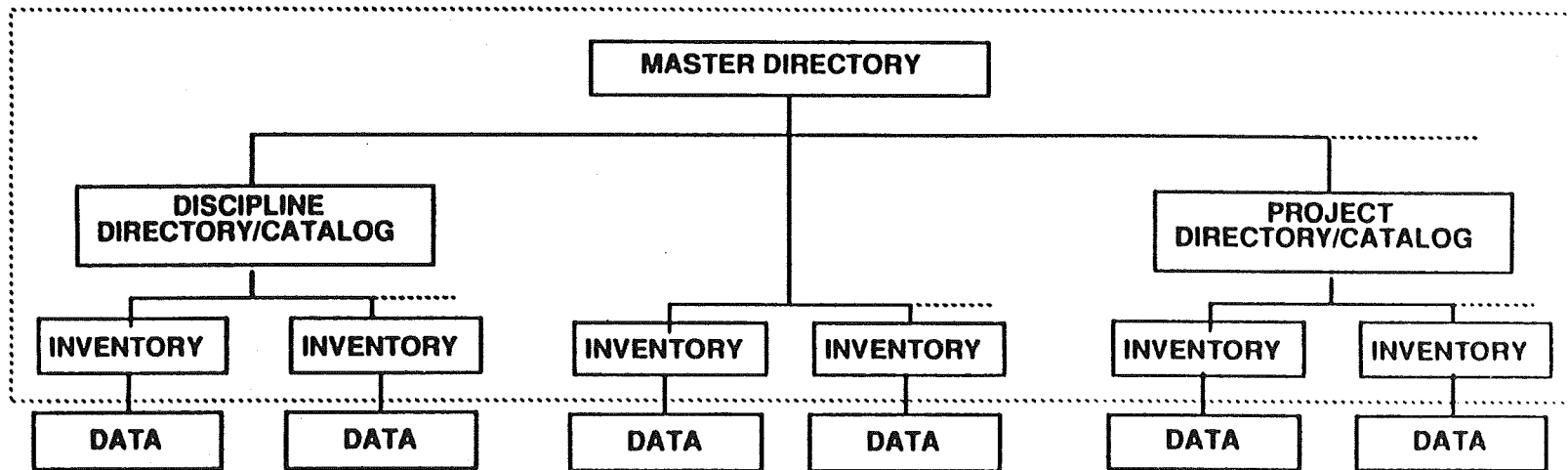


Science Network Resources: Distributed Systems

**Neal Cline
February 13, 1991**

DATA SYSTEM ENVIRONMENT



Directory - Brief overview information about whole data sets

Catalog - More detailed information about whole data sets

Inventory - Information about individual granules or elements of the data set

MASTER DIRECTORY

WHAT IS A PROTOTYPE INTERNATIONAL DIRECTORY?

PURPOSE

- An online information system for rapid and efficient identification, location, and overview information on data sets of interest to the science community
- Initial place to search for data - leading to catalogs and inventories having more detailed information about the data
- Automated network links to other systems having more detailed information and possible additional capabilities

FEATURES

- No training needed
- Open, free access
- Interdisciplinary
- Earth and space science data
- International
- Data center/archive descriptions
- Campaign/project descriptions

MASTER DIRECTORY

ADVANTAGES OF ON-LINE DIRECTORIES

- Provides data information to the science community 24 hours per day
- Contains up-to-date information on the well-known data as well as the lesser-known data sets in remote locations
- Allows quick information sharing among the interconnected directories via Directory Interchange Format (DIF) files
- Permits immediate links to other on-line information systems which provide more detailed information
- Information can be periodically extracted onto CD-ROM or floppy disk format for use in personal computer systems

MASTER DIRECTORY

INTERCONNECTED DIRECTORY ASSUMPTIONS

- **Directory service will be provided free of charge to the science community**
- **The DIF files will be used as the standard of directory information exchange**
- **DIF files submitted to one node will be distributed, through an established procedure, to all nodes of a directory system**
- **DIF files will be reviewed at procedurally-determined locations according to standards defined for the system**
- **Copies of the final, reviewed DIF entry are retained at the reviewing location and by the DIF author. The author copy is the master copy.**

MASTER DIRECTORY

DIF - EXCHANGE FILE FOR DIRECTORY INFORMATION

Description of a data set is written in the Directory Interchange Format (DIF) then passed among directories and automatically loaded

Entry_ID:	_____
Title:	_____
Source_Name:	_____
Sensor_Name:	_____
Start_Date:	____
Stop Date:	_____
.....
.....
.....

