RECOLLECTIONS OF THE UNIDATA ORIGINS: AN NSF PERSPECTIVE

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I would like to begin this presentation by acknowledging the effective organization of this celebration. The efforts of Mohan and his staff to make a very successful celebration of the 25th anniversary of Unidata should receive our recognition. PLEASE JOIN ME IN APPLAUDING THEIR EFFORTS!

There is always some danger in having people try to recall events from 25 to 30 years ago. It is somewhat analogous to the famous story from India concerning a group of blind men (or men in the dark) touching an elephant to learn what it is like. Each one is only permitted to touch a different part, but only one part, such as the side or the tusk. They then compare notes and learn they totally disagree about what the animal they have encountered. The story indicates that reality (or history) may be viewed differently depending upon one's perspective, suggesting that there is no absolute truth. In reality, truth is actually relative due to the deceptive nature of perception. Having cited this story as a warning of the danger of summarizing one's perceptions of historical events, I will now proceed to ignore it.

My earliest recollections of the beginnings of Unidata (long before the name was coined) revolve around a meeting that took place at CSU. This was sometime around 1981 and involved a discussion that Vern Suomi organized between him, Tom VonderHaar, and me. In 1980 I had been selected to be the Head of the Grant Programs Section in the Division of Atmospheric Sciences (ATM) at the National Science Foundation. At that meeting, Vern and Tom urged me to consider ways to provide computerized data analysis services for the atmospheric sciences university community. Why did Vern and Tom make that suggestion to me?

The University of Wisconsin had pioneered earlier a system that analyzed surface-based, radar and satellite data called McIDAS (an acronym for Man-computer Interactive Data Access System). With McIDAS, University of Wisconsin atmospheric scientists were able to access, analyze and visually present a large variety of atmospheric data, primarily obtained from the National Weather Service. Vern had organized the Space Science and Engineering Center (SSEC) at the University of Wisconsin and it was their computer and atmospheric scientists that had developed McIDAS. CSU had adapted a version of McIDAS to their research needs. Other universities had been contacting Vern and Tom to ask for their assistance to develop McIDAS-like capabilities.

The concept that Vern and Tom proposed to me at that meeting was that ATM/NSF would support SSEC at Wisconsin and CSU to make available McIDAS-like capabilities to university atmospheric science researchers. Almost immediately, I felt that successful development and application of the concept offered the potential of providing a very useful capability for atmospheric research and teaching at a broad range of universities and colleges. As I recall the next sequence of events, I asked Gene Bierly, the ATM Division Director at that time, to put a discussion of the concept on the agenda for the next Advisory Committee meeting which he did. The next meeting of this committee that advised the Division on important actions, that took place, I believe, in the fall of 1981. At that meeting, I presented the concept that Vern and Tom had suggested to me. Bob White was the President of the University Corporation for Atmospheric Research (UCAR) and an ex-officio member of the Committee. At that meeting, Bob suggested that the concept should be explored fully by a steering committee jointly formed by ATM/NSF and UCAR that would present a report of their study to the full Committee. His rationale was that UCAR, as the organization of all of the atmospheric science universities of the U.S. naturally should be deeply involved in such an

undertaking. The Advisory Committee endorsed White's suggestion. Based on the recommendation of the ATM Advisory Committee, I worked with UCAR to form a steering committee that, as a first step decided to survey all of the atmospheric departments to determine their present and planned computer capabilities and to identify weather data that they were either using or wanted to use. At about the same time, NOAA had decided that they could no longer provide weather data over government supported circuits free of charges to the academic community. The results of that survey indicated that the departments wanted access to National Weather Service (NWS) observational data including surface, upper air, radar and satellite data, as well as model output from the National Meteorological Center (NMC). In addition, the departments also indicated their desire to access profiler and lightening data that, at the time, were just becoming available. Finally, especially for research purposes, the survey respondents indicated that they required access to the National Center for Atmospheric Research's (NCAR) and the National Climatic Data Center's (NCDC) extensive data archives.

Based on the results of the survey, the steering committee recommended that ATM/NSF should organize a community workshop to consider the concept and provide the Division with community feedback on whether and how to proceed.

In response to that recommendation, endorsed by the ATM Advisory Committee, I worked with Vern, Tom, and UCAR to establish the workshop.

In July 1983, the workshop was held, thanks to the good offices of Vern and his colleagues, at SSEC/University of Wisconsin. By combining the words -- university and data the name Unidata was coined. The more than 80 representatives of major and smaller university atmospheric departments and programs chose John Dutton, Pennsylvania State University to chair the workshop. The workshop attendees endorsed the concept of Unidata and

recommended that UCAR plan for, establish, and govern the program. The workshop also recommended that the Unidata objectives should be to provide:

1. **Access to current and archived weather data, satellite imagery, and forecasts,**
2. **Support for interactive computer capabilities at atmospheric science departments, and**
3. **Communication capabilities between university computers and the NCAR and National Aeronautical and Space Administration (NASA) mainframe computers.**

UCAR formed a Unidata Program Committee charged with establishing the program and John Dutton was selected to be the first chairman. Some time after that, Dave Fulker was selected to be the first Director of the Unidata Program Center at UCAR and the program was "off and walking." You will all remember the old adage that you must walk BEFORE you can run and walk we did in the beginning of Unidata.

That, in short, is my recollection of how Unidata began. I leave it to Dave, John and others to correct my fallible recollections and to offer their own perceptions of the beginnings of the Unidata "elephant."

A few closing comments: As one might expect at the outset of Unidata, there was a certain amount of controversy about how the program should proceed. Some of the more contentious issues were:

- **"Public" versus "private" institutions to provide the weather data for Unidata.**
- **Choice of software packages to be used by Unidata (among those under consideration were McIDAS, GEMPAK, or newly developed Unidata applications)**
- **Level of support for Unidata by NSF. This was resolved through the standard NSF approach, i.e. a fully reviewed proposal.**

In very large measure, thanks to the vision and steady leadership of Dave Fulker, Ben Domenico and the Unidata staff, these issues were effectively resolved.

Finally, I would be remiss if we did not take note that Unidata's present and future success is in the very capable hands of and due to the leadership of Mohan with the very able support of the Unidata staff.