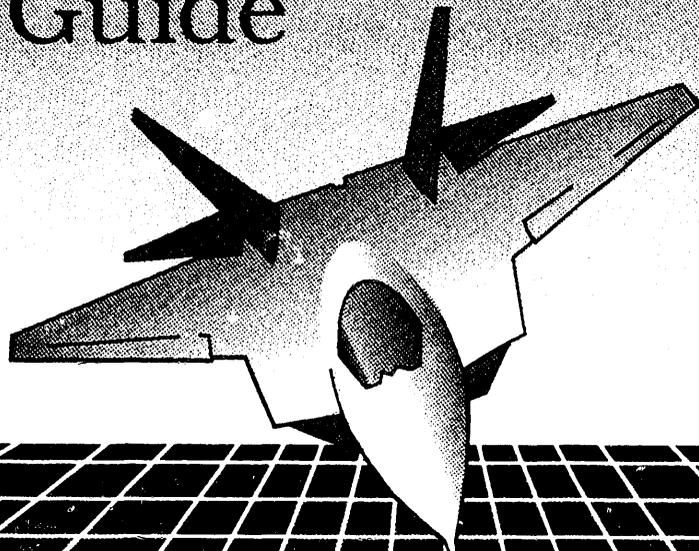


● CMS Preprocessing Subsystem User's Guide



Prepared for the U.S. Air Force
under a Related Services Agreement
with the U.S. Department of Energy
Contract DE-AC06-76RLO 1830

DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

CMS PREPROCESSING SUBSYSTEM USER'S GUIDE

Software Version 2.0

December 1993

B. T. Didier
J. D. Gash
F. L. Greitzer
S. L. Havre
J. V. Ramsdell
C. R. Turney

Prepared for
the U.S. Air Force
under a Related Services Agreement
with the U.S. Department of Energy
under Contract DE-AC06-76RLO 1830

Pacific Northwest Laboratory
Operated for the U.S. Department of Energy
by Battelle Memorial Institute

MASTER

ds
DISTRIBUTION OF THIS DOCUMENT IS UNLIMITED

DISCLAIMER

This report was prepared as an account of work sponsored by an agency of the United States Government. Neither the United States Government nor any agency thereof, nor Battelle Memorial Institute, nor any of their employees, makes any warranty, expressed or implied, or assumes any legal liability or responsibility for the accuracy, completeness, or usefulness of any information, apparatus, product, or process disclosed, or represents that its use would not infringe privately owned rights. Reference herein to any specific commercial product, process, or service by trade name, trademark, manufacturer, or otherwise does not necessarily constitute or imply its endorsement, recommendation, or favoring by the United States Government or any agency thereof, or Battelle Memorial Institute. The views and opinions of authors expressed herein do not necessarily state or reflect those of the United States Government or any agency thereof.

PACIFIC NORTHWEST LABORATORY
operated by
BATTELLE MEMORIAL INSTITUTE
for the
UNITED STATES DEPARTMENT OF ENERGY
under Contract DE-AC06-76RLO 1830

Printed in the United States of America

Available to DOE and DOE contractors from the
Office of Scientific and Technical Information, P.O. Box 62, Oak Ridge, TN 37831;
prices available from (615) 576-8401. FTS 626-8401.

Available to the public from the National Technical Information Service,
U.S. Department of Commerce, 5285 Port Royal Rd., Springfield, VA 22161

Approved for public release; distribution is unlimited and reproduction is authorized.

ACKNOWLEDGMENTS

The program staff would like to thank the following persons for their contributions to this document: N. D. Foote for her editing skills and M. L. Petersen for her excellent cover design.

SUMMARY

The Common Mapping Standard (CMS) Data Production System (CDPS) produces and distributes CMS data in compliance with the *Common Mapping Standard Interface Control Document*. CDPS is composed of two subsystems, the CMS Preprocessing Subsystem (CPS) and the CMS Distribution Subsystem (CDS). This guide describes the operation of CPS.

CPS is responsible for the management of source data and the production of CMS data from source data. The CPS system was developed for use on a workstation running Ultrix 4.2, the X Window System Version X11R4, and motif Version 1.1. This subsystem is organized into four major functional groups and supports production of CMS data from source chart, indose, and elevation data products.

CONTENTS

Summary	v
1 Introduction	1-1
1.1 CPS Description	1-1
1.2 About the CPS User's Guide	1-1
1.2.1 References	1-3
1.2.2 Bibliography	1-3
2 Using CPS	2-1
2.1 Basic X Windows Concepts	2-1
2.1.1 Main Interface Components	2-1
2.2 Overview of CPS	2-8
2.2.1 CPS Executive	2-8
2.2.2 Manage Source Data	2-10
2.2.3 Manage CMS Data Preprocessing	2-10
2.2.4 CPS System Utilities	2-10
2.3 Common Geographic Display Functions	2-10
2.3.1 System Modes	2-12
2.3.2 Coverage	2-12
2.3.3 Annotation	2-14
2.3.4 Default Areas	2-17
2.4 Examples of Screen Displays in Color	2-19
3 Managing Source Data (Source Data Menu)	3-1
3.1 Purpose	3-1
3.2 Source Data Menu	3-1
3.3 Scan Media	3-1
3.3.1 Reserving/Freeing a Device	3-2
3.3.2 Scanning Media	3-3
3.4 View Geographic Coverage	3-6
3.5 View Media Log	3-9
4 Managing CMS Data Preprocessing (Task Menu)	4-1
4.1 Purpose	4-1
4.2 Task Menu	4-1
4.3 Defining Tasks	4-2
4.3.1 Define by Geographic	4-2
4.3.2 Define by Media	4-6
4.3.3 Define by Coordinates	4-8
4.4 Task Execution	4-11
5 System Utilities (Utilities Menu)	5-1
5.1 Purpose	5-1
5.2 Utilities Menu	5-1
5.3 View System Configuration File	5-1

5.4 Backup/Restore System Files	5-3
5.5 Rebuild Source Coverage Catalog Files	5-6
5.6 Import CDS Processed Data Catalog Files	5-8
5.7 Export Source Coverage Catalog Files	5-8
Appendix A: System Messages	A-1
Appendix B: Glossary	B-1

HOW-TO BOXES

Resize a window	2-3
Iconify/Redisplay a window	2-4
Zoom In/Zoom Out	2-13
Define a default area	2-18
View a default area without applying default areas	2-18
Delete a default area	2-19
Reserve/Free/Cancel a device(s) displayed in Scan Media window	3-3
Scan a tape or CD-ROM in a RESERVED device(s)	3-4
Verify scanned media	3-6
Define a task by geographic features	4-5
Define a task by media	4-9
Define a task by coordinates	4-10
Backup critical CPS data files	5-4
Restore critical CPS files to the current system execution path	5-5
Rebuild SCC	5-7

FIGURES

2-1	Main Features of a Window	2-2
2-2	Paned Window	2-3
2-3	Toggle Button and Pushbutton	2-5
2-4	Radio Buttons	2-6
2-5	Option Menu Button	2-6
2-6	Example of a Default Pushbutton	2-7
2-7	Text Area Examples	2-8
2-8	CPS Executive	2-8
2-9	System Message History Log Window	2-9
2-10	Geographic Display	2-11
2-11	Mode Pull-Down Menu	2-12
2-12	Coverage Pull-Down Menu	2-13
2-13	Annotation Pull-Down Menu	2-14
2-14	Continuous Lat Lon Window	2-15
2-15	Continuous Frame Number Window	2-15
2-16	Pan Map Display Window	2-15
2-17	View Media SCC Contributing Frames	2-16
2-18	Contributing Frames Output to Geographic Window	2-17
2-19	Default Areas Window	2-17
2-20	Default Area Pull-Down Menu.	2-19
2-21	CPS Executive, Message Log, and Configuration Viewer	2-21
2-22	Scan Media and Media Log Directory	2-22
2-23	Define by Geographic	2-23
2-24	Task Execution and History	2-24
3-1	Source Data Menu	3-1
3-2	Scan Media Window	3-2
3-3	Scan Verify Window	3-5
3-4	Source Coverage Window	3-7
3-5	Products Window	3-8
3-6	Media Log Directory	3-10
3-7	Search Media List Dialog Box	3-10
3-8	Media Log Entry	3-11
4-1	Task Menu for Manage CMS Data Preprocessing	4-1
4-2	Task Definition by Geographic Window	4-3
4-3	Define Task Mode Area of Geographic Window	4-4
4-4	Zoom Mode Area of Geographic Window	4-4
4-5	Frame Contributors Mode Area of Geographic Window	4-4
4-6	Current Selected Frames Window	4-4

FIGURES (Contd)

4-7	Task Definition by Media Window	4-7
4-8	Search Media List Dialog Box	4-7
4-9	Create Task Dialog Box	4-8
4-10	Task Definition by Coordinates Window	4-9
4-11	Task Log Directory Window	4-12
4-12	Task Log Entry Window for a Defined Task	4-12
4-13	Task Log Entry Window for an Executing Task	4-13
4-14	Execution Dialog Box Example	4-14
4-15	Task Contributors	4-15
4-16	Task Log History Window	4-15
5-1	System Utilities Menu	5-1
5-2	Configuration Viewer Window	5-2
5-3	Devices Option Menu	5-3
5-4	Directories Option Menu	5-3
5-5	Backup/Restore Utility Window	5-4
5-6	Rebuild SCC Dialog Window	5-7
A-1	System Message History Log Window	A-1

TABLES

1-1	Products Supported by CPS	1-1
2-1	CPS Executive: Displayed Message Types	2-9
A-1	System Message Types	A-1

1 Introduction

1.1 CPS Description

The Common Mapping Standard (CMS) Data Production System (CDPS) produces and distributes CMS data in compliance with the *Common Mapping Standard Interface Control Document, Revision 2.2* (see Section 1.2.1). Historically, tactical mission planning systems have been the primary clients of CMS data. CDPS is composed of two subsystems, the CMS Preprocessing Subsystem (CPS) and the CMS Distribution Subsystem (CDS). This guide describes the operation of CPS. References and other resources used for the preparation of this guide are listed at the end of this section.

CPS is responsible for the management of source data and the production of CMS data from source data. The CPS system was developed for use on a workstation running Ultrix 4.2, the X Window System Version X11R4, and Motif Version 1.1. This subsystem is organized into four major functional groups:

- 1) CPS Executive
- 2) Manage Source Data
- 3) Manage CMS Data Preprocessing
- 4) CPS System Utilities

CPS supports the production of CMS data from the source chart, image, and elevation data products listed in Table 1-1.

Table 1-1. Products Supported by CPS

GNC	Global Navigation Chart
JNC	Jet Navigation Chart
ONC	Operational Navigation Chart
TPC	Tactical Pilotage Chart
JGA	Joint Operations Graphics - Air
TLM	Topographic Line Map
ADRI	ARC Digital Raster Imagery (10 meters)
DTED	Digital Terrain Elevation Data (Level 1)
LFC	Low Flying Chart
TCM	TLM (100 meters)
ADRI5	ARC Digital Raster Imagery (5 meters)

1.2 About the CPS User's Guide

This guide describes the operation of the CMS Preprocessing Subsystem. Four major sections in addition to this section comprise this guide. Section 2 provides definitions of X Windows terminology and an overview of CPS with details on common features shared across major functional areas. Section 3 describes the Manage Source Data function, that is used to build and view databases. Section 4 covers CMS data preprocessing, the module that defines and manages preprocessing tasks. Section 5 reviews CPS system utilities that assist in keeping current the CPS system data.

Appendix A describes the types of system messages used by CPS. Appendix B lists acronyms and terms used in this guide, together with definitions of commonly used terms.

Two special features are provided in this user's guide: how-to boxes and hint boxes. How-to boxes give simple, step-by-step instructions for most operations described in this guide. To help distinguish these instructions, how-to boxes are double outlined. A list of the how-to boxes and their page numbers immediately follows the Contents of this guide.

Hint boxes provide helpful hints and information on the operation of CPS. Hints are italicized inside an outlined box and appear on the left side of the page. (See the following hint box for notation conventions.)

Hint About Notation Conventions:

This guide uses the following conventions in referring to objects displayed on the screen:

Button Name	<i>boxed and bold-faced serif</i>
WINDOW NAME	<i>small caps sans serif</i>
Menu Item	<i>bold-faced serif</i>
system message	<i>bold-faced sans serif</i>
STATE (ON, IDLE, USABLE)	<i>all caps serif</i>
<i>Note: Important text</i>	<i>bold, italics serif</i>

In this guide, all button names are **boxed** like this and bolded so you can easily identify them; menu item names are denoted using bold-faced type. System messages appear on the screen in a font type that looks like this: **415: A: Message Text**. (The number that appears

at the beginning is a predefined message number, the letter following it is a symbol for the kind of message, and text following the second colon is the actual message text.) Status indications (such as OFF, SCANNING, or ALLOCATED) are shown as caps in the text serif typeface. Notes are in a bolded, italicized serif font and are usually boxed.

System managers will want to consult the *System Administrator's Guide to CDPS* that is intended for individuals with responsibility for maintaining the system software and hardware configuration for both CPS and CDS.

1.2.1 Reference

CMS Distribution Subsystem User's Guide. 1993. PNL-8929. Pacific Northwest Laboratory, Richland, Washington.

U.S. Air Force. 1993. *The Common Mapping Standard Interface Control Document, ESD-82155046A004 Revision 2.2*. ESC/YVD, Hanscom Air Force Base, Massachusetts.

1.2.2 Bibliography

Quercia, V. and O'Reilly, T. 1992. *The Definitive Guides to the X Window System, Volume Three, X Window System User's Guide, OSF/Motif Edition*. O'Reilly & Associates, Inc., Sebastopol, California.

Software Requirements Specification for the CMS Pre-Processor Subsystem (DRAFT), Revision 2. Pacific Northwest Laboratory, Richland, Washington.

System Administrator's Guide to CDPS, (DRAFT). Pacific Northwest Laboratory, Richland, Washington.

2 Using CPS

2.1 Basic X Windows Concepts

CPS is a window-oriented application that was developed using X Windows and the OSF/Motif toolkit. X Windows is a network-based interface to a computer's operating system using graphical images to represent data in a user-friendly manner. The purpose of this section is to provide a basic introduction to X Windows concepts.

Note: It is strongly recommended that you understand these concepts before reading the rest of this manual and operating CPS.

If you have prior experience working in the X windows environment, you may wish to skip this section.

X Windows concepts and terms introduced in this section are printed in *italics*, and are defined in the glossary (Appendix B).

2.1.1 Main Interface Components

A graphical interface takes advantage of three basic components of a computer: the monitor for relaying information via *windows* displayed on the screen; the *mouse* for selecting items on the screen; and the *keyboard* for entering data.

2.1.1.1 Windows

The computer screen or monitor is commonly called the *root window*, or in other windowing systems, the desk top. The *root window* can be thought of as the parent that takes care of the graphical needs of its children; CPS and CDS are such software applications. An application needs at least one window to relay or request information to communicate directly with you. A window becomes the active (or in use) window when the mouse is clicked within the window boundaries. Figure 2-1 indicates the major features of a window.

Typically, each window displays a window border. This border supports the following common window functions: resizing, repositioning, iconifying, raising/lowering, and removing. These functions are accessed through the window menu located in the upper left-hand corner. To access the window menu, click on the window menu button, a square button containing a raised, three-dimensional minus sign. From this menu you can *iconify* the window, change the window size, shuffle the window (raise/lower) to the front or rear of the screen, and, in some instances, exit the application associated with the window.

