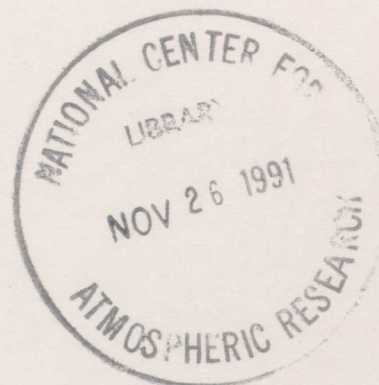


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COMPUTING NEWS

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USER DOCUMENTATION CATALOG



SCIENTIFIC COMPUTING DIVISION
NATIONAL CENTER FOR ATMOSPHERIC RESEARCH

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Note: Documents regarding the IBM 4381 and CMS operating system are not included in this catalog, because they are being phased out at NCAR. If you need assistance with conversion to UNIX, contact the SCD consultants at (303) 497-1278; e-mail: consult1@ncar.ucar.edu.

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Overview of this Catalog

This catalog describes the documentation that the Scientific Computing Division (SCD) distributes to National Center for Atmospheric Research (NCAR) computer users. The catalog also recommends the documentation that users may want to order directly from vendors. This catalog is available both in hardcopy and online.

How to Order Documentation

To order documentation distributed by SCD (except NCAR Graphics manuals), use a copy of the order form at the end of this catalog or the online order form. You can also call (303) 497-1232. To order NCAR Graphics, Version 3.00 manuals, see the instructions on page 27 of the hardcopy catalog. To order vendor documentation, see the information provided in the catalog descriptions.

SCD Documentation Available Online

Documents available online are indicated in this catalog with the phrase "Available online from anonymous ftp." This catalog has the filename `docs/catalog/userdoc.catalog`. The filename for the online order form is `docs/catalog/orderform.catalog`. To order SCD documentation via e-mail, send the online order form to `docorder@ncar.ucar.edu` on the Internet. A listing of online documentation and instructions for obtaining it are given in the section, "Anonymous FTP."

How to Obtain Computing Information

Copies of the documentation described in this catalog are available in the SCD Consulting Office, Room 17 of the Mesa Lab. If you need more information about the documentation contents, please contact an SCD consultant by sending e-mail to `consult1@ncar.ucar.edu`, or by calling (303) 497-1278.

Documentation Categories

The documentation listed in this catalog is grouped into the following categories:

- Introductory
- Cray Computers
- Mass Storage System
- Applications Software
- Graphics
- UNIX
- Networking and Data Communications
- Additional Topics

Within each category, the catalog provides a brief description of each document. If the information is available, the catalog also provides the version or publication and revision number, publication date, number of pages, and price of vendor documentation. Acronyms and terms used in the descriptions are defined after the document listings.

Introductory

NCAR UNICOS Primer,
Version 2.0, October 1990,
448 pages

Introduces the UNICOS computing environment at NCAR and provides sufficient information, examples, and practice for most new users to become comfortable with UNICOS. Each chapter begins with a synopsis of commands introduced in that chapter, continues with a one- or two-page discussion of key concepts, and concludes with a step-by-step practice session designed to exercise the user's new skills. This tutorial manual helps new users grasp the basic principles of UNIX and UNICOS, the vi screen editor, UNICOS shells, and UNICOS tools. It also provides recommendations for using the UNICOS system as well as instructions for running jobs, viewing job output, processing graphics metafiles, and using software libraries.

**Resources for Users of the
CRAY Y-MP8/864 (shavano) at
NCAR,** February 1991, 15 pages

Discusses the organization of UNICOS **man** pages on shavano, offers tips for accessing and searching them, and lists SCD-installed shavano **man** pages. This document gives instructions for using the **hints** and **news** commands and lists current online **hints** documents. It also tells how to obtain sample job scripts on shavano. In addition to online resources on shavano, the UserDoc lists documents currently available from SCD via anonymous FTP and gives instructions for accessing and copying them to your home computer via anonymous FTP. A section is included giving instructions on accessing Distributed Software Libraries online documentation.

Cray Computers

Documentation Distributed by SCD

COS-UNICOS Conversion Guide, Draft Version 2.1,
September 1990, 128 pages

Is designed to help users with the process of converting and moving codes developed on the COS Cray computer to the new UNICOS Cray computer. The document discusses conversion considerations, gives examples of common COS jobs and their corresponding UNICOS job scripts, describes useful UNICOS tools and commands, and offers pointers for using scripts to submit jobs via the UNICOS batch job submission utility, NQS.

Reprint: IPT User's Manual, Fortran-lint™ Source Code Analyzer for UNIX based Operating System Version 2.71,
February 1991, 44 pages

Describes FORTRAN-lint, a programming tool developed by Information Processing Techniques that analyzes source code and detects a wide range of potential problems. FORTRAN-lint is especially useful for finding errors between routines, such as incorrect arguments and common block problems. SCD encourages the use of **flint** on all shavano Fortran programs.

Online Documentation on shavano

All user commands, system calls, libraries, and special files on the CRAY Y-MP8/864 running UNICOS (shavano) are available as online manual pages. To access the manual page for a command, at the prompt (%) type

man command

There is even a **man** page for **man** (type **man man**).

In addition, SCD has installed numerous local online documents on shavano to give you conversion hints, recent updates, and information about local features. A local **hints** command has been installed for accessing these documents. To obtain a list of available locally written online documents on shavano, at the prompt type:

% hints gettingstarted

You may also use the **hints** command to search for keywords if you are unsure of the filename but have a specific topic in mind. You use the **-k** option (similar to the **-k** option for **man** pages) as follows:

```
% hints -k search_topic
```

Consult the **man** page (type **man hints**) for further instructions.

The following **hints** documents are available on shavano:

batch	batch submittal options
charges	how your jobs are charged
conversion	conversion options
craymans	UNICOS manuals available from Cray Research, Inc.
dropjobs	how to drop NQS (batch) and interactive jobs from shavano
e-mail	using e-mail from shavano
formats	UNICOS file formats for Fortran users
ftp	transferring files to and from shavano using File Transfer Protocol. (Note: ftp is also a UNICOS command, for which there is a man page).
gettingstarted	getting started with UNICOS; a list of available local documents
ishell	determining exit status from ISHELL
libraries	linking software libraries into your program
login	CRAY Y-MP login request form
paging	tips for reading online manual pages; choosing between pg -style paging and more -style paging
pshell	using pshell (under ishell) for executing UNICOS shell commands from within your Fortran program
queues	current shavano job queues
scripts	shell scripts for submitting jobs
sed	conversion of EDITOR commands using sed
tmpdir	how to use your unique, temporary directory in /usr/tmp , \$TMPDIR
unix_books	recommended books about UNIX

