METHODS OF DOWNLOADING TO USER INSTITUTIONS

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The PCDS not only supports the ability to output data in a uniform structure via the Common Data Format (CDF) but also supports the ability to provide data in native format for any data set supported by the PCDS. Methods were discussed for acquiring data in either format from the PCDS for further work at remote sites. Four levels of remote utilization were defined, based on the extent of offloading the NSSDC computer and local PCDS processing. Characteristics of each level were thoroughly explained in the presentation, including details of information and data transfers, downloading, uploading, and offloading of the NSSDC computer. Only the levels themselves are specified here. The characteristics can be found in the accompanying viewgraphs.

The first level defined is that of a network-based distributed PCDS. A subset of the PCDS software is ported to another VAX and made available on a network (i.e., SPAN) node. There is no subset of the PCDS at the second level, but it is also network based. Non-network utilization of the PCDS, requiring dial-up log on, is denoted as a third level. Finally, at the fourth level, personal computer utilization of the PCDS through dial-up log on with proper terminal emulation is defined.

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Methods of Downloading

Data from the PCDS to

User Institutions

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National Space Science Data Center
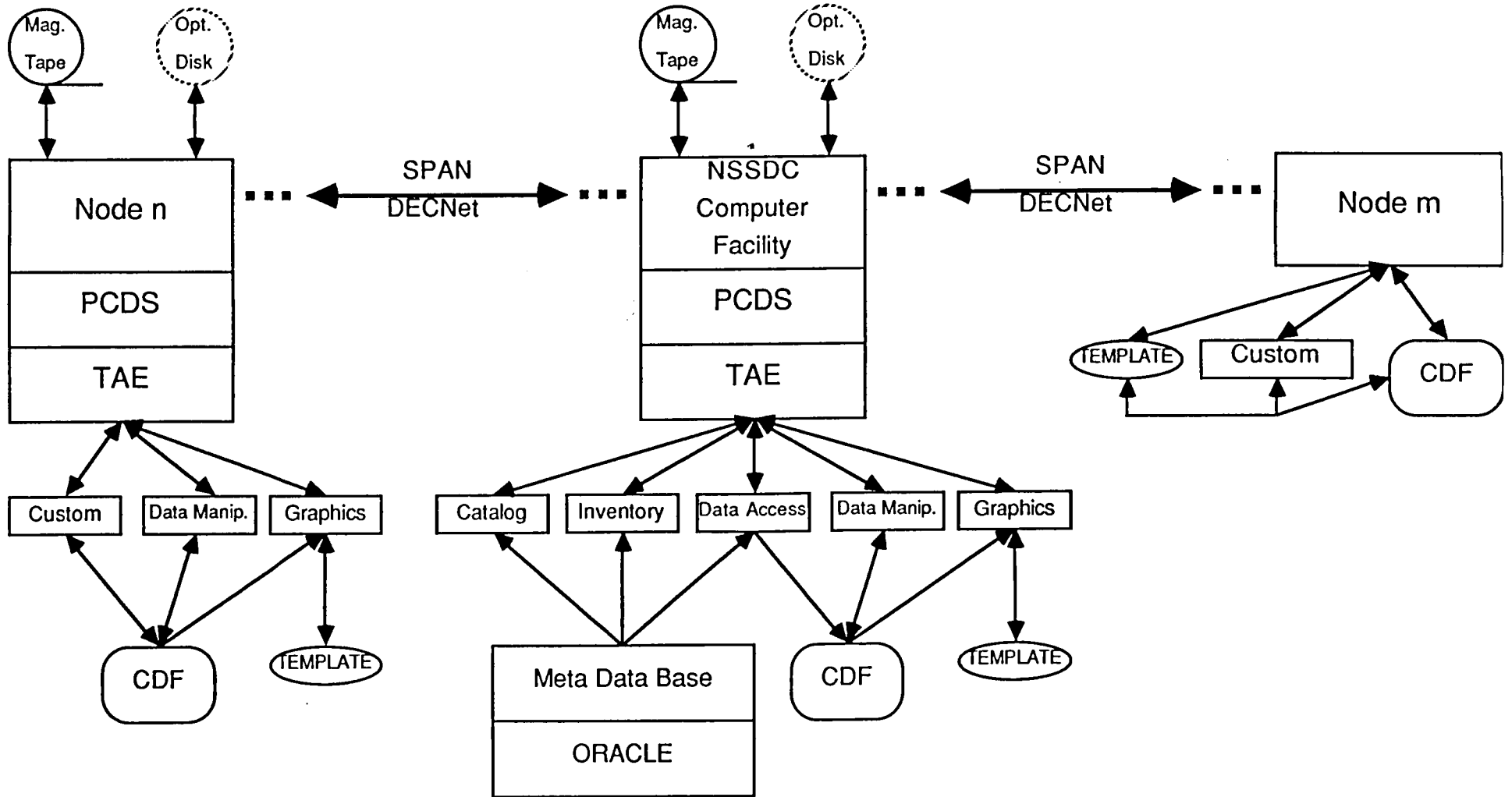NASA/Goddard Space Flight Center