To the right of the window menu is the window title. To the right of the title is the iconify button, a square button with a small, raised three-dimensional square inside. This button has the

same functionality as the **Minimize** window menu item. That is, clicking on the iconify button reduces the window to an *icon* (a small graphical image representing an object). The button at the far right on the window border is the **Maximize** window menu item. This square button (with a recessed three-dimensional square inside) is used to resize the window to fill the entire screen area. In this example, the area within the window border between the window menu button and the minimize button is used for the title area.

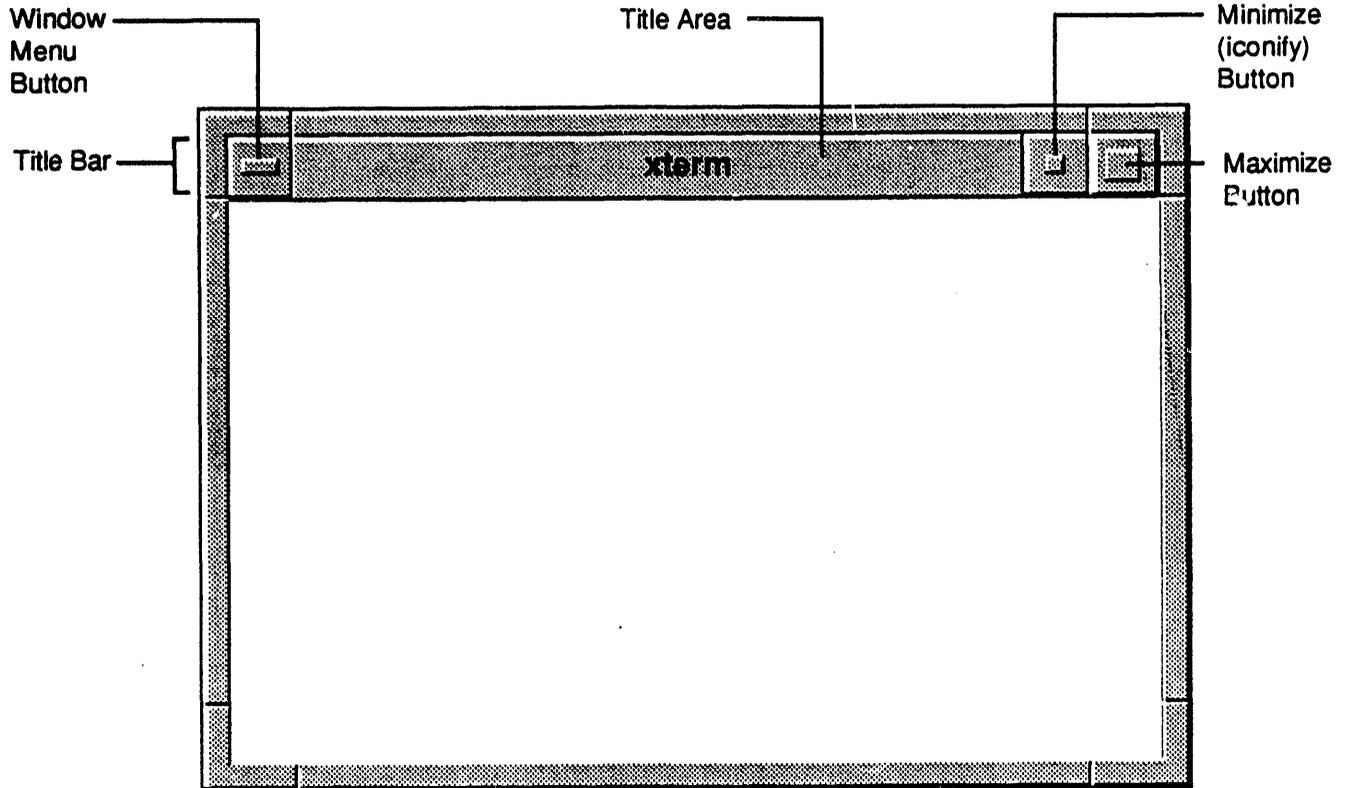


Figure 2-1. Main Features of a Window

The X Windows environment provides four types of windows: (a) Standard input/output window — used for displaying and prompting; (b) Application modal — a window requiring you to respond before doing anything else within the application, but not requiring a response from other applications; (c) System modal — a window demanding user response before any application can continue; (d) Paned window — a special case of the standard window in which a number of horizontal bars partition the window into sections.

In the paned window in Figure 2-2, the horizontal partition bars divide the allocation of display area between separate sections of the window without changing the overall size of the window. For example, if a window contains two lists in separate panes, you can adjust the separating bar so that the top list gets more (or all) of the window area. To adjust a pane, click and drag (up or down) one of the small buttons located on the left or right side of the separating line.

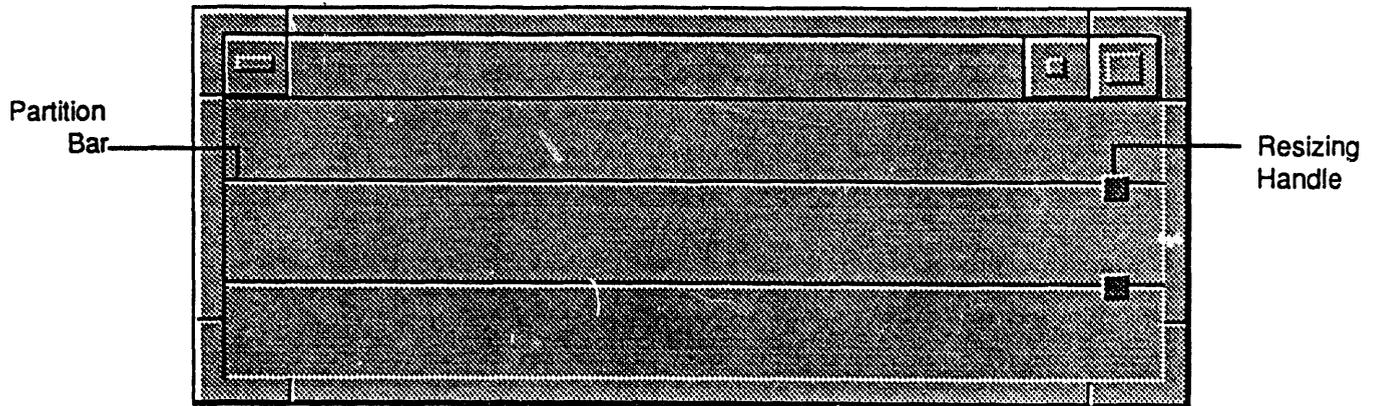


Figure 2-2. Paned Window

To Resize a window:

- 1- Position the mouse pointer over the border of the window. (Notice the pointer changes into a resize pointer.)
- 2- Click and drag the mouse (left mouse button). As you drag the mouse, a window outline is drawn showing the new size.

When the window outline reaches the desired size, release the left mouse button and the window is redrawn to match the outlined box. (Another method of resizing a window is to select the **Size** menu item in the window menu, use the mouse to stretch or shrink the window, and then press the left mouse button.)

2.1.1.2 The Mouse

The *mouse* is the primary means of interacting with software applications. The mouse controls the *pointer*, the screen indicator that allows you to select objects within a display.

The mouse supplied with the system has three buttons that are used to convey responses to the application while the mouse pointer is positioned over an object on the screen. Each of the mouse buttons can invoke different responses from the application. The buttons are referred to as the left, middle, and right buttons or as buttons one, two, and three, respectively. The left mouse button is used mainly for selecting items (buttons, menu items, or windows) or positioning the cursor within a text input area. The middle and right buttons are not currently used by CPS.

Hint About Repositioning Obscured Windows:

X Windows provides various solutions to correct the problem of a window that is obscuring (covering) another window on the screen:

You can move it to another location on the screen by clicking on the window title and dragging the window to the new location. Alternatively, you can click on the border of a partially obscured window to bring that window to the front.

*Or, if you repeatedly select the **Lower** menu item for the top window that is obscuring another window, this will shuffle the obscuring window lower until it no longer covers the desired window. Finally, if you do not need to interact with the obscuring window, you can iconify it (see the following how-to box).*

To Iconify/Redisplay a window:

- 1- Click on the iconify button in the upper right-hand corner of the menu or select the **Minimize** window menu item.

This causes the window to shrink into a small graphical object (icon).

- 2- The iconified window can be redisplayed by positioning the pointer over the icon and either double-clicking the left mouse button or clicking it once to bring up the window menu and then selecting the **Restore** window menu item.

The three basic operations performed with the mouse in a window system are *point*, *click*, and *drag*. Pointing is defined as moving the mouse to position the pointer over the desired object or text. Clicking is the act of depressing and releasing the left mouse button. Dragging is accomplished by holding down the left mouse button and moving the mouse. Dragging is used to highlight text for editing or for drawing, for example, editing a description field or drawing selection boxes in the geographic display.

A variation of clicking is the *double-click*. Double-clicking is used as a shortcut in X Windows to redisplay windows that have been iconified or in selecting areas of text. To double-click on an icon or a text area, position the pointer over the subject and rapidly press and release the left mouse button two times.

2.1.1.3 The Keyboard

The keyboard is like other computer keyboards, but in X Windows the keyboard can perform the same operations as the mouse. Special keys or combinations of keys allow you to move the

pointer and simulate mouse clicks. The use of the keyboard to replace the mouse is beyond the scope of this discussion; for more information refer to *The Definitive Guides to the X Window System*.

2.1.1.4 Interacting with Objects in X Windows

Applications written using X Windows provide various methods to enter data, to invoke and respond to action. The methods of interacting with an application include clicking/dragging, pressing buttons, selecting items from lists or menu, and entering text. The objects within a display are commonly referred to as widgets. These widgets can be: a raised rectangular button appearing to be three-dimensional; a toggle button which turns ON or OFF a defined state when it is selected; a menu that appears when a button is selected; or a list of items.

A *button* (commonly known as a pushbutton because it is pressed by clicking on it with the mouse) is generally associated with a single action. For example, a button labeled **Exit** closes the window when it is pressed. See the illustration in Figure 2-2. A pushbutton can be identified by its three-dimensional raised rectangular appearance. In addition, a pushbutton can be described as a default action; that is, when the return key on the keyboard is pressed, the button is activated, as if you had selected it using the mouse. A default pushbutton looks like a round pushbutton with an additional inverted border surrounding it.

A *toggle button* (Figure 2-3), as its name implies, is used to set a state of either ON or OFF and its appearance is a small square pushbutton with a text label to the right. To set or turn on a toggle button, click on either the small button or its associated text. When set, this toggle button will change color (the color is application dependent). To reset or turn off a toggle button, reselect the button with the mouse. An example of a toggle button is the **Product** button in the geographic displays for both CPS and CDS.

A button similar to the toggle button is the *radio button*, represented by a raised, three-dimensional diamond. Radio buttons, as represented in Figure 2-4, are always found in groups of two or more because they are mutually exclusive: that is, only one button in the group can be set to ON at any time. The radio button is set like the toggle button; click on the diamond or the text and the diamond changes color. Unlike the toggle button, the radio button cannot be reset or turned off by reselection. The current selection can be changed only by selecting another radio button from the group. For example, in the CPS and CDS geographic displays, radio buttons are used for selecting the type of selection box to draw (for example, to add or remove).

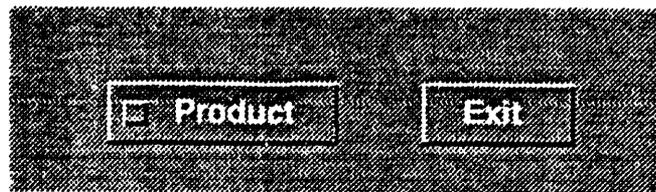


Figure 2-3. Toggle Button and Pushbutton

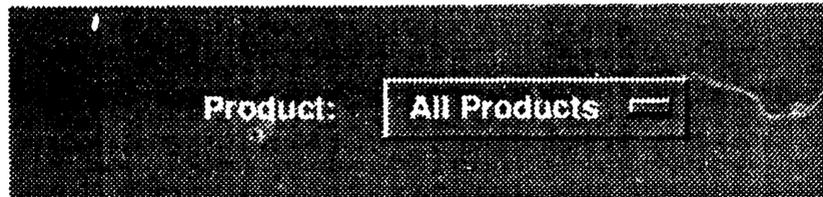


Figure 2-4. Radio Buttons

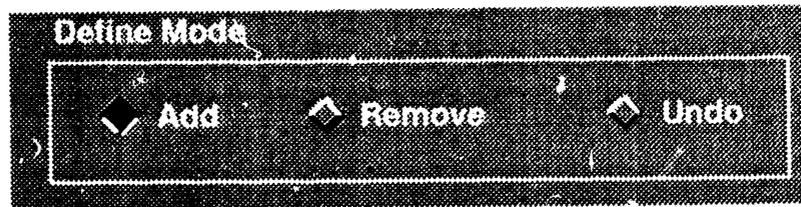


Figure 2-5. Option Menu Button

An *option menu* button looks just like a pushbutton except for its raised, three-dimensional minus sign to the right of the button text. (See illustration, Figure 2-5.) An option menu presents the user with a list of options (menu items). Typically, option menus are used to set a state for sorting/searching, for instance in the CPS display media log for searching on products.

Other types of menus can be found in X Window applications, including pull-down, pop-up, and cascade menus. A *pull-down* menu is activated by pressing down on the left mouse button and dragging the pointer to highlight or outline the desired selection. *Pull-down* menus are used to organize application functionality and to conserve screen space. For example, in CPS and CDS the geographic window contains a row (menu bar) of pull-down menus for activating different display options and functions. A *pop-up* menu is displayed when the right mouse button is depressed over an object. A *cascade* menu is a pull-down menu within another pull-down menu. Pop-up and cascade menus are not used in CDPS at this time. For more information refer to *The Definitive Guides to the X Window System*.

Because of the limited size of monitors, many applications use scroll bars for data that take too much space or exceed a display's dimensions; for example, large amounts of text or long selection lists. Refer to the example in Figure 2-6. A scroll bar can either be oriented vertically or horizontally depending on whether or not the width or height of the bounding window is exceeded. Within CDPS, scroll bars are used mainly for displaying long lists of items.

When selecting items from a list, position the pointer over the desired item in the list and click. The selected item becomes highlighted to reflect your selection and then can be acted on. If a list or text area contains a scroll bar, this means items are present within the list/text area that you cannot see. To view the hidden areas, choose the desired direction and click on the appropriate incremental arrow at one end of the scroll bar. You can also scroll/view the hidden items by either clicking and dragging the slider bar between the two incremental arrows or by clicking within the scrolling region to move quickly through the list.