The following "local" **man** pages are available on shavano in addition to the UNICOS **man** pages:

a2p	Awk to Perl translator
alfpack	associated Legendre polynomials
amoslib	special functions
areas	creates an area map from a set of edges
autograph	draws curves or families of curves
batchname	provides a name within NQS for the batch output file returned via MASNET
cgm	cgm_tools utility
cgm2ncgm	filters NCAR CGM to/from vanilla CGM
cgm_edit	X Window interface to the NCAR View CGM library
cgmtrans	NCAR CGM translator

change	adds a system change to the system log
changeform	items and format used by change(1L)
cnetcdf	Unidata Network Common Data Form (netCDF) library
colconv	converts color values from one color space to another
conpack	contours regularly distributed (gridded) data
conran	contours irregularly spaced data, labeling lines
conraq	contours data, no labeling
conras	contours data, lines smoothed, crowded lines removed
conrcq	contours 2-d arrays, no labeling
conrcspr	contours 2-d arrays, lines smoothed, crowded lines removed
conrec	contours 2-d arrays, labeling contour lines
cosconvert	converts a COS-blocked, single-file dataset into one of several formats
cosfile	analyzes a COS-blocked dataset and reports on the number of files, record sizes, and types of files
cossplit	splits a multi-file, COS-blocked dataset into multiple, single-file, COS-blocked datasets
crayfish	vectorized version of Fishpak
crayfishpak	vectorized version of Fishpak
ctrans	CGM translator
dashchar	software dashed-line package with character capability
dashline	software dashed-line package
dashsmth	software dashed-line package with character capability and smoothing
dashsupr	software dashed-line package with character capability, smoothing, and the capability of removing crowded lines
droptg	drops a TAGS job
ecmfft	multiple fast fourier transform package
eda	exploratory data analysis
editor	a line editor for card-image files
ezmap.exam	examples from EZMAP utility (NCAR Graphics)
ezmap	examples from EZMAP utility (NCAR Graphics)
ezmapa	allows ezmap output redirection to AREAS routines
fcaps	reports available fontcaps
fftpack	fast fourier transforms
findg	locates calls to all entries in pre-GKS NCAR Graphics
fishpak	separable elliptical partial differential equation solvers
fitpack	curve and surface fitting
flint	Fortran source code analyzer
fnetcdf	Unidata Network Common Data Form (netCDF) Fortran library
fontc	fontcap preprocessor for NCAR Graphics
fontcap	NCAR Graphics font definition file
force	translate, compile and link Force files
forcerun	execute Force programs
fromms	ships files from the NCAR Mass Storage System
ftrans	NCAR CGM translator
funpack	special functions
gaus	displays the total GAUs allocated/used for your default project number or for a specified project number

gcaps	reports available graphcaps
gflash	captures and inserts specified portions of graphics instructions in subsequent frames
graphc	graphcap preprocessor for NCAR Graphics
graphcap	NCAR Graphics graphic device definition file
gridal	draws background grids
h2ph	converts any C header files specified to the corresponding Perl header file
hafton	halftone pictures of 2-d arrays
hdf	Hierarchical Data Format library
hints	finds "UNICOS hints" information by keywords, prints out the document
histgr	plots histograms
ictrans	user interface to the CGM translator ctrans
ident	identifies files
idt	X Window interactive image display tool
ixec	executes a UNICOS shell command from Fortran
iftran	translates a program from IFTRAN to Fortran
imslcnv	routines for converting IMSL Edition 9.2 to IMSL Edition 10.0
imslma	IMSL mathematical library
imslsf	IMSL special functions library
imslst	IMSL statistics library
isosrf	iso-surfaces from 2-d arrays, hidden lines removed
isosrfhr	iso-surfaces from high resolution 3-d arrays
labelbar	creates a labeled, filled, rectangular bar to serve as a key for a filled plot
lapack	introduction to solvers for dense linear systems
less	opposite of more
lread	copies a Mass Storage System (MSS) file to a file on UNICOS
lwrite	copies a UNICOS file to a file on the Mass Storage System (MSS)
maserr	provides the MASnet error message associated with the MASnet error number
med	NCAR CGM metafile frame editor
minpack	nonlinear equation solvers
mschg	mass store change the passwords, retention period, and/or comment associated with an MSCP bitfile
msdirect	restores a directory backed up on the Mass Storage System
mserror	Obtains an error message from the previous MsRead or MsWrite call
msexport	copies MSS data to a foreign volume
msgs	system messages and junk mail program
msimport	copies MSS data from a foreign volume
msls	lists contents of mass store directory
msmv	renames an MSCP bitfile; changes passwords, retention period, or comment associated with the bitfile
msoffline	ensures MSCP bitfile is on an online medium
msonline	ensures MSCP bitfile is not on an online medium
msread	copies a Mass Storage System (MSS) file to UNICOS disk via the NCAR Local Data Network

msrestore	restores or lists files backed up on the Mass Storage System
msrm	removes bitfiles from the Mass Storage System (MSS)
mstouch	changes the time of last reference of a Mass Storage System (MSS) file
mswait	Checks on the status of files written asynchronously via the MsWrite NCAR local routine.
mswrite	copies a UNICOS disk file to the NCAR Mass Storage System (MSS) via the NCAR Local Data Network
mudpack	elliptical partial differential equation solvers
nag	general math and statistics library
ncargcc	command for compiling C code that uses NCAR Graphics
ncargex	NCAR Graphics examples and tests
ncargf77	command for compiling f77 code that uses NCAR Graphics
ncargintr	NCAR Graphics overview
ncargmv	move an installed version of NCAR Graphics
ncargpar	retrieves a value from the NCAR graphics parameter file
ncargrun	script to invoke a program name which uses the NCAR GKS library
ncargsrc	script to retrieve NCAR Graphics source
ncargtar	creates tar file for NCAR Graphics
ncargtest	creates, compiles, links a program that uses an NCAR Graphics utility
ncarm	ncar math historical routines
ncaro	ncar i/o historical routines
ncarv_pool	spooled device configuration table for interactive metafiletranslator ictrans
ncdump	a netcdf to ascii translator
ncgen	a netcdf description compiler
ngm2cgm	filters NCAR CGM to/from vanilla CGM
netcdf	Unidata Network Common Data Form (netCDF) library
netxx	generalized interface to the NCAR computer network
nriftohd	filter to convert from nrif raster file to hdf format
odepack	solves for ordinary differential equations, initial value problems
perl	an interpreted language optimized for scanning arbitrary text files, extracting information, and printing reports
plotchar	plots text using one of three quality levels
plotmp	simplified MASnet interface for submitting metafiles to the Xerox 4050 (main printer) MASnet node for recording on paper
plt	user interface for NCAR metacode translators
pre2ncgm	converts a pre-CGM NCAR metafile to an NCAR CGM
preforce	translates Force files
primer	copies files described in the NCAR UNICOS Primer
psblack	PostScript filter
pshell	performs ISHELL requests
pswhite	PostScript filter
pwrity	fancy character plotting
pwrity	character plotting
pwrzi	plots characters in 3-d with ISOSRF
pwrzs	plots characters in 3-d with SRFACE

pwrtz	plots characters in 3-d with THREEED
qchange	queries the change log for a system change note
qstat	displays status of NQS queues
rasttg	translates, colors, and concatenates raster images into encapsulated NCAR Raster Interchange Format (NRIF)
rasview	X11 windows raster file previewer
s2p	Sed to Perl translator
sccs	Source Code Control System (SCCS) file format
sendmstg	simplified MASnet interface for submitting requests to process MSS files to the Text and Graphics System (TAGS) MASnet node
sendtg	simplified MASnet interface for submitting files to the Text and Graphics System (TAGS) MASnet node for recording on film
slatec	general math library—nonpriority
softfill	fills the area inside a polygon in various ways
sphere	spherical harmonic analysis
spherepack	spherepack harmonic analysis
srface	3-d plot of functions with 2 variables
ssdlin	out-of-core linear solvers using the CRAY SSD
starpac	time series, regression solvers—statistical analysis
stattg	gets TAGS queue status
stitle	plots stationary or scrolling titles
strmln	draws a streamline representation of a flow field
threed	3-d line drawing package
toms	ships files to the NCAR Mass Storage System
velvct	draws 2-d velocity fields
xprint	prints on Xerox 4050 laser printers
xwdtohdf	filter to convert from X11 raster file to hdf format

