



EXPANDING HORIZONS:

Enhancing scientific research and education in the geosciences



unidata

UNIDATA

For 20 years Unidata has been providing data, tools, and community leadership to enhance Earth-system education and research. In an era of increasing data complexity, accessibility, and multidisciplinary integration, Unidata provides a rich set of services and tools including:

- Software and systems for data exploration
- Collaboration enabling technologies
- Community building and support

All as part of a larger cyberinfrastructure for the 21st century.

Equipped with such robust tools and computing infrastructure, the broad Unidata community of users continue to study and solve some of the most challenging scientific problems facing our nation in the 21st century.



1983

1983

University Data Project (Unidata) conceived at a grassroots meeting in Madison, Wisconsin



1984

1984

Fulker named program director

DATA

WE PROVIDE A BROAD ARRAY OF DATA TO OUR COMMUNITY FOR USE IN MANY GEOSCIENTIFIC APPLICATIONS.

Efficient access to and visualization of data continue to be the cornerstones of our enterprise.

We continuously strive to make new and valuable data sources available to our community. The explosion of data and their increasing complexity pose challenges for future provision and management. Accepting this challenge is among Unidata's core values.

As diverse disciplines join our community, we continue to provide a wider variety of data products.

Data discovery, an important dimension of the scientific method, is provided in a new framework called THREDDS (THematic Realtime Environmental Data Distributed Services). THREDDS provides end users with tools for data discovery, browsing, selection through inventory cataloging methods, and integration with multimedia educational materials.



1987

1987

Test broadcast data via satellite for PC-McIDAS

1988



1989

First training workshop for PC McIDAS users

Begin data delivery through satellite broadcast and LDM

LDM 1.0 released

TOOLS

THE TOOLS AND SOFTWARE PROVIDED UNDER THE UNIDATA UMBRELLA FACILITATE THE ACCESS, ANALYSIS, VISUALIZATION, INTEGRATION, AND INTERPRETATION OF DATA.

As part of our software development philosophy, we:

- Emphasize object-oriented, platform-independent approaches to tool development
- Embrace open standards for broad and transparent use of our systems
- Promote openly-available software

The community uses our Local Data Manager (LDM) software to manage and process data, which are then distributed through a “virtual community” of hierarchically organized sites in a system called the Internet Data Distribution (IDD) system.

Our three large, research quality applications for decoding, analyzing, and displaying meteorological data are McIDAS, GEMPAK, and the Integrated Data Viewer (IDV). The IDV is a new and powerful application for 3D visualization and analysis that emphasizes the integration of diverse and distributed data types.

The network Common Data Form—netCDF—is a community standard for creating, accessing, and sharing scientific data. It is an interface for array-oriented data access and a library that provides an implementation of the interface. The netCDF library defines a machine-independent format for representing scientific data.



1989

1989

WXP, Weather Processor software made available



1990

1990

NSF Initiates Equipment Grant Program

1994



1994

Internet Data Distribution system deployed

SUPPORT

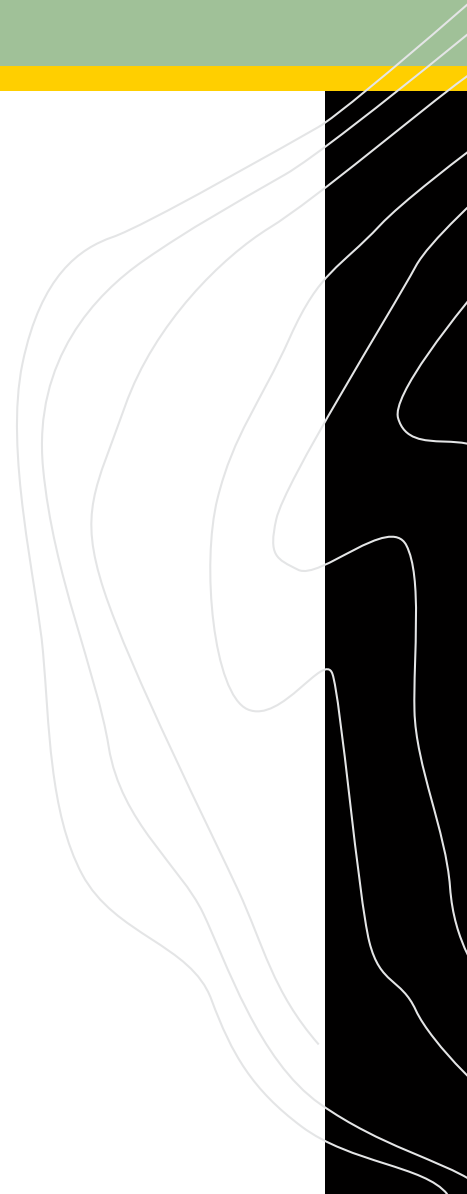
PROVIDING THE HIGHEST LEVEL OF SUPPORT IS A CORE UNIDATA VALUE.