CPS Task Definition by Media				
Media Locator	Stock Number	Edm	Scan Date	
JNC CDROM 00001	ARCI JNCX0077	001	Jan 22, 1993	
JNC CDROM 00002	ARCI JNCX0104	001	Jan 22, 1993	
JNC CDROM 00003	ARCI JNCX0061	001	Jan 22, 1993	
JNC CDROM 00004	ARCI JNCX0043	001	Jan 22, 1993	
JNC CDROM 00005	ARCI JNCX0046	001	Jan 22, 1993	
JNC CDROM 00006	ARCI JNCX0038	001	Jan 22, 1993	
JNC CDROM 00007	ARCI JNCX0042	001	Jan 22, 1993	
JNC CDROM 00008	ARCI JNCX0019	001	Jan 22, 1993	
JNC CDROM 00009	ARCI JNCX0015	001	Jan 22, 1993	
JNC CDROM 00010	ARCI JNCX0017	001	Jan 26, 1993	
JNC CDROM 00011	ARCI JNCX0087	001	Feb 04, 1993	
JNC CDROM 00012	ARCI JNCX0073	001	Feb 04, 1993	
JNC CDROM 00013	ARCI JNCX0057	001	Feb 04, 1993	
JNC CDROM 00014	ARCI JNCX0101	001	Feb 04, 1993	
JNC CDROM 00015	ARCI JNCX0040	001	Feb 04, 1993	

Product: All Products

Task

Figure 2-6. Example of a Default Pushbutton

Note: Generally, the smaller the slider bar (rectangle between the incremental arrows showing current location within the list) the greater amount of data/text is hidden from view. You can resize the window to expand the scrolled area and display more of the hidden text.

Text areas are used to allow you to enter data directly to the application from the keyboard. To enter data into a text area, position the pointer in the displayed text area and click the left mouse button. The pointer will change into a cursor shaped like an I-bar and text can be entered. To modify existing text, position the cursor at the point of insertion and click the left mouse button. The pointer will change into the I-bar cursor. Sections of text can be removed or replaced by clicking and dragging the pointer across the desired text, deleting it, and then entering the new text. A text area can be identified by its three-dimensional, recessed appearance. Text areas, such as those on the TASK DEFINITION BY COORDINATES window, are shown in the Figure 2-7 example.



Figure 2-7. Text Area Examples

2.2 Overview of CPS

This section provides an explanation of CPS and how it works within X Windows/Motif. Included is a description of the CPS Executive, and brief descriptions of the Manage Source Data module, the Manage CMS Data Preprocessing module, and the system utilities.

2.2.1 CPS Executive

The first display on the screen after you log into CPS is the CPS Executive window. The purpose of this window is to provide access to the three CPS modules using Source Data, Task, and Utilities pull-down menus. The CPS EXECUTIVE occupies the top section of the screen (see Figure 2-8) and is present throughout the CPS session. The top line shows the date and time at the left and right sides, respectively. When CPS is operating in *degraded mode*, a label indicating this appears in the center of the top line. The term degraded mode means that no socket connection is present between CPS and CDS for the transfer of process frames. An 8mm tape is used to save these frames for later achival onto CDS. The label letters, Degraded Mode, and the box outline are displayed in yellow.

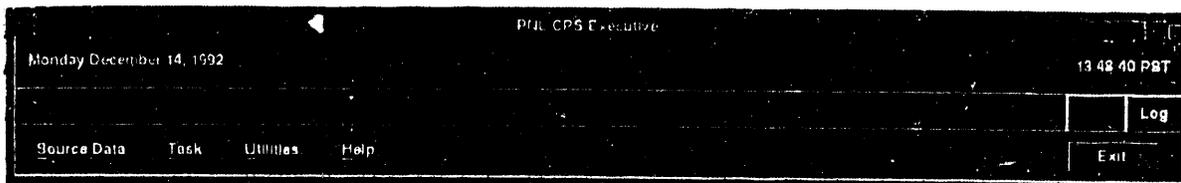


Figure 2-8. CPS Executive

Line 2 of this menu displays system messages. Color coding defines the type of message displayed, as shown in Table 2-1. Appendix A provides an additional description of message types.

Table 2-1. CPS Executive: Displayed Message Types

<u>Error Code</u>	<u>Type of Message</u>	<u>Color</u>
A	Alerts	white
W	Warnings	yellow
E	Errors	red
F	Fatal Errors	red

Note: Diagnostic messages are not displayed on the CPS Executive system message line. However, such messages are displayed in the SYSTEM MESSAGE HISTORY LOG window, Figure 2.9.

System messages are just one of many feedback mechanisms set up in CPS to communicate with you. Some others, described in various sections of this guide, include:

- Dialog windows
- Updates to active windows
- Displayed messages within active windows.

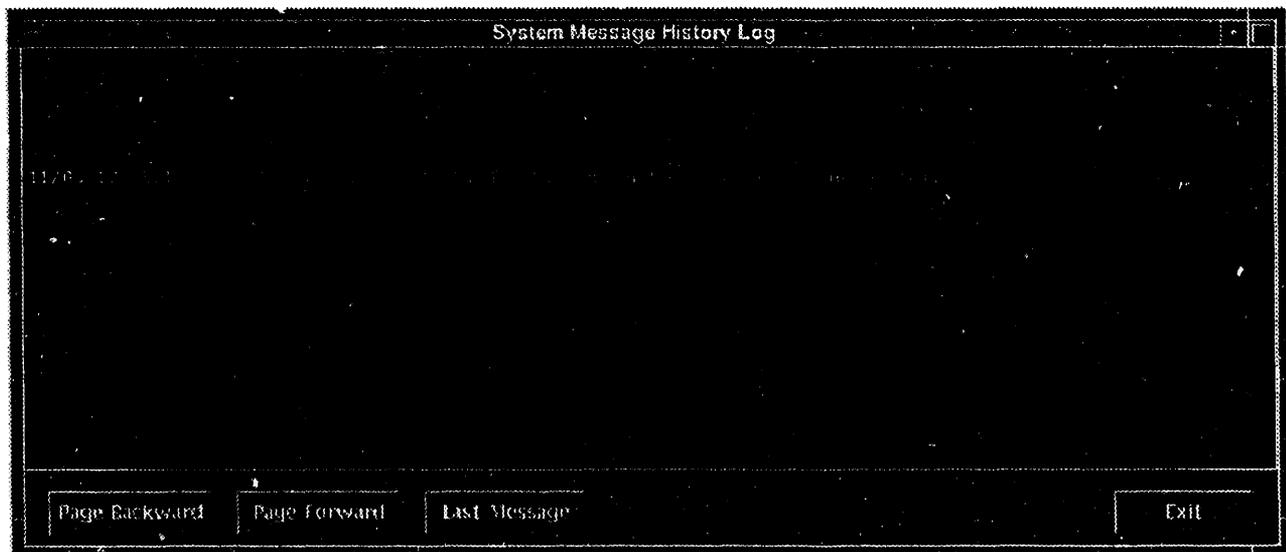


Figure 2-9. System Message History Log Window

A counter to the right of the system messages line displays the number of messages in the queue. A click on the counter clears the current message and displays the next most recent message; in this way, messages can be read one at a time (most recent message first) to clear the message queue. Click on the **Log** button to the right of the counter to examine a historical list of messages. Figure 2-9 is an example of the SYSTEM MESSAGE HISTORY LOG window. Note the background color for the system message line is reversed to become the color of the actual message in the SYSTEM MESSAGE HISTORY LOG window.

This window also provides four buttons to perform the actions indicated by their names: the **Page Backward** button, the **Page Forward** button, the **Last Message** button, and the **Exit** button.

The bottom line of the CPS Executive contains a menu bar containing the three pull-down menus used for accessing the main CPS modules:

- **Source Data** — pull-down menu that accesses Manage Source Data
- **Task** — pull-down menu to access Manage CMS Data preprocessing and Preprocess CMS Data
- **Utilities** — pull-down menu that accesses CPS System Utilities functions
- **Help** — not implemented.

In addition, the **Exit** button, located at the far right, is used to exit CPS. However, before you can do so, all CPS processing must have completed.

2.2.2 Manage Source Data

The Manage Source Data module (Section 3) allows you to create, view, and maintain two databases: the Media Log and the Source Coverage Catalog. The Media Log is a historical record of all media known to the CPS. It provides a view of summary information about the media. The Source Coverage Catalog is derived from the Media Log. It contains a composite of geographic areas, based either on media stock numbers and editions or geocells and release dates. The Source Coverage Catalog is used for preprocessing.

2.2.3 Manage CMS Data Preprocessing

The Manage CMS Data Preprocessing module (Section 4) displays the contents of the CDPS coverage catalogs and allows you to specify/manage preprocessing tasks for CPS.

2.2.4 CPS System Utilities

Section 5, *CPS System Utilities*, gives you the information needed to review the data in the system configuration file and to perform periodic user-level administrative tasks.

2.3 Common Geographic Display Functions

All geographic map displays contain basic map manipulation functions; some are accessed from the menu bar; others are available from buttons and windows. For instance, if the geographic display (Figure 2-10) is entered from the CPS Executive **Source Data**, through clicking on **View Geographic Coverage**, the map is always in Zoom mode. If the geographic display is entered through **Task** on the CPS Executive and clicking on **Define by Geographic**, the mode can be either Zoom or Define Task. You can choose the mode you want by selecting Mode.

In addition to the Mode selection, functions in the geographic display menu bar include Coverage selection, Annotation features, and Default Area selection. Other functions are available through buttons displayed near the bottom of the geographic map windows. These include the **Products** button and the **Exit** button. The use of the **Products** button is described in Section 3.4. Additional buttons are available, depending on the mode currently active.

2.3.1 System Modes

For geographic displays, the mode determines the effect of mouse clicks in the map area and the display/control functions that appear in the bottom section of the window. You select a mode by choosing Mode in the menu bar of the map window. A pull-down menu (Figure 2-11) appears with a list of available modes. For explanations of Define Task mode and Frame Contributors mode, refer to Section 4 of this guide.

Zoom mode (the default setting) enables you to select areas of the map and then click on display control buttons (**Zoom In**, **Zoom Out**, or **World Map**). In this mode, you can select areas of interest for closer viewing. When you click and drag the cursor across a map area, the system responds by highlighting the selected area with a rectangle that grows or shrinks as you move the mouse. The rectangle is constrained to have an aspect ratio in which the width is twice the height. When you click on the **Zoom In** button, the map is redrawn to fill the entire map display window with the designated region. If displayed, coastlines/political boundaries are resized accordingly. You can zoom into an area as often as you wish, but the display will cease to enlarge when the product frames are as large as the screen size and aspect ratio allows. After zooming in on a region, you can **Zoom Out** to the previously displayed area. A second click on **Zoom Out** returns the viewing area to the default area or world map. The **World Map** button resets the display to the world map.

2.3.2 Coverage

The second menu bar in the geographic map window is Coverage (Figure 2-12). Pull-down menu choices are:

- **Source Coverage Catalog (SCC)**. This item is the default setting that shows all source data that have been scanned by CPS.

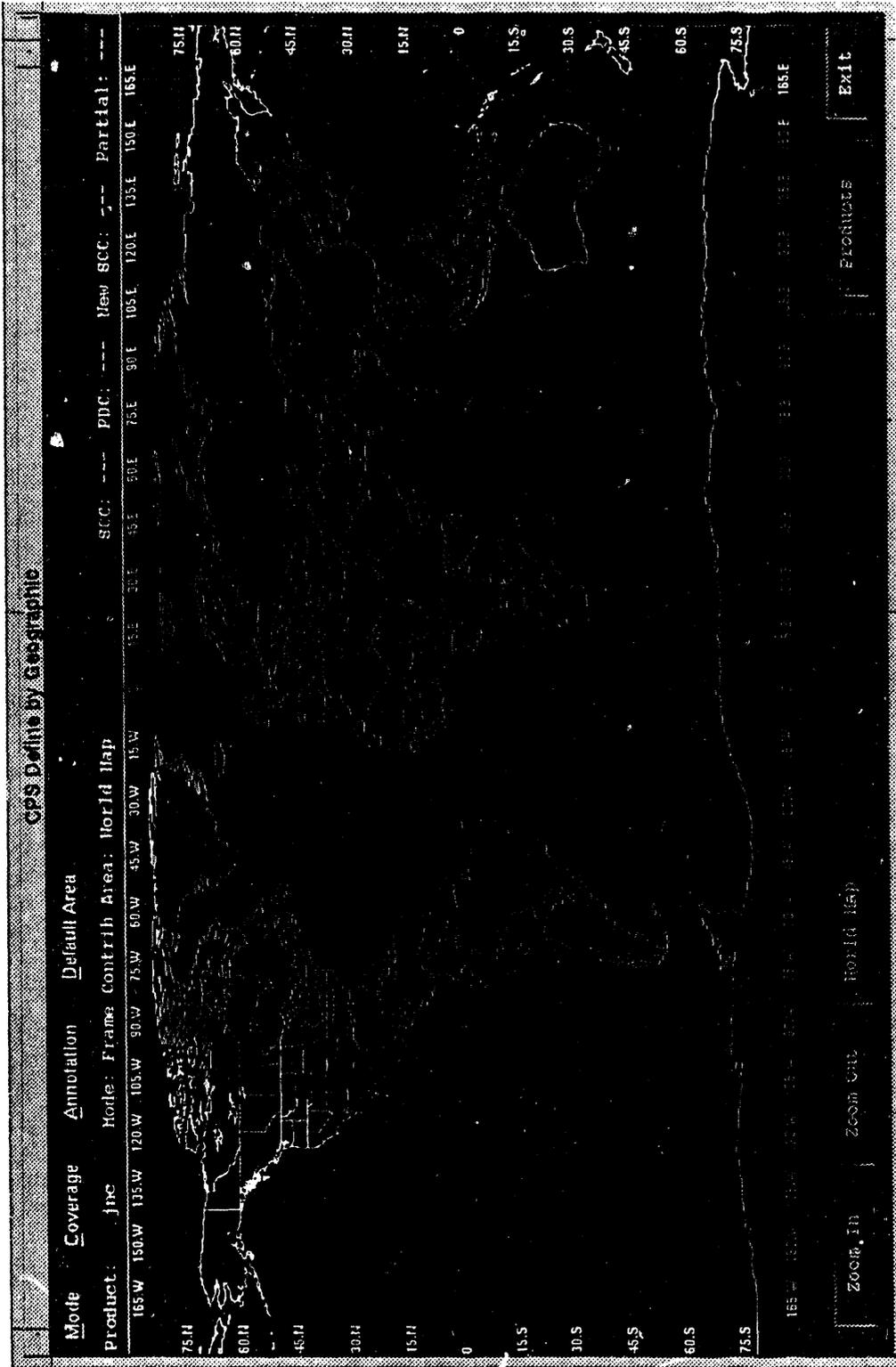


Figure 2-10. Geographic Display

Zoom	Ctrl-Z
Define Task	Ctrl-D
Frame Contributors	Ctrl-F

Figure 2-11. Mode Pull-Down Menu

To Zoom In/Zoom Out:

- 1- Be sure Zoom Mode has been selected in the Mode menu.
- 2- Position and drag the mouse pointer within the displayed map to create a box that surrounds the area of interest.

Steps 1 and 2 may be repeated as often as desired; only the most recently drawn rectangle will be displayed.

- 3- Click on **Zoom In**.
- 4- A single **Zoom Out** returns the screen to the previous display. The second click on **Zoom Out** returns the display to the default area or world map.

Source Coverage Catalog (SCC)	Ctrl-S
Processed Data Catalog (PDC)	Ctrl-P
New Source for Processed Data	Ctrl-N
Display SCC Partial Frames	
Source Time Filter	

Figure 2-12. Coverage Pull-Down Menu

- **Processed Data Catalog (PDC).** This item shows processed data that are stored by and available through CDS.
- **New Source for Processed Data.** This item shows whether source data exist that are newer than the processed data. Any such data are indicated by darker coloring on the map (75 percent black shading).