Docview

The Docview online documentation system is available on shavano under UNICOS 6.1.4. Docview allows you to view information online or to write it to a file. It offers a system of menus to help you access information. Each document in the Docview library is identified by a unique *docname* (an abbreviated document name), and each document consists of passages that are identified by specific keywords. Docview also lets you examine all keywords associated with a particular document. Currently, Docview is an interactive tool and is therefore not suitable for batch use.

The Docview utility is based on the DOCUMENT program, which was developed by the National Energy Research Supercomputer Center (NERSC) at the Lawrence Livermore National Laboratories. It was ported to UNICOS as a joint project between Cray Research and the National Center for Supercomputing Applications (NCSA).

Many Cray Manuals Now Online

Docview comes with several Cray manuals online, and will allow the addition of local documents as well. Manuals online under Docview are listed in Table 1.

Table 1. Cray Manuals Available in Docview

docname	Document title
UNICOS60notice	<i>UNICOS 6.0 Release Notice</i>
docview	<i>Docview User's Guide, SG-2109</i>
doc.writer	<i>Docview Writer's Guide, SG-2118</i>
tcpip.user	<i>TCP/IP and OSI Network User's Guide, SG-2009</i>
admin	<i>UNICOS System Administration for Source Releases, SG-2113</i>
seglldr	<i>Segment Loader (SEGLDR) and ld Reference Manual, SR-0066</i>
support	<i>UNICOS Support Tools Guide, SG-2016</i>
primer	<i>UNICOS Primer, SG-2010</i>
pascal	<i>Pascal Reference Manual, SR-0060</i>
perf	<i>UNICOS Performance Utilities Reference Manual, SR-2040</i>
tape.user	<i>UNICOS Tape Subsystem User's Guide, SG-2051</i>
cdbx	<i>UNICOS CDBX Symbolic Debugger Reference Manual, SR-2091</i>
c.std	<i>Cray Standard C Programmer's Reference Manual, SR-2074</i>
usm	<i>UNICOS Source Manager (USM) User's Guide, SG-2097</i>
x.window	<i>UNICOS X Window System Reference Manual, SR-2101</i>

Getting Started with Docview

To get started with Docview, type:

docview

The Docview main menu will be displayed, along with the Docview prompt (>). There is also a **docview man** page. For further assistance in using Docview, contact the SCD consulting office by sending e-mail to consult1@ncar.ucar.edu or calling (303) 497-1278.

UNICOS Documents Distributed by Cray

Note: The following list contains a subset of the documentation provided by Cray Research that is generally needed by most users of the CRAY Y-MP8/864 (shavano) computer at NCAR. Many more manuals and technical notes are available from Cray Research, and a complete list is printed in Cray's *User Publications Catalog*, CP-0099, Revision H. Ordering instructions for all Cray documents appear at the end of this section.

"CF77 Compiling System Ready Reference," SQ-3070, \$6.65.	Gives frequently used CF77 commands in reference card form.
CF77 Compiling System, Volume 1: Fortran Reference Manual, SR-3071, Revision 4.0, \$43.20	Describes the use of the CF77 compiling system. It includes information on invocation commands, options, and directives.
CF77 Compiling System, Volume 2: Compiler Message Manual, SR-3072, Revision 4.0, \$16.05	Lists all messages issued by the compiling phase of the CF77 compiling system. Each message is accompanied with an expanded description of the problem and suggested solution.
CF77 Compiling System, Volume 4: Parallel Processing Guide, SG-3074, Revision 4.0, \$38.15	Defines and describes the Autotasking feature of the CF77 compiling system.
Cray Standard C Programmer's Reference Manual, SR-2074, Revision 2.0, \$34.15	Describes Cray Standard C features and summarizes Cray-specific details of the ANSI standard C language.
Docview User's Guide, SG-2109, Revision 6.0, \$16.85	Describes the Docview program, which provides online access to Cray Research documents as well as locally written documents.
Macros and Opdefs Reference Manual, SR-0012, Revision E, \$31.55	Describes macro and opdef instructions for use on CRAY Y-MP computer systems running under UNICOS. Macro instructions in this manual include macros intended for typical users and macros and opdefs intended for internal system users.

**Segment Loader (SEGLDR) and
Id Reference Manual**, SR-0066,
Revision 6.0, \$19.95

Describes the operation of the Cray loader that
loads both segmented and nonsegmented
programs.

**TCP/IP and OSI Network
User's Guide**, SG-2009,
Revision 6.0, \$17.85

Introduces the network communications
capabilities of Transmission Control
Protocol/Internet Protocol (TCP/IP) on UNICOS.

**UNICOS 6.0 Release Notice
(UC-06.0-UAN-RN)**

Describes all the new features of UNICOS 6.0. A
complete online version is available via
anonymous FTP on ftp.ucar.edu in the
docs/cray/unicos6/cray.release directory. See the
directory's **README** file for descriptions of the
files. (Directions for obtaining documents via
anonymous FTP are at the end of the
Documentation column in this issue.)

**UNICOS CDBX Debugger
User's Guide**, SG-2094,
Revision 6.0, \$12.95

Provides a guide for operating the CDBX
debugger.

**UNICOS CDBX Symbolic
Debugger Reference Manual**,
SR-2091, Revision 6.1, \$29.40

Describes the functions and characteristics of the
Cray symbolic debugger, CDBX.

**"UNICOS CFT77 Reference
Card,"** SQ-0138, Revision B,
\$1.50

Summarizes frequently used elements of CF77,
including the CFT77 options and directives; a
very useful card.

**UNICOS File Formats and
Special Files Reference Manual**,
SR-2014, Revision 6.0, \$34.65

Provides information on UNICOS file formats
and special files available on UNICOS systems for
programmers and system administrators.

**UNICOS Fortran Library
Reference Manual**, SR-2079,
Revision 6.0, \$47.55

Describes Fortran subprograms and functions
available under UNICOS.