We pride ourselves on supporting a diverse community of users working in highly heterogeneous computing environments.

The Unidata Program Center provides support to our community on software, hardware, and related issues. Members can obtain support through the Unidata portal or via e-mail. We maintain discussion groups that allow community members to support each other, collaborate, and discuss important issues.

Three other mechanisms that help us serve our community are:

- On-line training workshops to facilitate effective use of our software packages
- Regional and national users workshops to facilitate sharing of ideas
- Equipment Awards Program to facilitate participation



1996

Eligible community participants enlarged to include all of WMO Region IV

1997



1991

A step toward platform independence taken with JAVA™ tool development

COMMUNITY

UNIDATA'S COMMUNITY WAS ESTABLISHED THROUGH MUTUAL NEEDS FOR DATA AND TOOLS TO USE IN EARTH SCIENCE EDUCATION AND RESEARCH.

The resulting "virtual community" is adaptable, interactive, diverse—and growing more so each day. It is this foundation of adaptability and community participation that provides the strength of our comprehensive program.

We assess community needs through direct interaction with users and community-wide surveys. We also place strong emphasis on community-based governance. The Users Committee is the primary means for gaining feedback on our effectiveness in serving our members. The Policy Committee, based on input from the Users Committee, makes recommendations to the UCAR President on our program's policies, activities, and objectives.

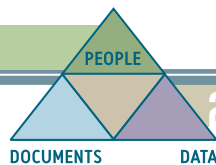
Our goal is to develop strategic partnerships and collaborations that broaden our community and address complex multi-disciplinary problems.



1998

1998

David Fulker awarded Educom Medal for leadership and Unidata's success in data provision



2001

THREDDS project initiated

2001



First DeSouza Award made to Harry Edmon

THE FUTURE

WHILE MAINTAINING OUR HISTORIC CORE VALUES, THE UNIDATA PROGRAM CENTER, WORKING IN CONCERT WITH OUR COMMUNITY, WILL ENCOURAGE DIVERSITY BY ACTIVELY ENGAGING OTHER SCIENTIFIC GROUPS SUCH AS GEOGRAPHIC INFORMATION SYSTEMS (GIS) USERS.

Over the next five years we will:

- Broaden the scope and range of communities served
- Facilitate multidisciplinary synthesis and societal impact studies through GIS integration
- Improve delivery of real-time data
- Develop superior visualization and analysis software
- Enhance community collaboration

In this new era, we will continue to provide and enhance our tools and services that allow members to discover, obtain, synthesize, integrate, and use many new types of scientific data to advance research and help educate future generations about our Earth system.

THE UNIDATA PROGRAM CENTER, AS THE LEADER OF A BROAD COMMUNITY:

- Explores new technologies
- Evaluates and implements technological standards and tools
- Advocates for the community
- Provides leadership in solving community problems in new and creative ways
- Negotiates for new and valuable data sources
- Facilitates data discovery and use of digital libraries
- Enables student-centered learning in the Earth system sciences by promoting use of data and tools in education
- Values open standards, interoperability, and open-source approaches
- Develops innovative solutions and new capabilities to solve community needs
- Stays abreast of computing trends as they pertain to advancing research and education

2002

my.unidata

2002

my.unidata web portal makes debut



2003

2003

Integrated Data Viewer released

LDM6, a major upgrade, released to community



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For more information contact info@unidata.ucar.edu

<http://my.unidata.ucar.edu>

The Unidata Program is sponsored by the National Science Foundation