- **Display SCC Partial Frames.** This item is used to display Source Coverage Catalog partial frames. These frames are displayed using a solid color contrasting with the current product color. The partial frame toggle is mutually exclusive with the **Processed Data Catalog** item in the **Coverage** menu.

- **Source Time Filter.** Found beneath the **Coverage separator line**, this choice allows you to view SCC data scanned from a user-specified starting date to the present.

You may toggle on or off any of the items in the coverage menu (except the last one) in any combination by selecting them from the **Coverage** pull-down menu. A status line below the menu bar on the geographic display shows the current selection of coverage displayed.

2.3.3 Annotation

The third geographic menu bar item is **Annotation**. The **Annotation** menu contains a number of overlay and map manipulation functions. These menu items are shown in Figure 2-13. All items in this pull-down menu (except the last one) toggle ON and OFF.

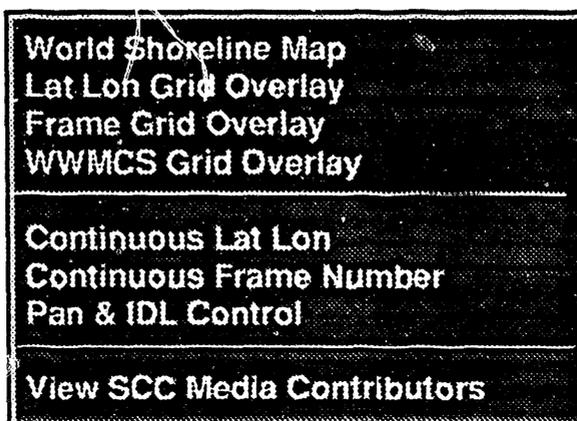


Figure 2-13. Annotation Pull-Down Menu

The first item is the **World Shoreline Map**, which displays coastline/political boundaries. The second item (**Lat Lon Grid Overlay**) displays the latitude and longitude lines. Both of these items are set to ON as the default for all modes. All of the first four items, including **Frame Grid Overlay** and **WWMCS Grid Overlay**, toggle grids on the geographic map. The **WWMCS** (or **World Wide Media Cell Scheme**) **Grid Overlay** displays the CDS partitions of CMS data coverage of the world by a single side of an EOD.

The next three items (**Continuous Lat Lon**, **Continuous Frame Number**, and **Pan and IDL [International Date Line] Control**) each open separate utility windows. All three of these windows are dialog window toggles.

The CONTINUOUS LAT LON window (Figure 2-14) provides a continuous read-out of the latitude and longitude of the cursor position when the cursor is over the map. The CONTINUOUS FRAME NUMBER window (Figure 2-15) provides a continuous read-out of the frame number. The PAN AND IDL CONTROL window (see Figure 2-16) allows you to pan the map by clicking on the left or right arrows. The Cntr button will center the display over the IDL. The (0,0) button returns the display with 0° latitude as the center.

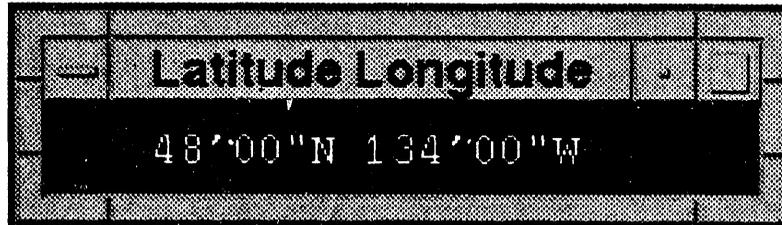


Figure 2-14. Continuous Lat Lon Window

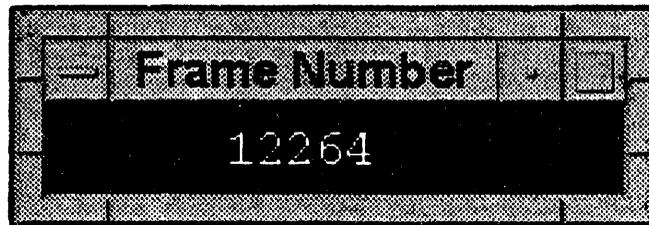


Figure 2-15. Continuous Frame Number Window

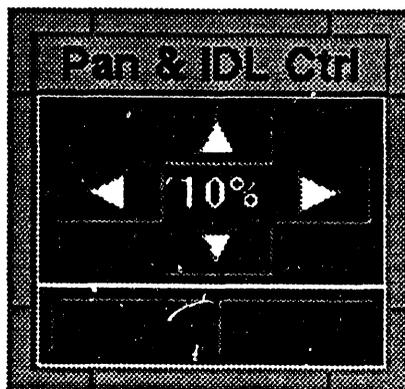


Figure 2-16a. Pan and IDL Ctrl Window

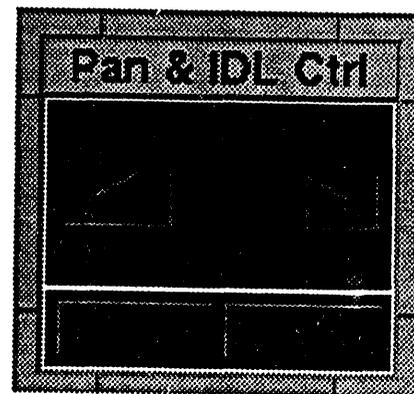


Figure 2-16b. Pan and IDL Control

The last line in the **Annotation** menu is **View SCC Media Contributors**. This displays an interactive dialog window, illustrated in Figure 2-17. This figure lists the media SCC contributing frames by media locator and stock numbers.

Media Locator	Stock Number	ECL	SCC
JNC_CDROM_00001	ARC1 JNCKX077	001	
JNC_CDROM_00002	ARC1 JNCKX104	001	
JNC_CDROM_00003	ARC1 JNCKX061	001	
JNC_CDROM_00004	ARC1 JNCKX043	001	
JNC_CDROM_00005	ARC1 JNCKX046	001	
JNC_CDROM_00006	ARC1 JNCKX038	001	

Frame Extents Outline Solid

Exit

Figure 2-17. View Media SCC Contributing Frames

Four radio buttons in two groups allow you to view data in different ways. The first radio button group, **Frame** and **Extents** are mutually exclusive. **Frame** brings up a yellow grid showing the list of contributing frames. **Extents** displays the actual contributing coverage. The second radio button group contains the buttons **Outline** and **Solid**, also mutually exclusive. **Outline** displays a grid outlining the contributing frames; **Solid** fills the entire grid of contributing frames with yellow. Figure 2-18 is an example of a grid indicating the contributing frames output to the DEFINE BY GEOGRAPHIC window. The full frame grid color changes according to the product selected. You will see a partial frames grid in cyan, beneath the yellow grid. Use the **Exit** button at the bottom to close this window.

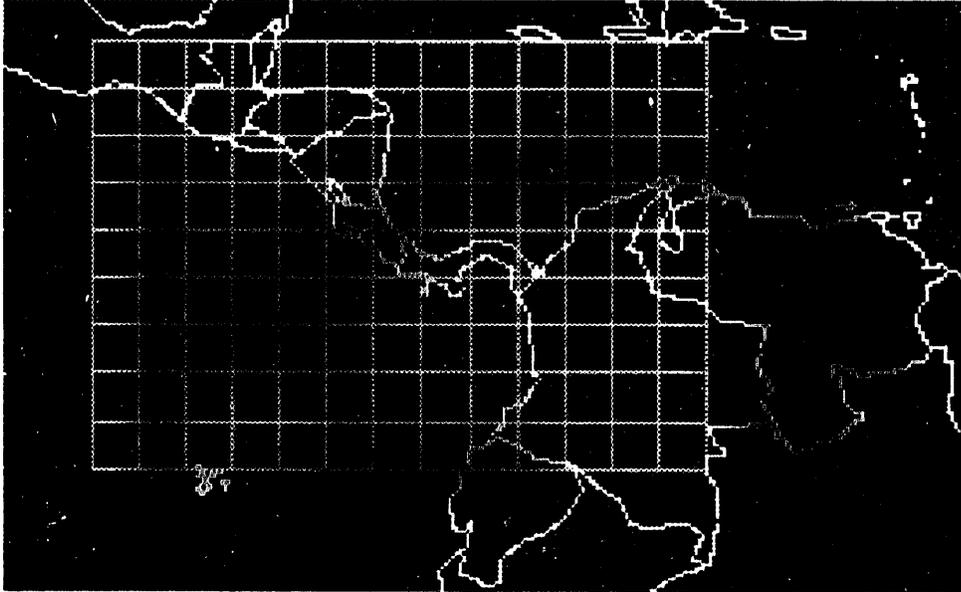


Figure 2-18. Contributing Frames Output to Geographic Window

2.3.4 Default Areas

The default area allows you to define, store, delete, and recall commonly used geographic regions for quick and easy access. You can store and label a maximum of 20 default areas. At startup, the geographic display defaults to the world map. Refer to the following how-to boxes for information on using the default areas (Figure 2-19).

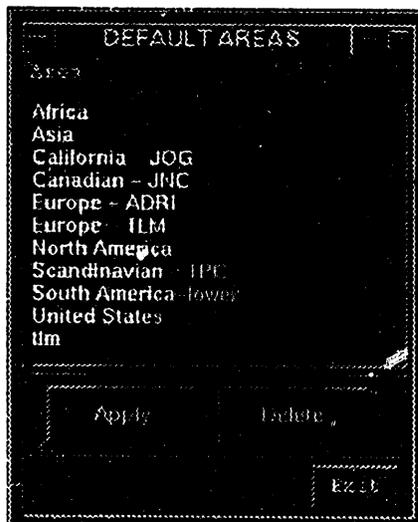


Figure 2-19. Default Areas Window

To Define a default area:

- 1- Use the zoom and pan map operations to set the display to the region you want to define. (The display shown will become the default area.)
- 2- When the desired area is displayed in the map region, select **Define** from the **Default Area** pull-down menu on the geographic display (Figure 2-10).

A dialog window then appears, asking you to type a name for the new default area.

- 3- Enter a unique description and click on **Create** or on **Cancel** to abort creation of the default area.

The new default area will be listed in the **Default Area** pull-down menu.

- 4- To register the new default area as the current default area, either select the new default area description from the **Default Area** pull-down menu or from the **DEFAULT AREAS** pop-up window (accessed through **View Default Areas**), select the area, and click on **Apply**.
- 5- To close the **DEFAULT AREAS** pop-up window, click on **Exit**.

To View a default area without applying a default area:

- 1- Select the **View Default Areas** item in the **Default Area** pull-down menu (Figure 2-20) of the geographic display.

The **DEFAULT AREAS** (Figure 2-19) window appears, listing the default areas.

- 2- From the list, select the desired area you wish to view.

The display returns to the world map and the selected area is outlined with a box.

- 3- To set the current default area from the **DEFAULT AREAS** pop-up window, select the desired area and click on **Apply**.
- 4- To close the **DEFAULT AREAS** window, click on **Exit**.



Figure 2-20. Default Area Pull-Down Menu

Hint About Default Area Pull-Down Menu:

The open space at the bottom of this menu is used for a listing of user-defined areas. This space grows or shrinks according to the number of defined areas.

To Delete a default area:

- 1- Select the **View Default Areas** item in the **Default Area** pull-down menu of the geographic display.
- 2- The **DEFAULT AREAS** pop-up window (Figure 2-17) will appear, listing the default areas.
- 3- From the list, select the area you wish to delete.
- 4- Click on **Delete** to remove the selected area.
- 5- When finished, click on **Exit** to close the **DEFAULT AREAS** pop-up window.

2.4 Examples of Screen Displays in Color

This section contains colored screen displays that illustrate four basic functions of CPS. Figure 2-21 shows the CPS Executive display with the system message log and the system configuration displays. It contains two windows, in addition to the CPS Executive window that is present throughout each session. The three windows shown in Figure 2-22 are the **SCAN MEDIA** window, the **MEDIA LOG DIRECTORY** window, and the **SCAN VERIFY ON DEVICE** window. This

figure shows the scan media display for scanning media, the scan verification window, and the log of scanned media. This figure shows the task by geographic window with supporting information and control windows (Continuous Latitude, Longitude, Frame Number, Pan Map, Current Selected Frames, SCC Time Filters, and View Media SCC Contributing Frames). The DEFINE BY GEOGRAPHIC window, together with a number of smaller related windows, is displayed in Figure 2-23. This figure shows the task by geographic window with supporting information and control windows (Continuous Latitude Longitude, Frame Number, Pan Map, Current Selected Frames, SCC Time Filters, and View Media SCC Contributing Frames). Figure 2-24 shows the task executing window with the executing task status and the task history log displays. A total of five windows that are related to task execution are present.

- TASK LOG DIRECTORY window
- TASK LOG ENTRY window
- MEDIA LOAD REQUEST window
- TASK CONTRIBUTORS window
- TASK LOG HISTORY window