UNICOS I/O Technical Note, SN-3075, \$39.45	Describes the types of I/O that are available to the Fortran programmer, examines the efficiencies and inefficiencies of each, and provides ways in which to speed up various forms of I/O after the type of I/O is chosen. It also describes tools that can be used to extract statistics from the execution of a Fortran program.
UNICOS Index for CRAY Y-MP, CRAY X-MP EA, CRAY X-MP, and CRAY-1 Computer Systems, SR-2049, Revision 6.0, \$42.65	Provides global indexes for the UNICOS manual set.
UNICOS Message Reference Manual, SR-2200, Revision 6.0, \$46.70	Lists error messages and corresponding documentation for portions of the UNICOS operating system and for several products that run under UNICOS.
UNICOS Overview for Users, SG-2052, Revision A, \$14.00	Provides an introduction to UNICOS.
UNICOS Performance Utilities Reference Manual, SR-2040, Revision 6.0, \$32.30	Describes various utilities for analyzing the performance of your program, including: ftref , flowtrace , prof , hpm , perftrace , and procstat .
UNICOS Primer, SG-2010, Revision 6.0, \$31.75	Covers the UNICOS basics, shells, and the batch facility. It is designed to be used as a tutorial for the user new to UNICOS.
"UNICOS Shell and Variable Ready Reference," SQ-2060, \$7.60	Provides a quick reference to the shell and to writing shell scripts (both Bourne and C shell).
"UNICOS Source Code Control System (SCCS) User's Guide," SG-2017, Revision B, \$10.90	Explains how to use SCCS to maintain different versions of source code.

UNICOS Source Manager (USM) User's Guide, SG-2097, Revision 6.0, \$15.65

Describes the UNICOS Source Manager (USM) utility that is released with UNICOS 6.0 for managing source code for UNICOS and UNIX systems.

UNICOS Support Tools Guide, SG-2016, Revision 6.0, \$28.85

Covers commands such as **make** and **awk**.

"UNICOS User Commands Ready Reference", SQ-2056, Revision 6.0, \$13.65

Summarizes the syntax and options of UNICOS user commands; a very useful pocket-sized booklet.

UNICOS User Commands Reference Manual, SR-2011, Revision 6.0, \$82.50

Describes UNICOS commands and application programs and is a reference manual for UNICOS programmers. It is an alphabetical collection of all the UNICOS command **man** pages. It assumes that the reader has a working knowledge of UNICOS or UNIX.

"UNICOS vi Reference Card", SQ-2054, \$1.00

Summarizes the **vi** editor.

UNICOS X Window System Reference Manual, SR-2101, Revision 6.0, \$11.65

Provides information on the X Window System.

UPDATE Reference Manual, SR-0013, Revision 6.0, \$22.50

Describes UPDATE, a Cray Research program that provides programmers with tools for modifying, editing, and updating source language programs on UNICOS.

Volume 1: UNICOS Fortran Library Reference Manual, SR-2079, Revision 6.0, \$47.55

Describes Fortran subprograms and functions available under UNICOS.

Volume 2: UNICOS Standard C Library Reference Manual, SR-2080, Revision 6.0, \$65.20

Describes the UNICOS C library functions.

Volume 3: UNICOS Math and Scientific Library Reference Manual, SR-2081, Revision 6.0, \$48.10

Describes the math and scientific library routines available on all Cray Research systems running under UNICOS.

Volume 4: UNICOS System Calls Reference Manual, SR-2012, Revision 6.0, \$27.70

Describes UNICOS system calls available on all Cray Research computer systems.

Volume 5: UNICOS Network Library Reference Manual, SR-2057, Revision 6.0, \$12.90

Describes network library routines for the TCP/IP product when it is used with UNICOS running on Cray computers.

To order Cray documentation or a copy of their complete *User Publications Catalog*, call (612) 681-5907 or write

Order Desk
Cray Research, Inc.
2360 Pilot Knob Rd.
Mendota Heights, MN 55120

If you order documentation by telephone, please state that you are affiliated with NCAR and provide a billing and a shipping address.

Ordering Information Also Available Online

The licensing and document ordering information for UNICOS 6.0 has not been included in the Docview version of the *UNICOS 6.0 Release Notice*. This information is currently only available online from anonymous FTP under the pathname `/docs/cray/unicos6/cray.release/ordering`. For information on using anonymous FTP, see the end of the Documentation column in this issue. (Note: Documentation for UNICOS 6.0 is also applicable to UNICOS 6.1.)

Mass Storage System

PSTRANS: A Utility for Transferring Files from PSTORE Datasets, Version 1.0, September 1986, 5 pages

Describes how to use PSTRANS, a utility that allows up to 50 specified files from a PSTORE dataset on the MSS to be transferred to specified directories on the MSS. PSTORE datasets were created on the TBM (the previous mass storage system).

TBM Utilities: EOFILT, TBMCONV, and PSTRANS, Version 1.0, September 1988, 10 pages

Documents the use of EOFILT, TBMCONV, and PSTRANS, three locally written utilities that are used with the Ampex TBM, NCAR's previous mass storage system. EOFILT filters end-of-file marks into and out of PSTORE datasets. PSTRANS transfers up to 50 files from a PSTORE dataset on the MSS to specified directories on the MSS. TBMCONV allows the COS computer to read TBM volumes originally written by the CDC 7600.

Importing and Exporting Data Between the Mass Storage System and Tape via MIGS, Version 1.0, January 1991, 27 pages

Gives detailed information on file transfer between the Mass Storage System (MSS) and tape media, including 1/2-inch magnetic tape, IBM 3480 tape cartridge, and 8-mm videotape cassettes (EXAbyte type). The document demonstrates use of the MIGS `nrnet` command, along with the `msimport` and `msexport` verbs, describes all applicable keywords, and gives examples of their use.

Applications Software

Note: In this section, SCD and non-SCD documents are grouped together, so you can easily see when both SCD and non-SCD documents are available for an applications software package. The documents are listed alphabetically, according to the name of the package. Reference copies are available for use in the Consulting Office, Room 17 of the Mesa Lab.

CFFT99: Complex Multiple Fast Fourier Transform Routines,
Draft Version 1.0, June 1991

Describes how to use complex transform routines in Cray's bnchm library and how to obtain the source code for the nonproprietary version of these routines. The document includes examples of simple working programs. Users who want the real transforms should see the SCD UserDoc "ECMFFT: Half-Complex Multiple Fast Fourier Transform Routines."

Collected Algorithms of the ACM 1975-1979 and 1980-1984,
Version 1.2, April 1987, 29 pages

Provides an overview of the Association for Computing Machinery (ACM) software collection that is available at NCAR. The document briefly describes over 130 mathematical software algorithms. The description of each algorithm includes the NCAR classification category for the algorithm (as used in the *NCAR Software Catalog*), as well as references to full descriptions and where to look for more information.

Distributed Software Libraries,
Version 1.2, August 1990,
18 pages

Describes how to use the Distributed Software Libraries (dsl) utility to access most of NCAR's public domain software libraries, search for subprograms to solve your mathematical problems, and return the appropriate software or documentation to your home computer anywhere on the Internet. This document gives instructions for accessing and using dsl; it includes examples and a list of available commands. This document is also available online under the dsl utility's help menu.