Levels of Remote

PCDS Utilization

0 Distributed Processing Concepts

0 Network Utilization

0 Non – Network Utilization

0 Personal Computer Utilization

Network-Based PCDS Processing Concepts

Distributed Processing Concepts

under PCDS Version 4.0

O   NSSDC-Based Centralized Meta Data Base & Data Archive

O   Remote PCDS Subset on SPAN Nodes (> = DEC MicroVAX II):
    –   Graphics
    –   Data Manipulation
    –   [CDF, TEMPLATE & TAE]

O   DECNet Logon (SET HOST) for the PCDS at NSSDC

O   Meta Data Transfers in ASCII Files:
    –   Catalog Sections for Verification, Update & Remote Printing
    –   Inventory Reports for Remote Printing

O   Download CDFs for Remote Processing:
    –   Graphics
    –   Data Manipulation
    –   Listings
    –   Custom Analysis
    –   Creation of "Value-Added" Data

Distributed Processing Concepts

under PCDS Version 4.0 (Continued)

O Upload New Data in CDF for Full NSSDC Support:
-      Producer Provides Catalog Information
-      "Automated Ingest" into Inventory
-      Data Access, Data Manipulation & Graphics by Default

O Upload and Download Graphics:
-      TEMPLATE "Pseudo–Device" Files
-      TAE "Macro" Meta Descriptions
-      Take Advantage of Special Remote Hardware

O File Transfers to and from NSSDC:
-      Small Volume – – DECNET
-      Moderate to Large Volume – – Magnetic Tape
-      Large Archival Volume – – Optical Disk

O Significant Off–loading of Processing & Storage from the NSSDC

Network Utilization of the PCDS

○ DECNet Logon (SET HOST) for the PCDS at NSSDC

○ Meta Data Transfers in ASCII Files:
- — Catalog Sections for Verification, Update & Remote Printing
- — Inventory Reports for Remote Printing
- — CDF Listings for Remote Printing

○ Download Graphics:
- — Device—Dependent Protocols via TEMPLATE
- — TEMPLATE "Pseudo—Device" Files (if TEMPLATE Installed)

Network Utilization

of the PCDS (Continued)

O   Download and Upload Data in CDF (if CDF Installed):
- Custom Analysis
- Creation of "Value—Added" Data
- Producer Provides Catalog Information
- "Automated Ingest" into Inventory
- Data Access, Data Manipulation & Graphics by Default

O   File Transfers to and from NSSDC:
- Small Volume —— DECNET
- Moderate to Large Volume —— Magnetic Tape
- Large Archival Volume —— Optical Disk

O   Some Off—loading of Processing & Storage from the NSSDC

Non–Network Utilization of the PCDS

○ Dialup Logon for the PCDS at NSSDC

○ Meta Data Transfers in ASCII Files:
  - Catalog Sections for Verification & Remote Printing
  - Inventory Reports for Remote Printing
  - CDF Listings for Remote Printing

○ Download Graphics in Device–Dependent Protocols via TEMPLATE

○ Download and Upload Data in CDF (if CDF Installed):
  - Custom Analysis
  - Creation of "Value–Added" Data
  - Producer Provides Catalog Information
  - "Automated Ingest" into Inventory
  - Data Access, Data Manipulation & Graphics by Default

○ File Transfers to and from NSSDC:
  - Very Small Volume –– Phone Line
  - Small to Large Volume –– Magnetic Tape

○ Minimal Off–loading of Processing & Storage from the NSSDC

Personal Computer Utilization of the PCDS

O Dialup Logon for the PCDS at NSSDC

O Terminal Emulation/Data Transfer/Communications Examples:
   -       IBM PC without graphics -- VT-100 Emulation
                                        Printer Output
   -       IBM PC with standard graphics -- VT-100/Tektronix 4010 Emulation
                                             Printer/Plotter Output
   -       IBM PC with enhanced graphics -- Tektronix 4105/4107 Emulation
                                             MicroTEMPLATE
                                             Printer/Plotter Output
   -       Apple Macintosh -- VT-100/Tektronix 4010 Emulation
                               Printer/Plotter Output
                               MacPaint/MacDraw

O Meta Data Transfers in ASCII Files:
   -       Catalog Sections for Verification & Remote Printing
   -       Inventory Reports for Remote Printing
   -       CDF Listings for Remote Printing

O Download Graphics in Device-Dependent Protocols via TEMPLATE

O Negligible Off-loading of Processing & Storage from the NSSDC