DIF :

- A standard developed by Catalog Interoperability Working Group (federal agency and academic representatives)
- Simple ASCII text file
- Usually 2-3 typed pages in length
- In use by federal agencies, academia, European countries, Japan, Russia
- Described in DIF Manual (contact Jim Thieman)
- Maintained under change control

MASTER DIRECTORY

DIRECTORY INTERCHANGE FORMAT

- SPECIFIES SYNTAX STANDARDS [PARAMETER: VALUE]
- SPECIFIES THE PARAMETERS CONSTITUTING A MASTER DIRECTORY ENTRY:
 - TITLE
 - START AND STOP DATA
 - SENSOR
 - SOURCE
 - INVESTIGATOR AND TECHNICAL CONTACT
 - DATA CENTER
 - CAMPAIGN OR PROJECT
 - STORAGE MEDIUM
 - PARAMETER MEASURED
 - DISCIPLINE KEYWORDS
 - SPATIAL COVERAGE
 - LOCATION KEYWORDS
 - GENERAL KEYWORDS
 - REFERENCES
 - SUMMARY

MASTER DIRECTORY

INFORMATION CONTENT OF DIF AND DIRECTORIES

Descriptive Title

Brief Summary/Abstract

Data Source Name (Spacecraft, Platform, etc.)

Sensor Name

Start/Stop Date

Storage Medium

Discipline/Subdiscipline

Parameters Measured

Location Name

Latitude/Longitude Coverage

Bibliographic References

Name, Address, Phone, etc. for:

Investigator

Technical Contact

Data Center Contact

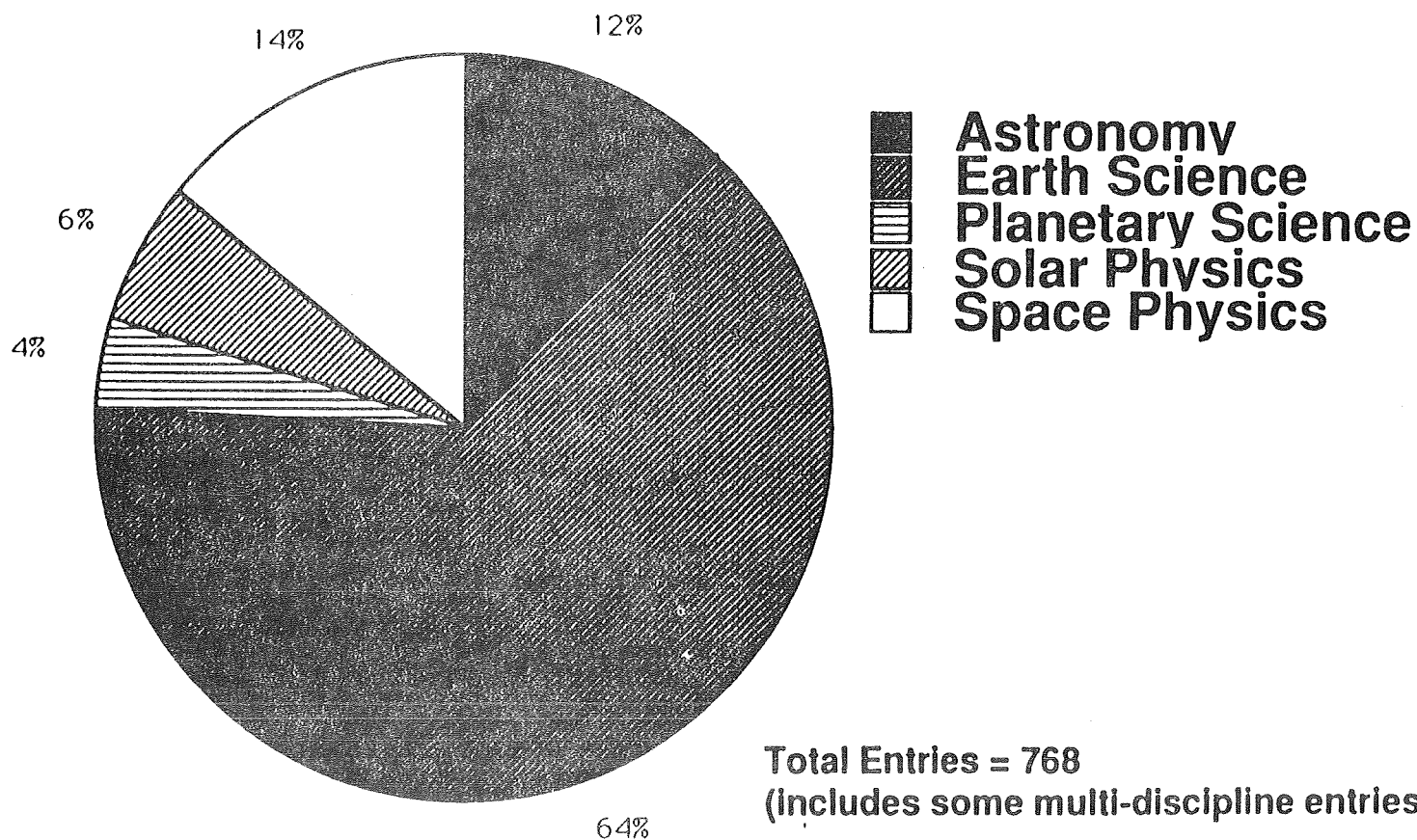
Data Center Name

Quality

MASTER DIRECTORY

DIRECTORY POPULATION STATUS

Percentage of Directory Entries by Discipline January, 1990



Total Entries = 768
(includes some multi-discipline entries)

MASTER DIRECTORY

DIRECTORY INTERCONNECTIONS STATUS AT GSFC

PRESENT

ADC - Astronomical Data Center

EDC - EROS Data Center Data Ordering Mailbox

IUE FACILITIES - IUE Processing Facilities

LEDA - ESA Land Observations Data Inventory

NCDS - NASA Climate Data System

NODS - NASA Ocean Data System

NSSDC - NSSDC Data Ordering Mailbox

OMNI - Interplanetary Medium Database

OCEANIC - Ocean Network Information Center

PDS - Planetary Data System

PLDS - Pilot Land Data System

SDCS - SAR Data Catalog System

TOMS - NIMBUS-7 Total Ozone Mapping Spectrometer Data

Assorted Dynamics Explorer Data Set Catalogs

Note that there are approximately 40 data systems/centers now described in the directory. The ones above can be connected to automatically from the directory through the LINK command.

MASTER DIRECTORY

DIRECTORY INTERCONNECTIONS STATUS (CONT.)

FUTURE

BRUNET REQUEST - UCLA Space Physics Data System

CEOS PID - CEOS Prototype International Directory System (Europe, Japan)

IRPS - Image Retrieval and Processing System (Washington Univ.)