**ECMFFT: Half-Complex
Multiple Fast Fourier
Transform Routines, Draft
Version 1.0, June 1991**

Describes how to use the real transform routines in NCAR's ECMFFT library and how to obtain the source code for the nonproprietary version of these routines. The document includes examples of simple working programs. ECMFFT is a binary library of half-complex Fast Fourier Transforms (FFTs) optimized for the Cray computers.

**EISPACK Matrix Eigensystem
Routines—EISPACK Guide,
ISBN 0-387-07546-1, \$33**

Describes a library that is primarily dedicated to finding eigenvalues and eigenvectors of matrices and matrix systems. EISPACK usage is explained in Volumes 6 and 51 of the Lecture Notes in Computer Science, which are published by Springer-Verlag. To order either of the EISPACK documents listed here, call Springer-Verlag at 1-800-777-4643 or write

**Matrix Eigensystem Routines—
EISPACK Guide Extension,
ISBN 0-387-08254-9, \$30**

Springer-Verlag New York, Inc.
Order Department
44 Hartz Way
Secaucus, NJ 07094

**FISHPAK: A Package of Fortran
Subprograms for the Solution
of Separable Elliptic Partial
Differential Equations, Version
2.0, March 1990, 8 pages**

Describes FISHPAK, a software library intended for users who are solving separable elliptic partial differential equations by direct methods. Several of the Fortran subroutines treat the Helmholtz equation in Cartesian, polar, cylindrical, and spherical coordinate systems. The new version contains information on accessing the FISHPAK binary and source libraries on the UNICOS Cray computer, via the new Distributed Software Libraries (dsl) utility. This document is also available online via anonymous FTP to `ftp.ucar.edu` in the `docs/software` subdirectory. The filename is `fishpak`.

Also available online from
anonymous FTP as `fishpak`

**FITPACK: A Software Package
for Curve and Surface Fitting
Employing Splines Under
Tension, Version 1.0,**
September 1987, 22 pages

Contains a preface that briefly describes the software features and provides instructions for accessing and using the FITPACK source code and binary library on NCAR's Cray computer. The rest of the document describes the routines for curve and surface fitting that use splines under tension. This document does not include argument descriptions; if you want to use FITPACK, you need to obtain the FITPACK manual that is described below.

FITPACK, 1983, 351 pages, \$30

Describes a library of software for curve and surface fitting employing splines under tension. The software fits data that represent any of the following kinds of mappings: a real function of one variable, a curve in the plane, a curve in three-dimensional space, a real function of two variables, and a surface. In the case of surface fitting, the data are required to be defined on a rectangular grid. You can order a copy of the manual from the author by calling (512) 345-7645 or writing

Dr. Alan Cline
Pleasant Valley Software
8603 Altus Cove
Austin, TX 78759

GBYTES and SBYTES,
Version 1.1, September 1988,
7 pages

Describes how to use the GYBYTES, GBYTE, SBYTES, and SBYTE utilities. These utilities allow you to unpack or pack selected data from a record, independent of what computer formatted the data and what computer is reading it. Graphics have been incorporated to clearly demonstrate the resulting bit manipulation.

IFTRAN Preprocessor,
Draft Version 2.0, April 1989,
27 pages

Offers guidance in using the IFTRAN preprocessor at NCAR. IFTRAN is Fortran-based, highly portable, and easier to write and read than basic Fortran. The document includes IFTRAN commands, statement and input formats, and information about using IFTRAN on several mainframe computers.

The IMSL Complete Libraries Group, Edition 10, April 1987,

softcover set, \$74
(CGLB-USM-PERFCT)

3-ring binder set, \$210
(CGLB-USM-3 ring)

Contains about 800 user entries for the International Mathematical and Statistical Library (IMSL) in three major groups: applied mathematics, statistics, and special functions. To order the IMSL manuals, call (713) 782-6060 or write

IMSL, Inc.
Customer Relations
2500 ParkWest Tower One
2500 CityWest Boulevard
Houston, TX 77042-3020

The IMSL Libraries Edition 10.0 Update Guide, November 1987,
71 pages

Assists users with the transition from the International Mathematical and Statistical Library (IMSL) Edition 9.2 to Edition 10.0. Tables in the appendix show which Edition 10.0 routine replaces each Edition 9.2 routine and indicate how the new routines differ from the old ones. The guide does not contain usage instructions, such as argument lists; for this reason, you should purchase the IMSL manuals if you use IMSL software frequently.

LINPACK Users' Guide,
1979, \$28

Describes a library that analyzes and solves various systems of simultaneous linear algebraic systems. To order the guide, call the Society for Industrial and Applied Mathematics (SIAM) at 1-800-447-7426 or write

SIAM
Customer Services
1400 Architects Building
117 South 17th Street
Philadelphia, PA 19103-5052

MUDPACK: Multigrid Software for Linear Elliptic Partial Differential Equations, Version 3.0, March 1991, 53 pages

Introduces, describes, and provides examples of the use of the Cray vectorized software package MUDPACK, which was developed at NCAR. MUDPACK is a collection of portable Fortran subroutines that utilize multigrid iteration to efficiently approximate the solution to a variety of two- and three-dimensional elliptic partial differential equations. Improvements since earlier versions include additional grid size flexibility, multigrid options, fourth-order solvers, hybrid multigrid-direct method solvers, subroutines to compute fine-grid residuals, solvers in relocatable binary form, and improved documentation. Version 3.0 of MUDPACK is incompatible with the earlier versions.

NAG Fortran Library Manual, Mark 14, March 1990, \$260

Contains over 1,000 Numerical Algorithms Group (NAG) library subroutines and functions. To order a copy of the manual, call (708) 971-2337 or write

NAG, Inc.
Technical Sales
1101 31st Street, Suite 100
Downers Grove, IL 60515

NCSA HDF Calling Interfaces and Utilities, Version 3.1, July 1990, 165 pages

Contains all the details of using the Hierarchical Data Format (HDF). HDF is a multi-object file format for the transfer of graphical and floating-point data between machines. This manual includes information on storing raster images, palettes, and rectangular gridded arrays of scientific data. HDF was developed by the National Center for Supercomputing Applications and is available on the CRAY Y-MP8/864.

The netCDF User's Guide: An interface for Data Access, Version 1.11, April 1991, 150 pages

Describes the files, data, and use of the Network Common Data Form, or netCDF. NetCDF is an interface to a library of data access programs for storing and retrieving scientific data. In netCDF files, data are represented in a machine-independent form, making it possible to access the data from any workstation on which the netCDF library is installed. NetCDF was developed by Unidata and is available on the CRAY Y-MP8/864.

ODEPACK Reprints, Version 1.0, March 1989, 18 pages

Contains two papers about ODEPACK by Dr. Alan C. Hindmarsh; ODEPACK is a collection of Fortran subprograms that solves the initial value problem for ordinary differential equation (ODE) systems.