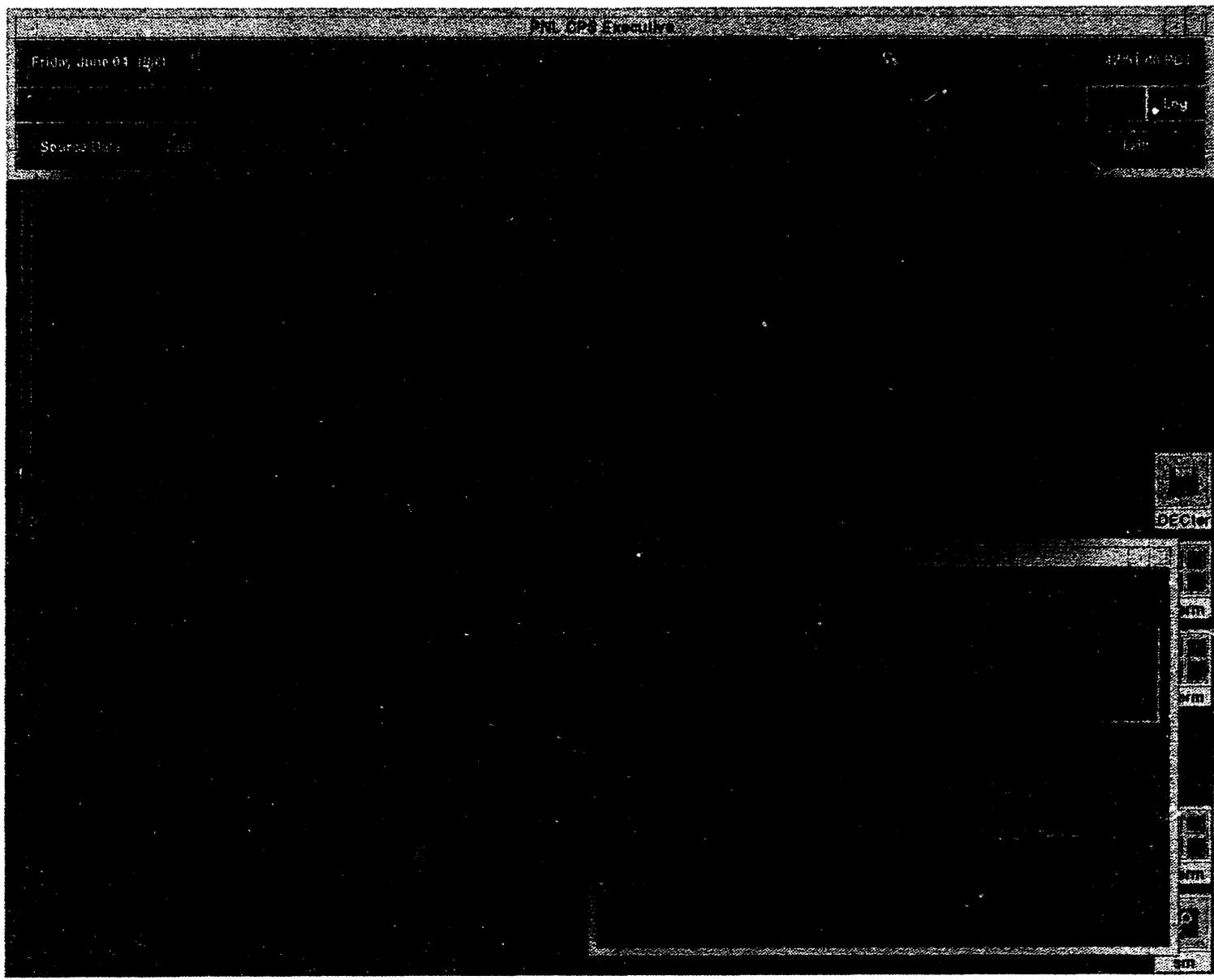


Figure 2-21. CPS Executive, Message Log, and Configuration Viewer



Figure 2-23. Define by Geographic

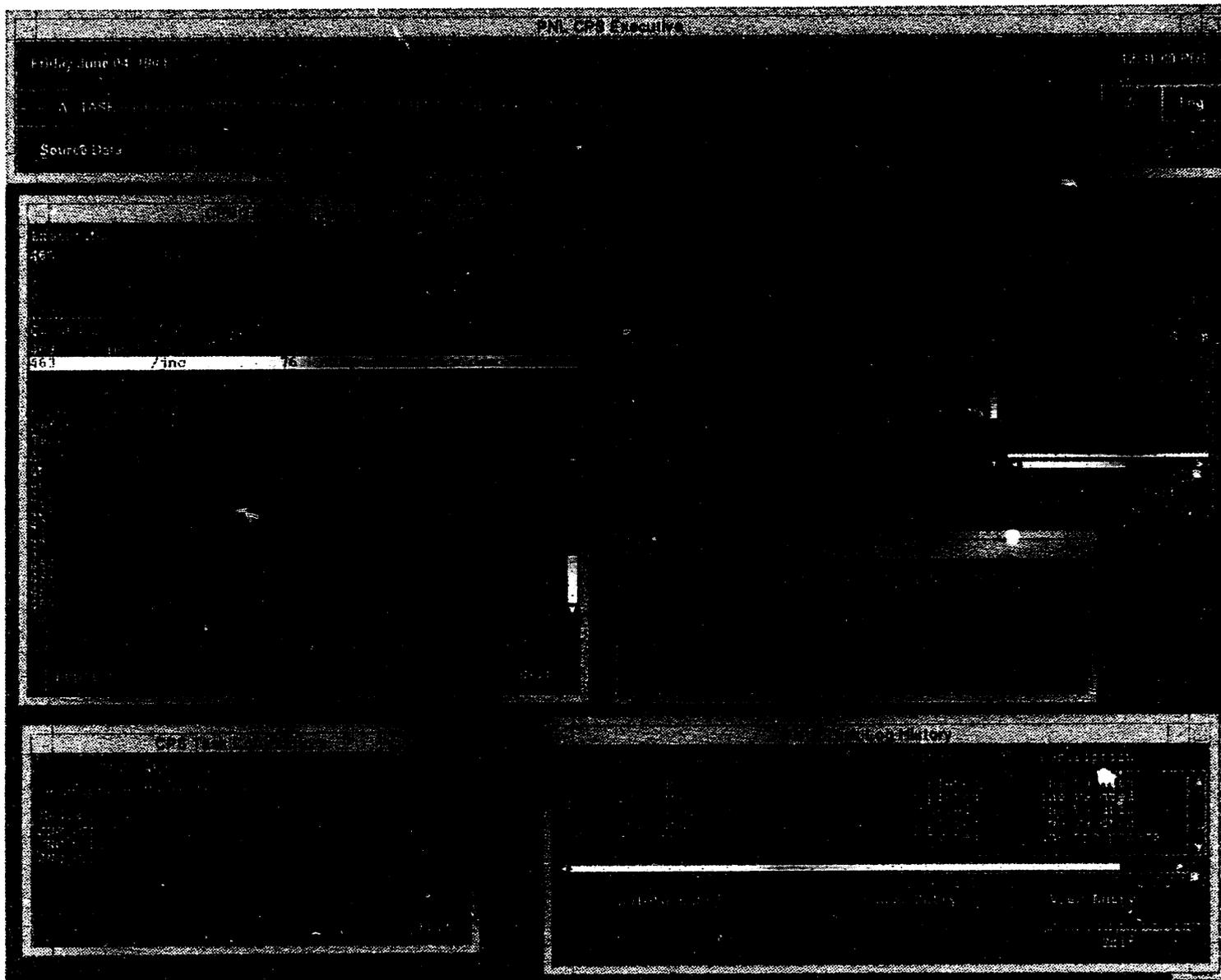


Figure 2-24. Task Execution and History

2-D

3 Managing Source Data (Source Data Menu)

3.1 Purpose

The purpose of the Manage Source Data module is to catalog the source media known to the CPS system and provide methods for viewing this information. Two databases contain this information: the Media Log and the Source Coverage Catalog. These databases receive this information from your scan of source media.

3.2 Source Data Menu

To display the Source Data menu, click on Source Data in the CPS Executive (Figure 2-8). This displays the pull-down menu shown in Figure 3-1 and described in the remainder of Section 3.

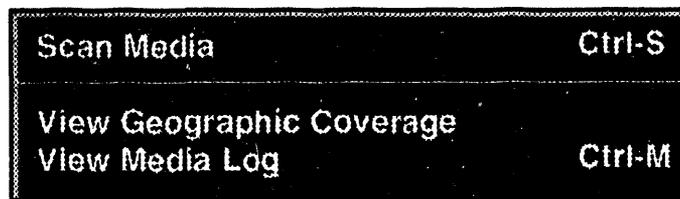


Figure 3-1. Source Data Menu

To close the menu without selecting a menu item, click outside the menu.

3.3 Scan Media

When the Scan Media item is selected, the SCAN MEDIA window is displayed (see Figure 3-2). Using this window, you can add to the Media Log and Source Coverage Catalog databases by accessing and retrieving summary product information from data files residing on the source media.

In a typical CPS installation, two types of devices are available: 8mm tapes drives and Compact Disk Read-Only Memory (CD-ROM) drives. The SCAN MEDIA window is organized into device type regions; each region contains only one type of device. Within the different regions are the *device boxes* (pushbuttons), each representing a specific device. For example, in Figure 3-2 the first region contains only 8mm devices and the second contains only CD-ROM devices. In the 8 mm region, two devices are defined and, in the CD-ROM region, six devices are defined.

The information displayed in each of the device boxes is:

- 1) Device type and number (such as, CDROM 1)
- 2) Device name (for instance, rz8c)
- 3) Device status.

A device box can indicate a status of either IDLE, SCANNING, RESERVED, COMPLETED, INUSE, or ERROR, as appropriate. When a device is in use by either the preprocessor or is in degraded mode operation, the device box displays a status of INUSE and the three-dimensional box border will not be displayed. A status of ERROR and a red device box indicates a media access error while scanning new source media. As devices are added and removed from the system, the SCAN MEDIA window automatically adjusts the placement of device regions and boxes.

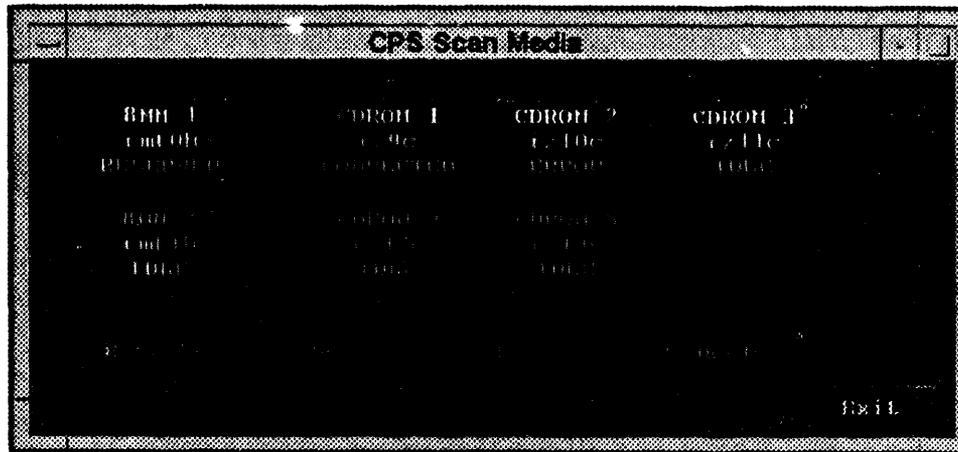


Figure 3-2. Scan Media Window

3.3.1 Reserving/Freeing a Device

To reserve a device(s) for scanning new media or preventing the preprocessor from allocating specific devices, click on the appropriate device box (a selected box will have a highlighted border). Any number of device boxes can be selected (highlighted) by successively repositioning and clicking the mouse. Devices allocated to preprocessing cannot be selected, reserved, freed, or canceled by the SCAN MEDIA window.

In the SCAN MEDIA window, to perform a scan operation or to reserve a device for use during subsequent scan operations, use the **Reserve** and **Scan** buttons. After a device is reserved, the device box remains highlighted, so when the CD-ROM or tape is loaded you can click on **Scan** without reselecting the device box.

Selecting a device box and clicking on **Free** allows the selected device(s) to be used for preprocessing. **Cancel** is valid for devices that are currently in the process of scanning new

media. The **Cancel** button is also used to clear an error encountered in a scanning operation. When a device is canceled, the request to the scanning process sometimes is not processed until the scan is complete and the results displayed. If this case arises, use the **Reject** button on the SCAN VERIFY window to reject the scanned media.

The **Exit** button closes the SCAN MEDIA window, but does not cancel any media scans or free reserved devices.

To Reserve/Free/Cancel a device(s) displayed in the SCAN MEDIA window:

- 1- Select the device(s) to be reserved or freed.

Each device box will be highlighted with a surrounding rectangle.

- 2- Click on **Reserve** or **Free** or **Cancel**, respectively.

The fill color of each of the selected device box(es) has now changed to green or back to the background color of the window.

The status displayed in each box has changed to RESERVED or IDLE, respectively.

You may operate any number of devices by clicking on them and then using either the **Reserve**, the **Free**, or the **Cancel** button.

To change a device from RESERVED back to IDLE, select the device box and click on **Free**. Note a device currently in the process of scanning new media must first be canceled and then freed.

Hint About Reserving Devices:

Although it is possible to reserve all available devices for scanning, no preprocessing tasks can execute to completion without at least one available device of the required type. Thus, it is advisable to keep at least one device of each type available for preprocessing.

3.3.2 Scanning Media

To scan media, you must first reserve a device. Then, click on the **Scan** button to commence scanning each of the designated CD-ROMs or tapes.

To Scan a tape or CD-ROM in a RESERVED device(s):

- 1- Select device(s) for scanning, if not already highlighted.

Each device box will be highlighted with a surrounding rectangle.

- 2- After loading the tape or CD-ROM into the reserved devices, click on **Scan**.

For scanning CD-ROMs, you must first place the platter into a special cartridge before loading it into the device.

After the cartridge is loaded, the status displayed in each box changes to SCANNING.

When the scanning of a device is complete, the device box status is shown as COMPLETED and a SCAN VERIFY window is opened. The scanned media data are available for verification (Figure 3-3).

Data resulting from the scan operation are displayed in the SCAN VERIFY window, as shown in Figure 3-3. New data from multiple scan operations are displayed in the order received from the scanning process. The currently displayed scan data must be accepted or rejected before the next scanned data can be displayed.

The data scanned and displayed in the SCAN VERIFY window is read-only, and simply requires user verification. In addition to storing the scanned data, CPS allows you to store a 24-character comment for each scanned CD-ROM or tape entry and to set the **Status** flag. This flag, located in the upper right-hand corner of the SCAN VERIFY window, allows you to control whether or not the current scan data should be used for building the Source Coverage Catalog. The status value can be toggled between USABLE and UNUSABLE.

The **Delete Flag** entry is currently disabled.

The SCAN VERIFY window is composed of two sections. The header information for the data is shown in the top portion of the window; an image data description for the associated CD-ROM or tape is shown in a scroll box near the bottom of the window. The scroll box at the bottom of the window is in a paned window that can be resized.

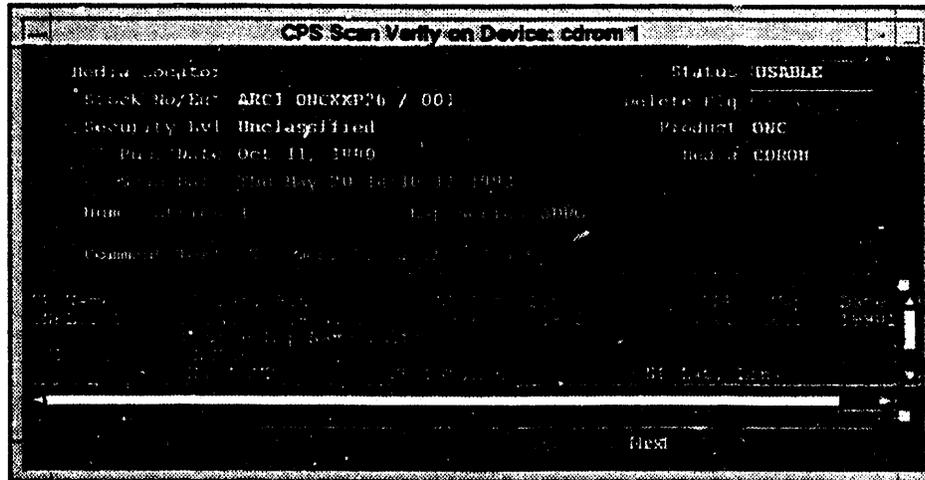


Figure 3-3. Scan Verify Window

Note: You may not reuse a device for scanning until you have either accepted or rejected the CD-ROM or tape in that device.

When a scanned disk or tape has been accepted, a unique CPS media locator number is assigned to it and the media status indicator is changed to COMPLETED. You will be prompted to affix the media locator number to the proper tape or CD-ROM. The assigned media locator number will be used for prompting in future preprocessing. If a tape or CD-ROM that has already been scanned and registered by CPS is scanned again, a **Duplicate** error occurs and the scanned media does not enter the system. To view other scanned media, after a media locator number has been assigned, click on **Next**. If all the scanned verifications have been accepted or rejected, **Next** becomes disabled and **Exit** becomes enabled to close the window.

When a scanned tape or CD-ROM has been rejected, the next scanned CD-ROM or tape data are immediately displayed. If no further scan data are available, the SCAN VERIFY window is closed.

To Verify scanned media:

- 1- Review the header information displayed in the top portion of the window.
- 2- Review the image data description displayed in the pane window at the bottom.
- 3- Type any comments you have in the comment line (maximum number of characters is 24).
- 4- Click on **Accept** or **Reject** , as appropriate.