NASA ARIN - NASA Aerospace Research Information Network

NASA GISS - NASA Goddard Institute of Space Studies

**NASA RECON - NASA REmote CONsole - (NASA Scientific and Technical
Information Database)**

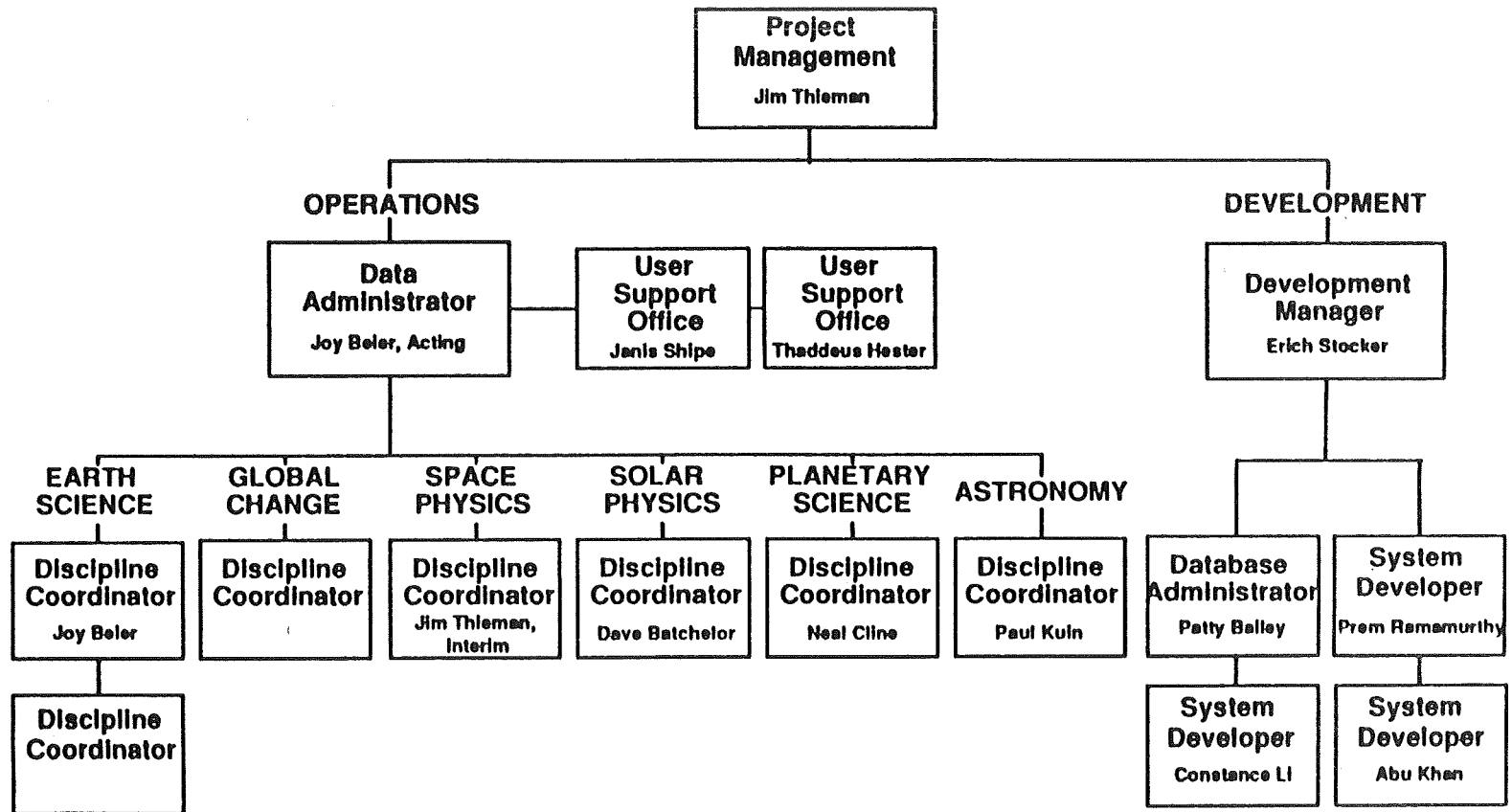
NOAA NESDD - NOAA Earth Systems Data Directory

UA - GEODATA CENTER - University of Alaska Fairbanks/GeoData Center

USGS ESDD - USGS Earth Science Data Directory

MASTER DIRECTORY

DIRECTORY STAFFING AT GSFC



The number of staff reflects the role of GSFC as a coordination point for software and database content. (Not all personnel are full-time)

MASTER DIRECTORY

ACCESS TO DIRECTORY AT GSFC

SPAN

\$ SET HOST NSSDCA
USERNAME: NSSDC

INTERNET

TELNET 128.183.10.4
USERNAME: NSSDC

OMNET

GOTO NSSDC

DIAL-IN LINES

Dial 301-286-9000

CONNECT 1200 (or 2400 or 300)

Enter several carriage returns

ENTER NUMBER

MD

CALLING 55201 (or 55202)

CALL COMPLETE

Enter several carriage returns

USERNAME: NSSDC

ITALICS INDICATE RESPONSE FROM THE COMPUTER

MASTER DIRECTORY