SSDLIN: A Collection of Out-of-core Linear Algebra Software, Version 2.0, May 1988, 22 pages

Contains information about using SSDLIN, a collection of out-of-core linear algebra routines, on NCAR's Cray UNICOS computer. The routines are designed to take advantage of the extremely fast data transfer capabilities of the Solid-state Storage Device (SSD). The document includes both matrix subroutines and auxiliary I/O routines that facilitate the storage and retrieval of matrices.

User's Guide to STARPAC: The Standard Time Series and Regression Package (STARPAC Version 2.07), October 1987, 300 pages

Explains how to use STARPAC, a library of Fortran subroutines for statistical data analysis developed by the Statistical Engineering Division of the National Institute for Standards and Technology (formerly the National Bureau of Standards), Boulder, Colorado. Available on NCAR's Cray UNICOS computer.

Graphics

NCAR Graphics

Converting Pre-GKS NCAR Graphics to NCAR Graphics Version 3.00, Version 1.1, April 1990, 43 pages

Provides a guide for converting program units that use the FORTRAN 66 NCAR System Plot Package (NSPP) and the FORTRAN 66 higher-level utilities to program units that use the Graphical Kernel System (GKS) and the FORTRAN 77 higher-level utilities in the Version 3.00 release of NCAR Graphics. This revised version of the document includes a new section on addressing systems, a list of common problems users have encountered during conversion, and an index.

ctrans: NCAR View CGM Translator, August 1989, 24 pages

Describes usage of the ctrans Computer Graphics Metafile (CGM) translator available with Version 3.00 of NCAR Graphics. The document is intended for users familiar with the C programming language and the UNIX operating system.

FILL: A Set of Routines to Fill Polygonal Areas, Version 1.0, May 1982, 11 pages

Summarizes FILL, a set of graphics subroutines used to fill polygonal portions of a plotter frame with parallel lines. The document discusses the use, required access method, and steps involved in resetting various parameters to determine how the filling is done. A set of example programs is included.

GFLASH—A Graphics Instruction Manipulation Package, Version 1.0, March 1989, 9 pages

Discusses a new package of Fortran subroutines that provide a limited picture segmentation capability. GFLASH captures a set of graphics instructions in a dataset and can be used to insert these instructions into any subsequent picture, making it unnecessary to regenerate the instructions. A classic use of this capability is in making movies. GFLASH routines (with one exception) can be used with any Graphical Kernel System package that is level 2A or higher.

A Guide to the Production of Computer-generated Films at NCAR, Version 3.0, January 1991, 20 pages

Gives information on making movies at NCAR, with special emphasis on using the GKS version of NCAR Graphics (Version 3.00). The document gives advice on planning, including defining content, time intervals, and running time, and provides tips on producing the film script and credits. It includes access information to the Text and Graphics System (TAGS) and shows how to test, produce, and edit your movies. The document also contains guidelines for the effective use of color.

Interactive Modification of NCAR Graphics Plots via Macintosh Applications, Version 1.0, November 1990, 11 pages

Reviews and compares four commercial products that convert NCAR Graphics Computer Graphics Metafile (CGM) format to PICT format. Once an NCAR Graphics plot is converted to PICT format, it can be interactively edited using Macintosh tools such as Canvas and Freehand. The resulting plot can then be incorporated in other Macintosh applications, such as Microsoft Word and PageMaker.

NCAR Computer Graphics Metafile Format Reference Guide, Version 1.0, April 1990, 5 pages

Describes the NCAR implementation of the Computer Graphics Metafile (CGM) standard. The NCAR CGM is a private encoding of the Binary Encoding described in the CGM standard defined by the American National Standards Institute (ANSI) and the International Standards Organization (ISO). This reference guide briefly describes record formatting and NCAR datatypes, then provides a list of the CGM standard elements that can be both generated by the NCAR GKS packages and interpreted by the NCAR CGM translator.

NCAR View—A CGM Translation and Manipulation Package (NCAR View Version 3.1), June 1991, 13 pages

Describes NCAR View Version 3.1. NCAR View facilitates the viewing of graphical objects created with NCAR Graphics on UNIX workstations. Includes a list of key concepts, a description of the required workstation environment, examples for interactive and non-interactive use, and instructions for printing output.

**Transferring Binary Metafiles
to VAX/VMS Systems, Version
1.0, November 1988, 5 pages**

Also available online from
anonymous FTP as
[vax.binary.conv](ftp://vax.binary.conv)

Discusses how to transfer binary metafiles to VAX/VMS systems for users of both pre-Computer Graphics Metafile (CGM) NCAR metafiles and NCAR CGM metafiles. Because of operating system differences, metafiles may have to be reformatted after they reach the VAX/VMS system. This document contains instructions on how to obtain executable code through anonymous FTP to perform these and other file transformations.

**The Use of X/Y Coordinates in
NCAR Graphics, Version 1.0,
April 1990, 24 pages**

Provides detailed information about the coordinate systems used in NCAR Graphics. It includes diagrams to explain the window and viewport concepts and contains an example that shows mirror imaging and log scaling. The document describes the routine SET in detail and lists the SET calls done by each utility.

**User's Guide for NCAR
GKS-0A Graphics, Version 2.0,
October 1990, 172 pages**

Describes the Fortran subroutines for a subset of the NCAR Graphical Kernel System (GKS) 0A routines that are most commonly used in conjunction with the NCAR Graphics package utilities. Functions discussed include opening and closing GKS, setting coordinate systems, designating types of graphic and text output, and selecting color representations. Some NCAR Graphics System Plot Package Simulator calls that provide additional functions not found in GKS are also discussed, as well as numerous examples and hints for avoiding common pitfalls.

**Using NCAR Graphics in a
UNIX Environment (NCAR
Graphics—UNIX Version 3.1),
June 1991, 13 pages**

Provides a basic explanation and examples of the steps involved in programming with NCAR Graphics in a UNIX environment: compiling, linking, and running programs that use NCAR Graphics; and viewing the resulting graphics on terminals, workstations, and printers. This document is pertinent to the UNIX Version of NCAR Graphics only.

Documentation Available with the NCAR Graphics Package

Note: The following list contains a subset of the user documentation for the NCAR Graphics Package. NCAR Graphics and these user documents are sold to nonprofit and for-profit groups. Ordering instructions for the software package and the associated documentation appear at the end of this section.

AUTOGRAPH: A Graphing Utility, Version 2.00, August 1987, 213 pages

Describes the utility that enables users to draw graphs with a labeled background and one or more curves.

NCAR Graphics Guide to New Utilities, Version 3.00, October 1989, 508 pages

Describes seven new utilities in NCAR Graphics Version 3.00. Includes new information on using color, a color chart for use with NCAR's Dicomed film recorder, samples of recent scientific applications of the new utilities, and examples of individual utilities. Users may also need the *NCAR Graphics User's Guide, Version 2.00* and *AUTOGRAPH: A Graphing Utility, Version 2.00*, described in this section.

NCAR Graphics User's Guide, Version 2.00, August 1987, 650 pages

Includes steps for converting code from the NCAR System Plot Package to NCAR Graphics, instructions on using the NCAR System Plot Package Simulator (SPPS), and details of using 28 graphics utilities, some of which are superseded by new utilities documented in *NCAR Graphics Guide to New Utilities, Version 3.00*. The Version 2.00 manual features 230 pages of examples.