When a CD-ROM or tape is accepted, a media locator number is assigned and displayed in green.

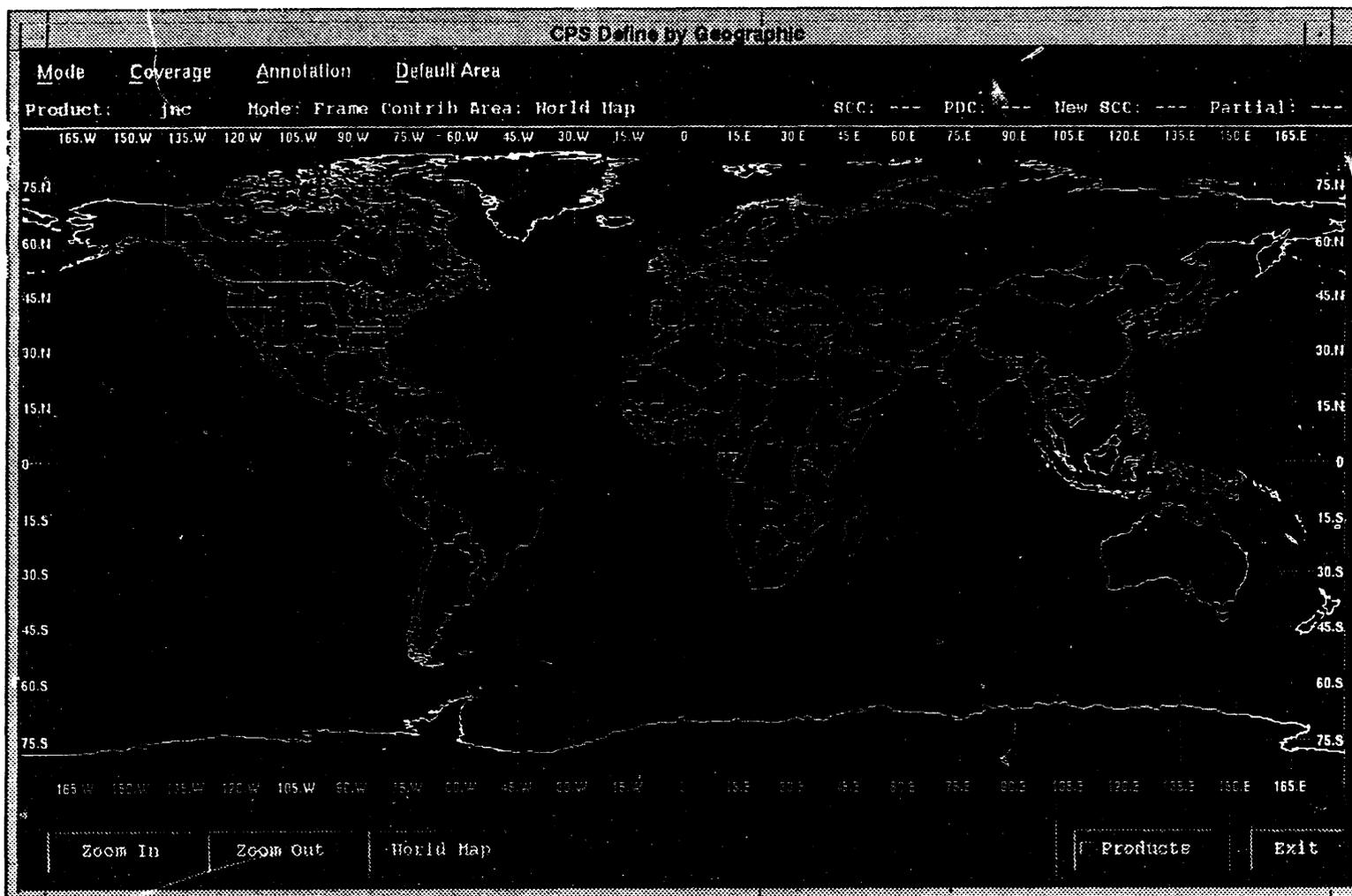
- 5- Continue processing scanned media using the **Next** button.

3.4 View Geographic Coverage

This view function provides a geographic display (see Figure 3-4) of the Source Coverage Catalog and the Processed Data Catalog for all supported products. Only one product may be displayed at a time. The display may be overlaid with a variety of features, such as coastlines/political boundaries, and may be manipulated with the basic geographic display functions, as described in Section 2.3.

General instructions for the use of the menus and buttons in the SOURCE COVERAGE window are also provided in Section 2.3. This section focuses on details about using this window to view coverage. The default map displayed for the SOURCE COVERAGE window is the world map, as shown in Figure 3-4. You can change the current default by using the methods described in Section 2.3.4.

Directly below the menu bar is a horizontal band (the status bar) that displays status information. The status bar is color-coded to match the product selected. This bar displays the name of the product, the mode (Zoom in this case), the default area, and three on-off indicator fields for coverage features: SCC, PDC, NEW SCC, and PARTIAL:. For example, the display SCC:ON indicates that source coverage catalog has been turned ON (using a toggle selection in the Coverage menu item). The display SCC:--- indicates that SCC is turned OFF. Similarly, PDC refers to CDS Processed Data Catalog, and NEW SCC refers to source data received by CPS that is more recent than processed data archived by CDS. PARTIAL: means SCC partial frames are displayed.



3-7

Figure 3-4. Source Coverage Window

Products are selected in the PRODUCTS window (Figure 3-5). This window appears automatically when the SOURCE COVERAGE window is opened, and it may be hidden or redisplayed by toggling the **Products** button at the bottom of the SOURCE COVERAGE window. Available products (listed in Table 1-1) are displayed as color-coded buttons in the PRODUCTS window. When you click on one of these product buttons, you cause corresponding changes in the product coverage of the Source Coverage map display.

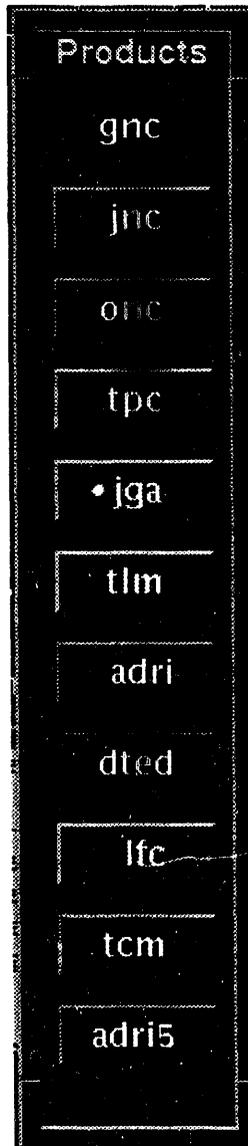


Figure 3-5. Products Window

Hint About Speeding Up the Display:

If you know the area of interest, you should zoom into that location. This causes the redrawing of the geographic display to be faster.

Hint about Clearing Product from Map:

When you need to clear the geographic map of all product, toggle all coverage items in the Coverage Pull-Down menu (Figure 2-12). This action results in clearing the map of all displayed products.

Zoom mode is the only enabled mode available to the SOURCE COVERAGE window. When you click and drag the cursor across a map area, the system responds by highlighting the selected area with a rectangle that grows or shrinks (called *rubber-banding*) as you move the mouse. You zoom in or out of the selected area by clicking on the **Zoom In** or **Zoom Out** buttons.

3.5 View Media Log

This view function produces a display of the Media Log directory that provides information on the media locator numbers, the products, and the date each was read. The MEDIA LOG DIRECTORY is shown in Figure 3-6. The Media Log can be filtered by using the two option menus labeled **Product** and **Entry Filter**. The **Product** filter searches the log by product type, as shown in Table 1-1 of this user's guide (default is **All Products**). The **Entry Filter** searches the log for records that are or are not contributors to Source Coverage Catalog. To view a particular media log entry, select the entry and click on **View**. You may view up to three media log entries (in three separate windows) at one time.

The remaining two buttons are **Search** and **Sorted by Date**. **Search** brings up a SEARCH MEDIA LIST window (Figure 3-7) that allows you to search for the first occurrence of a media locator or stock number. Type in your choice and use **Apply** to start the search; **Exit** to close the window. The result of the search is highlighted at the top of the list in the MEDIA LOG DIRECTORY window. **Sorted by Date** is a toggle between sort by scan date and sort by product (the default).

The MEDIA LOG ENTRY window, shown in Figure 3-8, appears for the selected media log entry. This window is nearly identical to the SCAN VERIFY window (Figure 3-3). You can use the MEDIA LOG ENTRY window to edit media entry comments and set media status as you do in the SCAN VERIFY window. To save changes and exit the entry window, click on **Save**; to exit without saving changes use the **Exit** button. **Delete Flag** is currently disabled.

CPS Media Log Directory

Media Location	Stack Number	Entry	Scan Date
JGA_CD0001_0001	1001	1001	Jan 22, 1994
JGA_CD0001_0002	1001	1002	Jan 22, 1994
JGA_CD0001_0003	1001	1003	Jan 22, 1994
JGA_CD0001_0004	1001	1004	Jan 22, 1994
JGA_CD0001_0005	1001	1005	Jan 22, 1994
JGA_CD0001_0006	1001	1006	Jan 22, 1994
JGA_CD0001_0007	1001	1007	Jan 22, 1994
JGA_CD0001_0008	1001	1008	Jan 22, 1994
JGA_CD0001_0009	1001	1009	Jan 22, 1994
JGA_CD0001_0010	1001	1010	Jan 22, 1994
JGA_CD0001_0011	1001	1011	Jan 22, 1994
JGA_CD0001_0012	1001	1012	Jan 22, 1994
JNC_CD0001_0001	1001	1013	Jan 22, 1994
JNC_CD0001_0002	1001	1014	Jan 22, 1994
JNC_CD0001_0003	1001	1015	Jan 22, 1994

Program: All Programs Search: All Filter: All All Items
 View: Search: Sort: by Date
Exit

Figure 3-6. Media Log Directory

Search Media List

Search For

Apply Exit

Figure 3-7. Search Media List Dialog Box

4 Managing CMS Data Preprocessing (Task Menu)

4.1 Purpose

The purpose of the Manage CMS Data Preprocessing module is to define tasks for preprocessing source data and to manage and monitor the execution of preprocessing tasks. In addition the CMS Data Preprocessing module communicates CMS data production to the CDS either directly when both systems are running or by creating a degraded mode tape for CDS to process at a later time.

Three methods are used to create tasks for preprocessing. These methods can be accessed directly through the menu items: **Define by Geographic**, **Define by Media**, and **Define by Coordinates**.

4.2 Task Menu

To display the **Task** menu, click on **Task** in the CPS Executive (see Figure 2-8). This causes the display of the pull-down menu items shown in Figure 4-1 and described in the remainder of Section 4.

To close the menu without selecting an item, click outside the menu.

The first three menu items (**Define by Geographic**, **Define by Media**, **Define by Coordinates**) allow you to define a task by boxing a geographic region, by specifying a CD-ROM or a tape, or by providing surrounding coordinates, respectively. Each of these methods stores the newly defined task in a task log for future execution. The defined tasks are displayed in the **TASK LOG DIRECTORY** window. Tasks that have been executed or canceled can be viewed from the **TASK LOG HISTORY** window, accessed through the **History** button in the **TASK LOG DIRECTORY** window.

The **Task Execution** item opens the Task Log Directory window and provides for the management/execution and the monitoring of the preprocessing tasks.

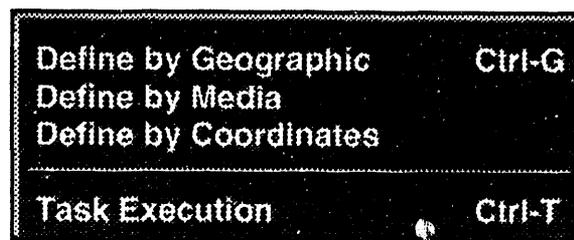


Figure 4-1. Task Menu for Manage CMS Data Preprocessing

4.3 Defining Tasks

Common to define by geographic and define by coordinates is the choice of either processing or not processing frames that have only partial coverage. This choice is available by toggling **Partial Frames** which toggles between ON (lit, meaning that partial frames will be processed) and OFF (not lit, meaning that partial frames will not be processed). The **Define by Media** menu item does not allow partial frame processing.

An on/off toggle common to all three methods is the option to reprocess data that have already been registered by the system as having been processed. This process uses the **PDC Override** button. By default, this button is not lit, meaning that frames already processed by CPS will not be reprocessed. If **PDC Override** is selected (lit), no comparison of the SCC and PDC is made and all frames are processed. The default procedure is intended to save system time by avoiding the reprocessing of duplicate frames.

*Note: These selections must be set before clicking on **Create Task**.*

4.3.1 Define by Geographic

This function provides a geographic display of the most recent source data coverage for all supported products. Only one product can be displayed at a time. This display is identical to the **SOURCE COVERAGE** window discussed in Section 3.4, except that Define Mode is enabled. The display can be overlaid with a variety of features, such as coastlines and political boundaries. It can be manipulated with basic geographic display functions, as described in Section 2.3.

The **DEFINE BY GEOGRAPHIC** window is shown in Figure 4-2. General instructions for the use of the menus and buttons in this window are provided in Section 2.3. This section focuses on using this window to define a task. The default map displayed for the **DEFINE BY GEOGRAPHIC** window is the world map, shown in Figure 4-2. You can change the current default area by using methods described in Section 2.3.4.

Directly below the menu bar is a horizontal band (the status bar) that displays status information. The status bar is color-coded to match the product selected in the accompanying **PRODUCTS** window. The status bar displays the name of the product, the mode, the area displayed, and four ON-OFF indicator fields for coverage features: **SCC**, **PDC**, **NEW SCC**, and **PARTIAL:**. The display **SCC:ON** indicates that source coverage catalog has been turned on (via a toggle selection in the **Coverage** menu item). The display **SCC:---** indicates that **SCC** is turned OFF. Similarly, **PDC** refers to CDS Processed Data Catalog, and **NEW SCC** refers to source data received by CPS that is more recent than processed data archived by CDS. **PARTIAL: on** means **SCC** partial frames are displayed.

