Unidata: A geoscience e-infrastructure for International Data Sharing

Mohan Ramamurthy

University Corporation for Atmospheric Research, Unidata, Boulder, United States (mohan@ucar.edu)

The Internet and its myriad manifestations, including the World Wide Web, have amply demonstrated the compounding benefits of a global cyberinfrastructure and the power of networked communities as institutions and people exchange knowledge, ideas, and resources. The Unidata Program recognizes those benefits, and over the past several years it has developed a growing portfolio of international data distribution activities, conducted in close collaboration with academic, research and operational institutions on several continents, to advance earth system science education and research. The portfolio includes provision of data, tools, support and training as well as outreach activities that bring various stakeholders together to address important issues, all toward the goals of building a community with a shared vision. The overarching goals of Unidata's international data sharing activities include:
• democratization of access-to and use-of data that describe the dynamic earth system by facilitating data access to a broad spectrum of observations and forecasts
• building capacity and empowering geoscientists and educators worldwide by building encouraging local communities where data, tools, and best practices in education and research are shared
• strengthening international science partnerships for exchanging knowledge and expertise
• Supporting faculty and students at research and educational institutions in the use of Unidata systems building regional and global communities around specific geoscientific themes.

In this presentation, I will present Unidata's ongoing data sharing activities in Latin America, Europe, Africa and Antarctica that are enabling linkages to existing and emergent e-infrastructures and operational networks, including recent advances to develop interoperable data systems, tools, and services that benefit the geosciences. Particular emphasis in the presentation will be made to describe the examples of the use of Unidata's International Data Distribution Network, Local Data Manager, and THREDDS in various settings, as well as experiences and lessons learned with the implementation and benefits of the myriad data sharing efforts.