NCAR Graphics Version 3.1 Update Packet, June 1991, 116 pages

Provides information that supplements other existing NCAR Graphics documents. These other documents provide most of the technical programming information that is essential for using NCAR Graphics effectively.

For information about ordering the GKS NCAR Graphics software package and the associated user documents, call (303) 497-1201 or write

NCAR
SCD/Graphics Distribution
P.O. Box 3000
Boulder, CO 80307-3000

Text and Graphics System

**NCAR Raster Interchange
Format and TAGS Raster
Reference Manual, Draft**
Version 1.1, April 1990, 34 pages

Describes the native and encapsulated NRIF formats and some of the ways they can be used to produce raster output at NCAR. This document also explains the various ways you can define color in NRIF files and tells how NRIF files are mapped on the Dicommed film recorders attached to the Text and Graphics System.

**Text and Graphics System
Reference Manual, Version 2.2,**
August 1991, 50 pages

Describes the Text and Graphics System, explains all TAGS parameters, including ways to customize your output format, and describes special considerations for film output. Appendixes provide hints on using color and instructions for customizing the placement of images in film frames. Modifications included in this version reflect new choices of film media and higher resolution output of color slides, microfilm/fiche, and movies.

**Using the Text and Graphics
System from UNIX and
UNICOS Computers, Version**
2.0, August 1991, 35 pages

Describes TAGS access from UNIX and UNICOS computers and how to process graphics files and ASCII text on black-and-white film, color film, and fiche. This document replaces the alpha and beta test draft versions; it provides examples and explains the most commonly used parameters.

Using the Text and Graphics System via the MASnet/Internet Gateway Server, Version 2.0, August 1991, 33 pages

Describes TAGS access via MIGS and how to process graphics files and ASCII text on black-and-white film, color film, and fiche. This document replaces the alpha and beta text draft versions; it provides examples and explains the most commonly used parameters.

Graphical User Interfaces

Reprint: OSF/Motif User's Guide, Version 1.1, October 1991, 57 pages

Describes OSF/Motif, a user environment based on the X Window System. Gives information on creating and manipulating windows on your screen, using application programs written for the Motif environment, and personalizing your Motif environment.

The X Window System at NCAR, Draft Version 1.0, December 1989, 49 pages

Introduces the X Window system (Version 11, Release 3), including the default NCAR X11 environment, the xterm terminal emulator, and the twm window manager. It also discusses basic terminology and usage on Sun workstations. A few guidelines for tailoring your X11 environment are also included.

UNIX

Elementary UNIX, Draft Version 1.1, January 1990, 19 pages

Explains the fundamentals of UNIX and provides a description of the most important UNIX commands that users of the CRAY Y-MP at NCAR will need to get started computing with UNICOS.

CMS-UNIX Conversion Guide and SCD UNIX Basic Usage Guide, Draft Version 1.0, November 1991, 270 pages

Note: Available in late November 1991

Provides UNIX conversion information for users of the IBM 4381 front-end computer (which runs VM/CMS and AIX/370), including a chapter of commonly used CMS commands and their UNIX replacements. Section II covers the basics of the UNIX operating system, UNIX shells, the vi editor, and e-mail. Section III documents how to access SCD computing resources from the SCD UNIX front-end computer. It includes details about using local commands for submitting jobs to the Cray supercomputers, using the Mass Storage System, obtaining output, and restoring the back-up copy of a file.

Networking and Data Communications

Asynchronous Communications Packages for PC Users, Version 1.0, May 1989, 4 pages

Discusses SCD-supported data communications packages for personal computer (PC) users who use asynchronous communications to access NCAR computing facilities.

Glossary of Networking Terms and Acronyms, Version 1.0, August 1989, 16 pages

Also available online from anonymous FTP as **network.terms**

Provides informal definitions and other useful information about networking terms and acronyms that are common in the NCAR computing environment. This document is also available online via anonymous FTP to [ftp.ucar.edu](ftp://ftp.ucar.edu/docs/networking) in the **docs/networking** directory.

MICROCOM AX/9624c User Documentation, Version 1.0, March 1989, 3 pages

Provides instructions for connecting to the 9600 bps modems that are installed on rotary phone lines at NCAR and documents the correct switch configurations and software settings necessary for communications. Purchasing information for NCAR-compatible 9600 bps modems is also given.

MIGS: MASnet/Internet Gateway Server Reference Manual, Version 2.0, March 1990, 78 pages

Describes MIGS, a combination of hardware and software that allows access to the NCAR Mainframe and Server Network (MASnet) from computers attached to the Internet. MIGS provides an easy way to access the Cray computers, the Text and Graphics System, and the Mass Storage System, as well as other components of the NCAR computing environment. This reference manual describes how to use MIGS from both your local system and from MASnet systems; it documents all parameters and provides examples. Version 2.0 contains significant changes and new material.

MIGS: MASnet/Internet Gateway Server Remote System Administrator's Guide, Draft Version 1.1, August 1988, 25 pages

Describes how to install MIGS at your local site. This document contains information on how to establish security and how to modify the MIGS defaults to meet your local site needs. Special sections cover UNIX and VMS implementation. This document is for use by local MIGS systems administrators, not users. It is a supplement to "MIGS: MASnet/Internet Gateway Server User's Guide."

MIGS: MASnet/Internet Gateway Server User Guide, Version 2.0, February 1991, 26 pages

Contains an introduction to MIGS, instructions for accessing MIGS from the Internet, a table of MIGS verbs and their parameters, and descriptions and examples for each MIGS verb. This version includes descriptions of new SCD-defined verbs. These new MIGS verbs primarily add access to utilities for the Mass Storage System and the status of the CRAY-YMP8/864 (shavano), as well as status of the MIGS gateway. Also includes the "MIGS Quick Reference."

UNIX Mail Hints, Version 1.0, May 1988, 7 pages

Includes information on saving and replying to messages, forwarding mail, using aliases, editing and sending files, and using set commands to alter your mail environment. The document also contains a quick reference guide of mail commands.

Using FTP for File Transfer at NCAR, Version 1.0, April 1989, 17 pages

Covers basic FTP concepts, tells how to establish an Internet connection via FTP, and discusses subcommands for file transfer. This document also shows how to use "anonymous FTP" to make information needed by a widespread audience readily available.

Using the NCAR E-mail System, Version 1.0, March 1989, 22 pages

Also available online from anonymous FTP as **email**

Discusses sending e-mail from and to NCAR via SPAN (Space Physics Analysis Network), BITNET (Because It's Time Network), UUCP (UNIX-to-UNIX Copy), CSNET (Computer and Science Network), and Telemail/Omnet. This document covers basic address syntax and describes how to use the query/change software to look up addresses. It is also available online via anonymous FTP to ftp.ucar.edu in the **docs/networking** directory.

