and scientists to continue meeting their research and educational goals. As for me, I've learned a lot from installing a new operating system, new software, and also have learned how it all comes together in the educational and research communities.

Thanks for the learning experience, and the new machines, Unidata! I look forward (as do my machines) to serving you for many years to come.