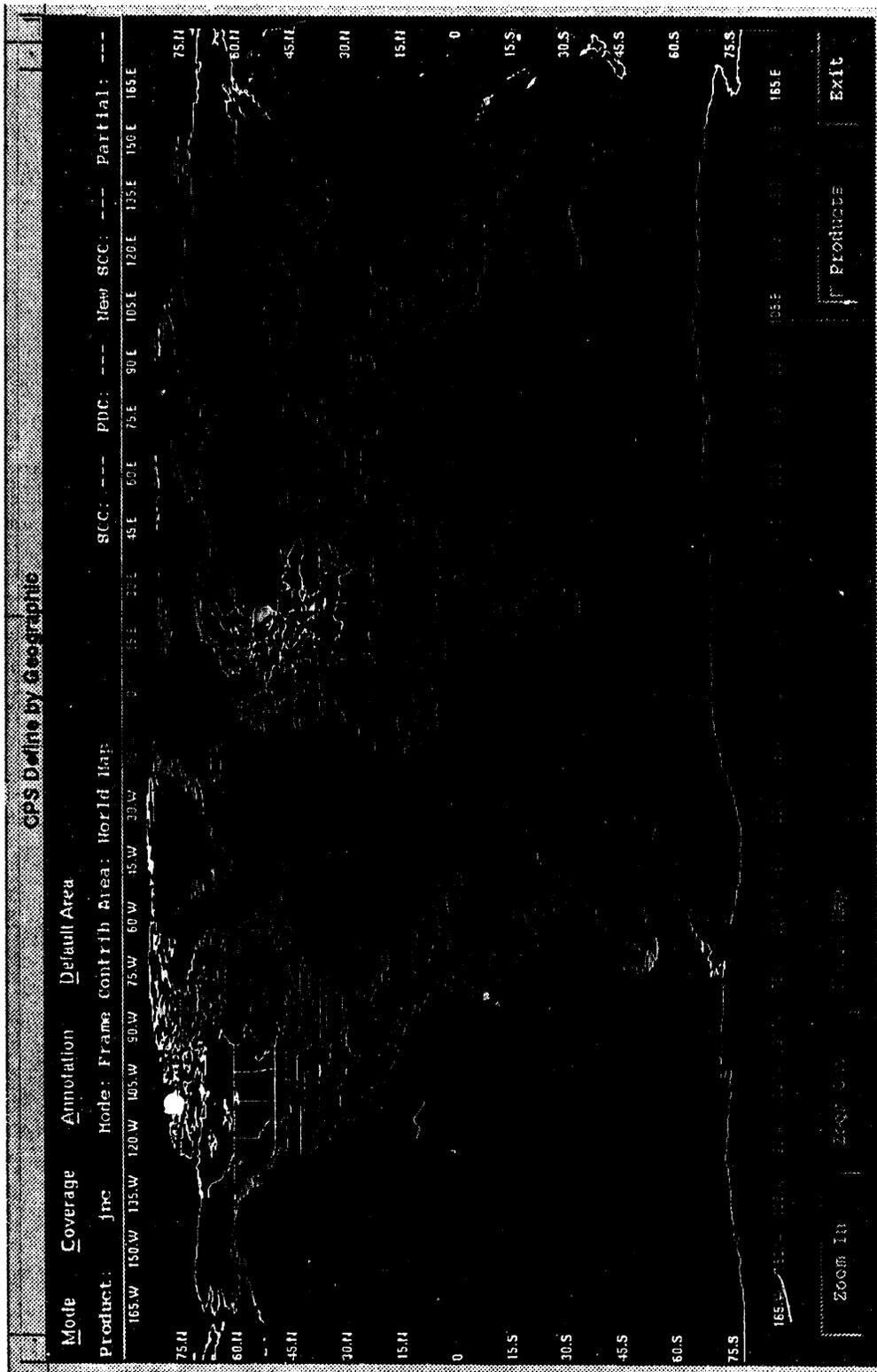


Figure 4-2. Task Definition by Geographic Window

Three modes are available from the Define Mode menu: **Zoom**, **Define Task**, and **Frame Contributors**. The **Zoom** mode operations are described in detail in Section 2.3. The **Define Task** mode supports definition of tasks. When you choose this mode, its control buttons are displayed at the bottom of the geographic window (see Figure 4-3).

Figures 4-3, 4-4, and 4-5 show the differences between the bottom display when the **DEFINE BY GEOGRAPHIC** window is in one of the three different modes. The mode area of this window when in **Define Task** mode is shown in Figure 4-3; the **Zoom** mode area of this window is shown in Figure 4-4. Figure 4-5 displays the menu bar for the **Frame Contributors** mode area of the **DEFINE BY GEOGRAPHIC** window. All three figures are only partial pieces of the **DEFINE BY GEOGRAPHIC** window; the world map and the top of this window are omitted. For information about the two paths for accessing these displays, review Section 2.3.1.

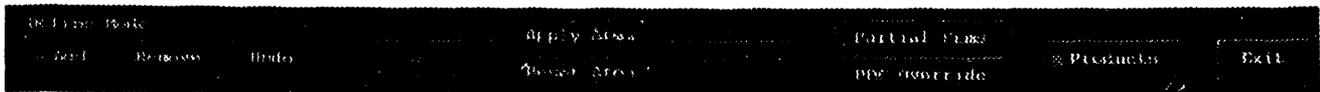


Figure 4-3. Define Task Mode Area of Geographic Window



Figure 4-4. Zoom Mode Area of Geographic Window

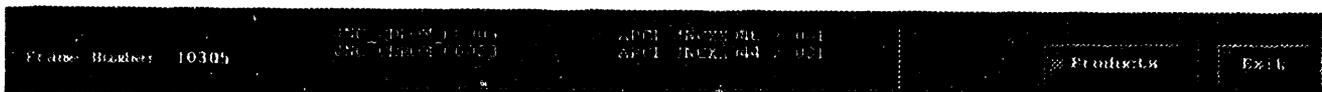


Figure 4-5. Frame Contributor Mode Area of Geographic Window

The remaining paragraphs in this section describe the **Define Mode**. At the bottom right of the **DEFINE BY GEOGRAPHIC** window, a second window is displayed (the **CURRENT SELECTED FRAMES** window, Figure 4-6) to track the CPS frames that have been defined. As you add or remove frames in the geographic display and click on the **Apply Area** button, the system updates the frame information displayed in this window.



Figure 4-6. Current Selected Frames Window

You can create and modify a defined area using successive applications of the **Add**, **Remove**, and **Undo** / **Undo All** buttons. The **Add** button expands the defined area by boxing a geographic area in the display. The **Remove** button allows you to selectively remove

areas within a box defined in Add mode. In this way, the map data can be reduced and further tailored. When the **Remove** button is employed, the remove box is displayed in the map region with a heavier border than an add box. The effect of a remove box is to remove the source frames from the currently defined area.

To Define a task by geographic features:

- 1- Select the **Define by Geographic** item from the Task menu.

The **TASK DEFINITION BY GEOGRAPHIC** window will appear.

- 2- Select a product from the **Products** window.
- 3- Make sure the **SCC** item is turned **ON** in the status bar. If not, select the **SCC** item from the **Coverage** menu.
- 4- Use the **Zoom**, **Pan Map**, or **Default Area** functions to display the desired area.
- 5- Select **Define Task** from the **Mode** menu in the **DEFINE BY GEOGRAPHIC** window.

Check to see if the Define mode is set to **Add**. (In **Add** mode, the bounding boxes add frames to the task.) The **Remove** mode excludes the bounded frames from the task. The **Undo** button allows you to select specific bounding boxes for erasure.

- 6- Click and drag to define areas (frames) on the map to be added to the task or, in **Remove**, the frames to be excluded.
- 7- Click on **Apply Area** to register selection. (This enables **Create Task**.)
- 8- Toggle **Partial Frames** and **PDC Override** to the state you want.
- 9- Click on **Create Task**. A dialog box prompts for a task description. (After the task is created, a dialog box appears, verifying it was created.)

Because a certain amount of trial and error is expected in defining an area using **Add** and **Remove**, two undo operations are provided to help alleviate errors and confusion. **Undo** allows you to selectively remove previously drawn boxes. When **Undo** is clicked on, you can remove any Add or Remove box in the display by positioning the mouse inside the box to be removed and clicking on mouse button 1 (the left button). If you click on an area occupied by two or more overlapping boxes and click on **Undo**, a dialog box appears to ask you to indicate which box you want removed. The box in question is drawn with a wide border. You can repeatedly click on a box and click on **Undo** to continue removing boxes. The **Undo All** button is not currently enabled.

Apply Area saves the defined area information for the currently selected product that will be used in the task definition. **Reset Area** deletes all boxes that have been drawn and removes all areas that have been applied for task definition. To create a task after selecting areas, use the **Create Task** button.

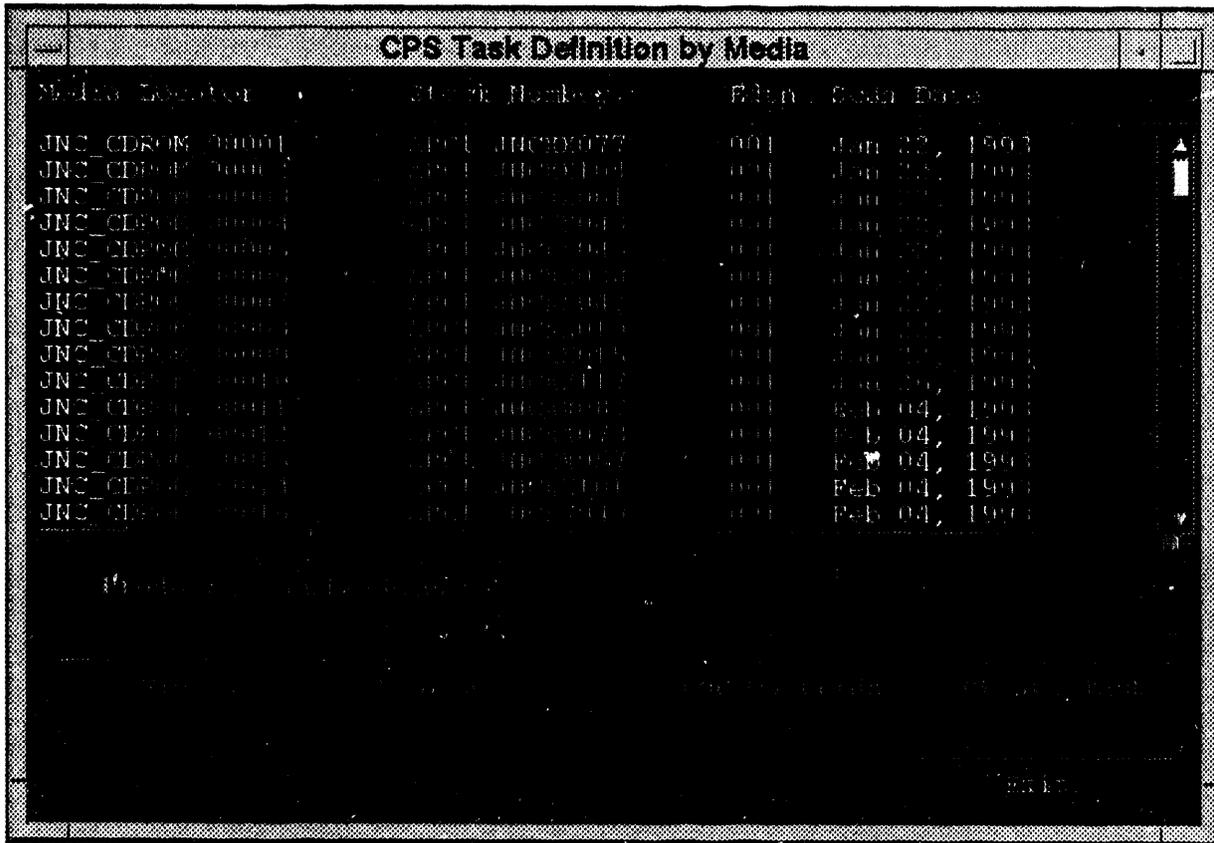
4.3.2 Define by Media

This function enables you to define a CPS task based on a scan media. The DEFINE BY MEDIA window is shown in Figure 4.7. This window is similar to the MEDIA LOG DIRECTORY window (Figure 3-6), except that only the CD-ROMs or tapes that contribute to the Source Coverage Catalog are displayed.

The **Product** filter searches by product type, as shown in Table 1-1 of this user's guide (default is **All Products**). **View** produces a display that provides information on the media locator numbers, the stock number, and the date each was scanned. To view an individual entry, select the entry and click on **View**. You may view only one media log entry at a time.

Search brings up a SEARCH MEDIA LIST window (Figure 4-8) that allows you to search for the first occurrence of a media locator or stock number. Type in your choice and use **Apply** to start the search; **Exit** to close the window. The result of the search is highlighted at the top of the list in the TASK DEFINITION BY MEDIA window.

To create a task by media, select a media log entry. Then toggle the **PDC Override** flag to either ON or OFF and click on **Create Task**. A dialog box prompts for a task description (see Figure 4-9); the default value is the stock number and edition of the CD-ROM or tape. You can add to or change this task description. Use **Create** to continue or **Cancel** to abort. If **Create** was selected, a second dialog box will appear with information about the newly created task information (task number automatically assigned, media locator number, and description, previously entered). To accept this media/task definition, click on **OK** to save the new task or **Cancel** to abort. The new media/task is then displayed in the TASK LOG DIRECTORY window.



The screenshot shows a window titled "CPS Task Definition by Media". It contains a table with the following columns: Media Location, Start Number, Edit, and Start Date. The table lists 15 entries, each with a unique media location and start number, and a start date ranging from Jan 04, 1993 to Feb 04, 1993. Below the table, there are several lines of text and a "Print" button.

Media Location	Start Number	Edit	Start Date
JNC_CDROM_00001	1991_JNC01077	001	Jan 04, 1993
JNC_CDROM_00002	1991_JNC01100	001	Jan 04, 1993
JNC_CDROM_00003	1991_JNC01001	001	Jan 04, 1993
JNC_CDROM_00004	1991_JNC01002	001	Jan 04, 1993
JNC_CDROM_00005	1991_JNC01003	001	Jan 04, 1993
JNC_CDROM_00006	1991_JNC01004	001	Jan 04, 1993
JNC_CDROM_00007	1991_JNC01005	001	Jan 04, 1993
JNC_CDROM_00008	1991_JNC01006	001	Jan 04, 1993
JNC_CDROM_00009	1991_JNC01007	001	Jan 04, 1993
JNC_CDROM_00010	1991_JNC01008	001	Jan 04, 1993
JNC_CDROM_00011	1991_JNC01009	001	Jan 04, 1993
JNC_CDROM_00012	1991_JNC01010	001	Jan 04, 1993
JNC_CDROM_00013	1991_JNC01011	001	Jan 04, 1993
JNC_CDROM_00014	1991_JNC01012	001	Jan 04, 1993
JNC_CDROM_00015	1991_JNC01013	001	Jan 04, 1993

Figure 4-7. Task Definition by Media Window

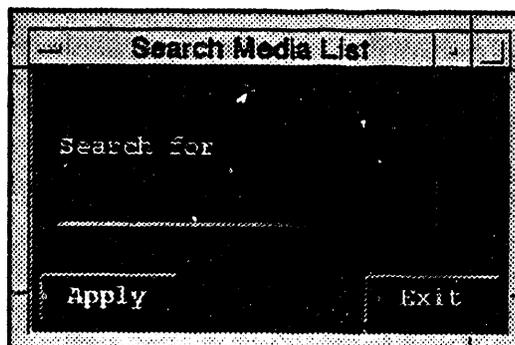


Figure 4-8. Search Media List Dialog Box

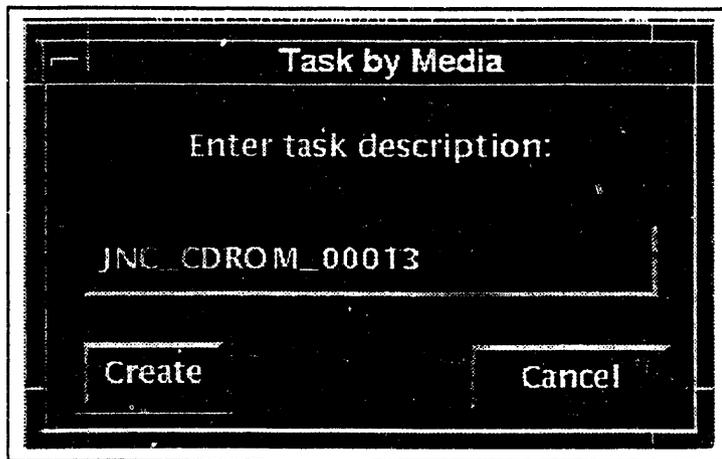


Figure 4-9. Create Task Dialog Box

4.3.3 Define by Coordinates

This function enables you to define a CPS task using the latitude/longitude coordinates. The TASK DEFINITION BY COORDINATES window is shown in Figure 4-10. Information required to define the task includes the product type, the coordinates, and the task description.

