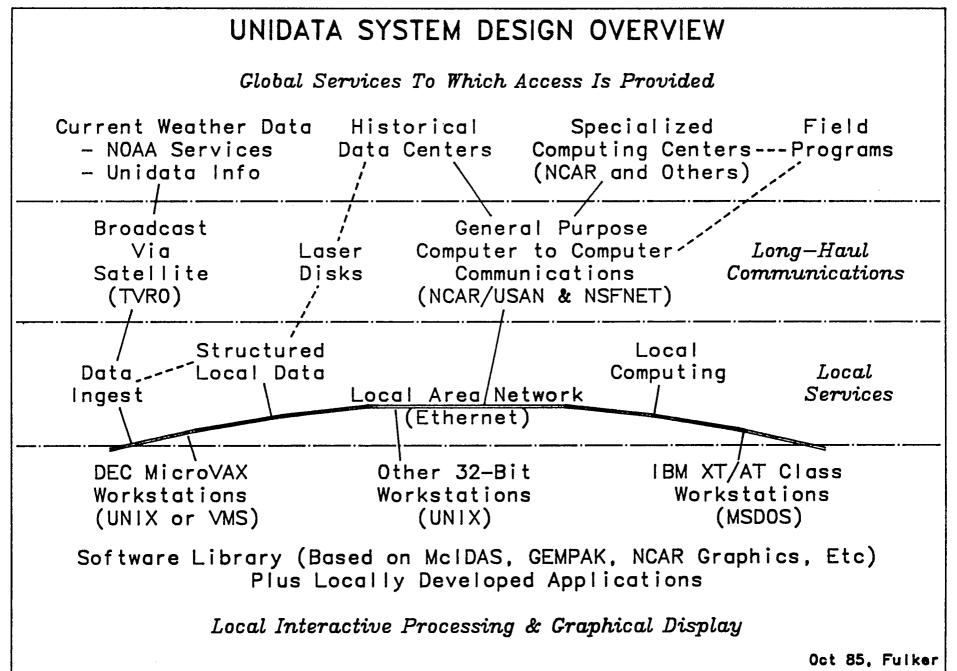# UNIVERSITY PARTICIPATION VIA UNIDATA
Part II

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The University Corporation for Atmospheric Research (UCAR) is presently completing UNIDATA, Phase II, considered to be the design phase of the UNIDATA Project. The four major components of the UNIDATA System are: 1) global services to which access is provided, 2) long haul communication for providing that access, 3) local services for providing access and local management of acquired data, and 4) local interactive processing and graphical display. In this presentation, each component was described in detail with linkages among the components elucidated.

Within this framework, access to the PCDS was discussed. It was pointed out that access to the PCDS could occur via general purpose computer-to-computer communications providing remote log on to the system. The UNIDATA System could also be used to transfer information from the PCDS, provided the appropriate software is available to receive the data. Both of these scenarios require agreements on the access protocols and appropriate physical connections.

One of the dominant driving forces behind the UNIDATA movement was the recognition that work stations and small (personal) computers have reached the point where they can be used significantly in the university atmospheric science setting. Another motivating factor was the universities' needs for weather information on a near real-time basis, and UNIDATA has already established a satellite broadcast data service for this purpose. Although only in the developmental stage, a model based on local area network (LAN) technology with common storage (or file server) has been proposed for a Local Data Management (LDM) Subsystem. Phase III of the UNIDATA Project will include a prototype implementation of this Local Data Management Subsystem. A proposal has been submitted to NSF to fund Phase III, which includes Beta testing in actual university settings of all UNIDATA components. Extending the broadcast data system, establishing a formal software library, establishing a support office, and preparing system and user documentation are also goals of Phase III. In addition, a Phase IV that calls for community wide implementation is being planned.

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UNIDATA SYSTEM DESIGN OVERVIEW

Global Services To Which Access Is Provided

Current Weather Data   Historical   Specialized   Field
  - NOAA Services   Data Centers   Computing Centers---Programs
  - Unidata Info   (NCAR and Others)

Broadcast   General Purpose
Via   Laser   Computer to Computer   *Long—Haul*
Satellite   Disks   Communications   *Communications*
(TVRO)   (NCAR/USAN & NSFNET)

Structured   Local
Data   Local Data   Computing   *Local*
Ingest   Local Area Network   *Services*
                 (Ethernet)

DEC MicroVAX   Other 32—Bit   IBM XT/AT Class
Workstations   Workstations   Workstations
(UNIX or VMS)   (UNIX)   (MSDOS)

Software Library (Based on McIDAS, GEMPAK, NCAR Graphics, Etc)
Plus Locally Developed Applications

Local Interactive Processing & Graphical Display

Oct 85, Fulker

BROADCAST DATA

USER INTERFACE,
GRAPHICS DISPLAY, AND
APPLICATIONS PROGRAMS

INGESTING,
SELECTION, AND
DECODING

TRANSFORMATION,
DERIVATION, AND
INDEX GENERATION

QUERY,
SELECTION, AND
DATA ACCESS

LOCAL
ARCHIVE

STANDARD UNIDATA STRUCTURES!

COMMON STORAGE

LAN

LOCAL DATA MANAGEMENT (LDM) SUBSYSTEM