Using the NCAR Internet Remote Job Entry System, Version 4.0, February 1991, 54 pages

Also available online from anonymous FTP as **irje**

Explains how university users can use IRJE to submit jobs directly from their local host computers to the Cray computers, the Mass Storage System (MSS), the Text and Graphics System (TAGS), and the laser printers at NCAR. Changes documented in this version are the addition of the data format parameter, new parameters for high-quality color film output via TAGS, and new UNICOS examples. This document is also available online via anonymous FTP to ftp.ucar.edu in the **docs/networking** directory. Also includes the "IRJE Quick Reference."

Using vttool and vtem, Version 1.1, April 1990, 9 pages

Describes how **vttool** can be used in conjunction with **vtem** to provide vt100 terminal emulation from within the SunView window environment. **Vtem** is a vt100 terminal emulator based on the entry in the termcap database (/etc/termcap). **Vttool** maps mouse-driven function keys to ASCII sequences to be used by **vtem**. **Vttool's** most valuable purpose is for those who want to communicate via non-Ethernet media, such as modems or PACX lines to the IBM 4381 (IO) front-end computer or other NCAR systems.

Additional Topics

**Acronyms and Terms
Frequently Used in the SCD
Computing Environment,**
Version 1.0, November 1988,
12 pages

Also available online from
anonymous FTP as **acronyms**

Contains the most frequently used acronyms and terms in use in the SCD computing environment. Entries are listed alphabetically. An appendix that discusses abbreviations for commonly used computing units is included. This document is also available online via anonymous FTP to ftp.ucar.edu in the **docs/other** directory.

**Charges for SCD Computing
Resources, Version 7.0 , January
1991, 18 pages**

Also available online from
anonymous FTP as **charges.gau**

Provides the charging formulas that are used to compute General Accounting Unit (GAU) charges for using the computing resources in SCD. This document contains the charging formulas for the CRAY Y-MP8/864 computer (shavano), the IBM 4381 (IO) computer, the Mass Storage System (MSS), the Text and Graphics System (TAGS), and Xerox 4050 laser printer output. This document is also available online via anonymous FTP to ftp.ucar.edu in the **docs/other** directory.

Data Availability at NCAR,
June 1989, 45 pages

Summarizes the datasets available from the SCD Data Support Section. Data can be copied on tape at cost, or they can be used online at NCAR by those who have an NCAR computing project number. Datasets include daily analyses, geophysical data, cloud data, climatologies, paleoclimate data, and many other types of data for use in numerical experiments in the atmospheric and oceanic sciences. Additional references are cited.

**Data Sets for Meteorological
Research, July 1975, 194 pages**

Contains information about various datasets that are available for meteorological and oceanographic research and gives basic information about the data or types of data. A list of addresses and a bibliography in the back of the manual provide sources of additional information.

Anonymous FTP

Documents Available via Anonymous FTP

Text-only versions of SCD UserDocs are available on anonymous FTP from the computer called ftp.ucar.edu. The **docs** directory contains subdirectories (categories) in which the documents can be found. Below is a listing of these documents by subdirectory within the **docs** directory. Instructions on obtaining these files follow the listing.

docs/

README

List of SCD documentation files contained in **docs** subdirectory

catalog/

userdoc.catalog

User Documentation Catalog, latest version

orderform.catalog

Order form for SCD documents

intro/

No files in this category at this time

cray/

io.buffersize

"How to size your I/O buffers"

mss/

msinfo

Description of the MSINFO Batch Command File (how to obtain batch listings on the Mass Storage System)

software/

fishpak

FISHPAK: A Package of Fortran Subprograms for the Solution of Separable Elliptic Partial Differential Equations, Version 2.0, March 1990

graphics/

vax.binary.conv

Transferring Binary Metafiles to VAX/VMS Systems, Version 1.0, November 1988

unix/

sed

Conversion of EDITOR commands using sed, May 1990

networking/

network.terms

Glossary of Networking Terms and Acronyms, Version 1.0, August 1989

irje

Using the NCAR Internet Remote Job Entry System, Version 4.0, February 1991

email

Using the NCAR E-mail System, Version 1.0, March 1989

index89

1989 index of *SCD Computing News* articles

index90

1990 index of *SCD Computing News* articles

scdug/

scdug.mon

Reports on the SCD User's Group meeting for the indicated month, where "*mon*" indicates the month (for example, scdug.feb).

other/

acronyms

Acronyms and Terms Frequently Used in the SCD Computing Environment, Version 1.0, November 1988

charges.gau

Charges for SCD Computing Resources, Version 7.0, January 1991

refs.consult

List of all reference materials available in the User Reference Section of the Mesa Lab Consulting Office (Room 17)

op.schedule

Current Operations schedule of major NCAR computers

Obtaining Documents via Anonymous FTP

To obtain copies of online documents, follow the steps below.

1. From your local computer connected to the Internet, type:

```
ftp ftp.ucar.edu
```

2. When prompted for a logon name, type:

```
anonymous
```

Note: If your local computer is a Digital Equipment VAX running VMS, you may need to type anonymous with quotes:

```
"anonymous"
```

3. Enter your login id at the password prompt and wait for the "ftp" prompt.

- a. If you're examining docs for the first time, you may obtain a README file with a list of the documentation categories (subdirectories) currently available by typing:

```
cd docs
get README
quit
```

You can read the README file using your own system tools.

- b. If you know the subdirectory you want, you can use the ls command within directories to list the contents.
4. To transfer a file to your present working directory on your local computer, change directories to the desired subdirectory of docs and use the get command. For example:

```
cd cray
get filename
```

where *filename* is the name of the file you want to transfer. If your local computer already has a file with a name identical to the one you want to transfer, your existing file will be replaced with the new file. To give a file a new name on your local computer, type:

```
get filename newfilename
```

5. To terminate the anonymous FTP session, type:

```
quit
```

Acronyms and Terms

Computing

ASCII	American Standard Code for Information Interchange
COS	Cray Operating System
Dicomed	Online graphic recorder used at NCAR for producing graphical output on various sizes of film
FFT	Fast Fourier Transform
GKS	Graphical Kernel System
EXEC	Executable program on the IBM 4381 (IO) front-end computer
IMSL	International Mathematical and Statistical Library
IRJE	Internet Remote Job Entry
MASnet	Mainframe And Server Network
MIGS	MASnet/Internet Gateway Server
MSS	Mass Storage System at NCAR
NAG	Numerical Algorithms Group
PACX	Private Automatic Computer Exchange
SAS	Statistical Analysis System
SLATEC	Software library developed by Sandia National Laboratory, Los Alamos National Laboratory, and the Air Force Weapons Laboratory Technical Exchange Committee
SMTP	Simple Mail Transfer Protocol
SPPS	System Plot Package Simulator, part of NCAR Graphics
TAGS	Text and Graphics System
TBM	TeraBit Memory, the previous mass storage system at NCAR
UNICOS	UNIX-based Cray Operating System
VM/CMS	Virtual Machine/Conversational Monitor System
VM/SP	Virtual Machine/System Product

Organizations

ACM	Association for Computing Machinery
ECMWF	European Centre for Medium-range Weather Forecasts
EPA	Environmental Protection Agency
NCAR	National Center for Atmospheric Research
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