Note: *The task description field is mandatory for Define by Coordinates.*

When you have entered the appropriate information, use the **Define** button to define the task. You may make additional changes to the information by clicking on **Define** again; this defines another task and so on. You can also use the **Clear** button to remove all information entered so that you can define a task starting with a fresh window. Clicking on the **Exit** button closes the window and returns control to the CPS Executive (Figure 2-8).

To Define a task by media:

1- Select **Define by Media** in the Task menu.

The **TASK DEFINITION BY MEDIA** window appears.

2- Use the **Product** option menu button to filter the list of media by product type.

3- Select the tape or CD-ROM from the displayed media list.

4- Toggle the **PDC Override** button. (The **Partial Frames** flag setting does not apply to the Define by Media function.)

5- Click on **Create Task**. A dialog box appears, prompting for a task description. (After the task is created, an information dialog box appears.)

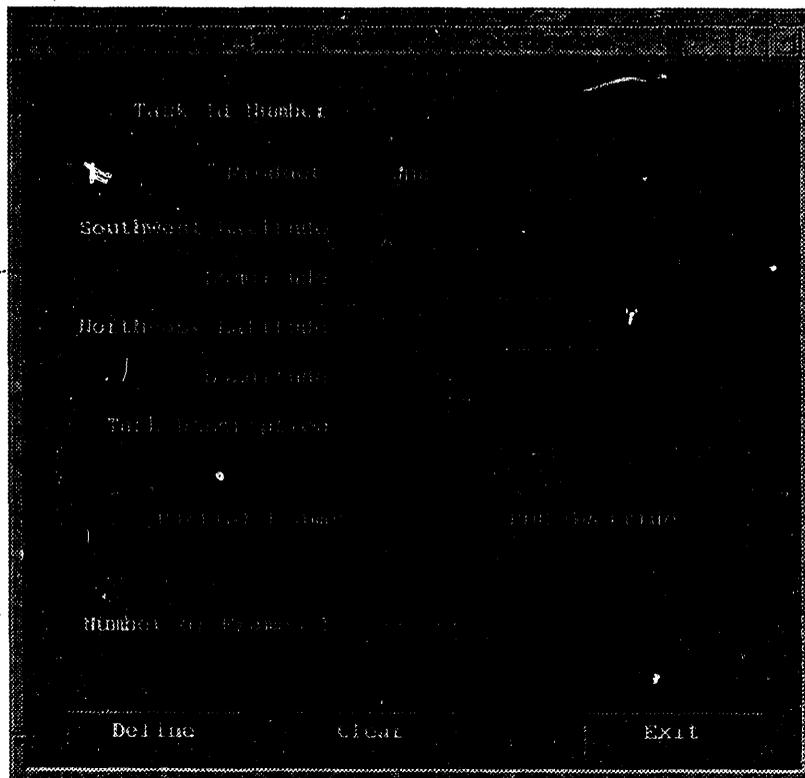


Figure 4-10. Task Definition by Coordinates Window

Note: *The latitude and longitude fields require that you enter values with a minus sign (-) for western and southern values. Latitude and longitude must be entered as decimal degrees.*

To Define a task by coordinates:

- 1- Select **Define by Coordinates** in the Task menu.
The TASK DEFINITION BY COORDINATES window appears.
- 2- Select a product from the **Product** option menu.
- 3- Type in the northeast latitude and longitude, and the southwest latitude and longitude of the area to be defined in decimal degrees.
- 4- Type in a comment in the Task Definition field, if you want.
- 5- Toggle **Partial Frames** ON or OFF.
- 6- Toggle **PDC Override** ON or OFF.
- 7- Click on **Define** to define the task.

When all data have been entered correctly and the coordinates have been validated, the Task ID number and number of frames are displayed in the TASK DEFINITION BY COORDINATES window. If invalid coordinates are entered, the word **Error** is displayed in the Task ID Number field.

Repeat Steps 2 through 7 as often as necessary.

Hint About Defining Tasks by Coordinates:

*You may want to define a number of tasks (say, using different products) for the same geographic area. This is easily done by repeatedly using the same information in the TASK DEFINITION BY COORDINATES window. Simply type the product name in the Product area, and click on **Define**. You can repeat this as often as you wish.*

4.4 Task Execution

This function allows you to manage the execution of defined tasks. All currently defined/queued/executing tasks are displayed in the TASK LOG DIRECTORY window, shown in Figure 4-11. This window has three lists of tasks: those that have been defined (at the bottom), those that are in the queue (waiting to be executed), and those that are executing (at the top of the window).

The following procedures are available to you in the TASK LOG DIRECTORY window:

- View a task
- Queue a task
- Execute a task
- View history
- Cancel a task
- Duplicate a task
- View task media
- Force degraded mode
- Exercise Device Allocation Control (DAC)
- Exit window (closes the window).

View is used to display more detailed information on a selected task in the TASK LOG ENTRY window, Figure 4-12). Header information is shown in the top portion of the window, and other product-specific data are shown in the pane window at the bottom. Below the status field in the upper right corner of the window, PFF stands for the Partial Frame Flag. The abbreviation PDC-OFF stands for the Processed Data Catalog Override Flag. (In this case, these flags are not set.)

Hint About Viewing Tasks:

View shows information about a task selected in the Task Log Directory window. If the task appears in the defined list or the queued list, the information is as shown in Figure 4-12. If the task is executing, the Task Log Entry window shows additional information about the selected executing task (see Figure 4-13, including the progress of each device. Note the status value will also be different.

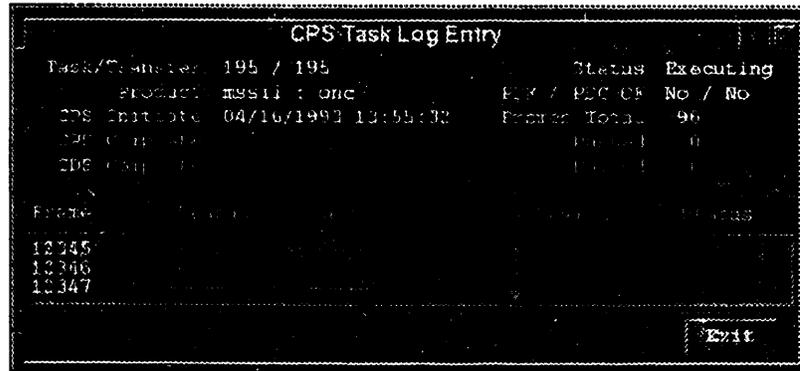


Figure 4-13. Task Log Entry Window for an Executing Task

Queue is used to move a selected task from the defined list to the queued list. To do so, select a task listed in the defined list at the bottom of the window, then click on **Queue**. The task entry is then moved to the queued list. A maximum of six tasks can be in the queue at one time.

When viewing a queued or executing task, all the frames from the specified area or media are listed. The frame's status will indicate if a frame cannot be processed because there is no source data or the frame already has been processed, and the PDC override flag is off.

Execute is used to move the defined tasks into executing status. To do this, click on **Execute**. CPS selects for execution up to the first three tasks from the queued list. The number of tasks selected depends on the number that can be accommodated by the CPS resources. Up to three tasks can execute at once. When a task begins execution, a series of dialog boxes is displayed. The number of dialog boxes depends on the number of source media required to execute the task. A sample execution dialog box is shown in Figure 4-14. The dialog box instructs you to load a particular tape or CD-ROM on a designated device. When the media is loaded into the designated device, press the **Continue** button to start the preprocessing of data

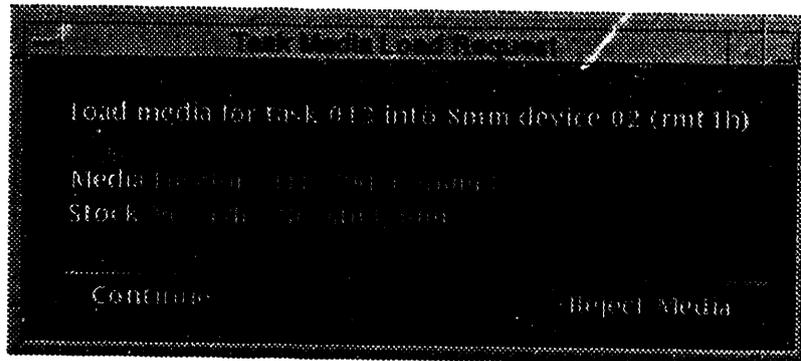


Figure 4-14. Execution Dialog Box Example

contained on the media. If **Reject Media** is selected, all frame data contained on this media will not be preprocessed in this task. Note that while a device is accessing source data for a preprocessing task, the device status in the SCAN MEDIA window (Figure 3-2) is INUSE.

The **History** button displays the TASK LOG HISTORY window. You can obtain information on a previous task by selecting a task and clicking on **View Entry**. This action displays the TASK LOG ENTRY window (Figure 4-9) for the selected task.

The **Cancel** button changes the status of a task. If the task is executing, use **Cancel** to remove it from the executing list and place it in the TASK LOG HISTORY. If the task is in the queue, it is moved into the defined task list. If the task is in the defined list, the effect of **Cancel** is to move it into the TASK LOG HISTORY. **Duplicate** is used to clone an existing task and assign a new task number.

Click on **Media** to view a list of media that contribute to a task defined by you. As shown in Figure 4-15, the media are listed by media locator and stock number.

Device Allocation Control (DAC) is exercised through an option menu. The current DAC mode is displayed on a button to the immediate left of the DAC label. The default mode is NICE and imposes a restriction on the number of CPS and CDS devices available for allocation during the execution of a preprocessing task. A click on the button calls up the full menu of modes. The user may select CPS Hog, CDS Hog, or CDPS Hog. In the Hog mode the specified subsystem(s) will allocate as many devices as necessary or available to complete the preprocessing task.

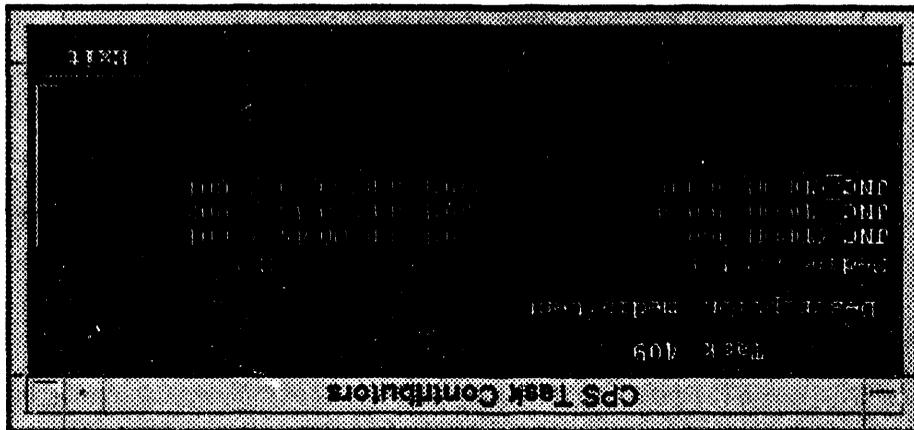


Figure 4-15. Task Contributors

The TASK LOG HISTORY window displays a summary list of all tasks that have been executed or canceled from the defined list (see Figure 4-16). For each task, the Frames (T:P:F) column displays the number of total frames in the task, processed frames, and frames that failed to be processed.

The **Delete Entry** button is the only way an entry in the task log can be deleted from the system. To delete a task, select it from the list and click on **Delete Entry**.

Rename Entry is the same as **Duplicate** in the TASK LOG DIRECTORY window.

View Entry is the same as **View** in the TASK LOG DIRECTORY window.

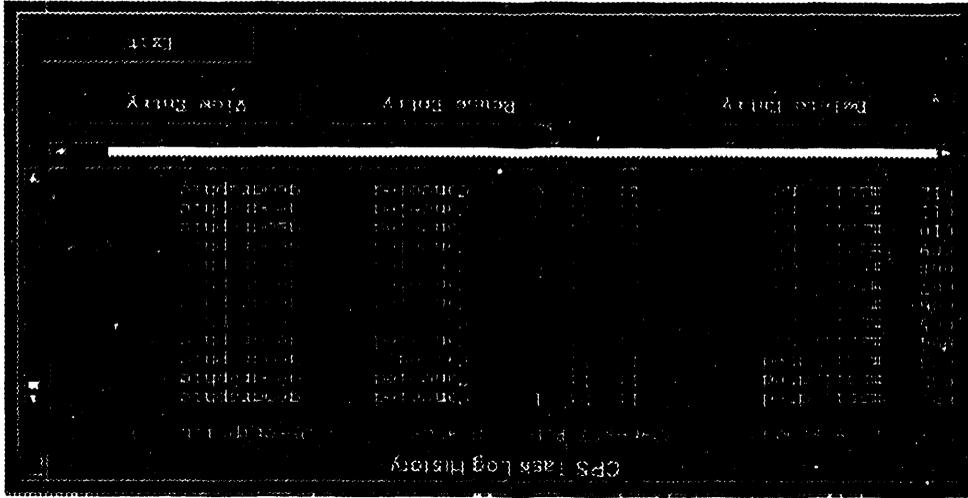


Figure 4-16. Task Log History Window

5 System Utilities (Utilities Menu)

5.1 Purpose

System utilities help the operator verify proper system configuration and perform routine data management functions. System utilities functions are user-level administrative tasks that can be executed only when no other CPS processes are active.

5.2 Utilities Menu

To display the Utilities menu, click on Utilities in the CPS Executive (see Figure 2-8). This displays the pull-down menu items shown in Figure 5-1 that are described in the remainder of Section 5.

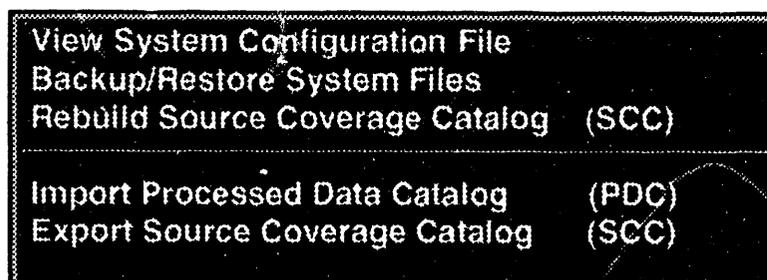


Figure 5-1. System Utilities Menu

To close the menu without selecting a menu item, click outside the menu.

To select a menu item and open a window that provides the desired system utility function, click on the menu item in the utilities menu. The available functions are described in Sections 5.3 through 5.7.

5.3 View System Configuration File

This menu item allows you to view the configuration file. This item is available to check for possible configuration errors. If an error is detected, notify your system administrator or refer to the system administration manual.

The CONFIGURATION VIEWER window is shown in Figure 5-2. This window displays information on available devices, directories, and products. You can select the device type and directory lists (shown at the upper left and right, respectively). The products list (shown at the lower left) is static and you cannot change it.

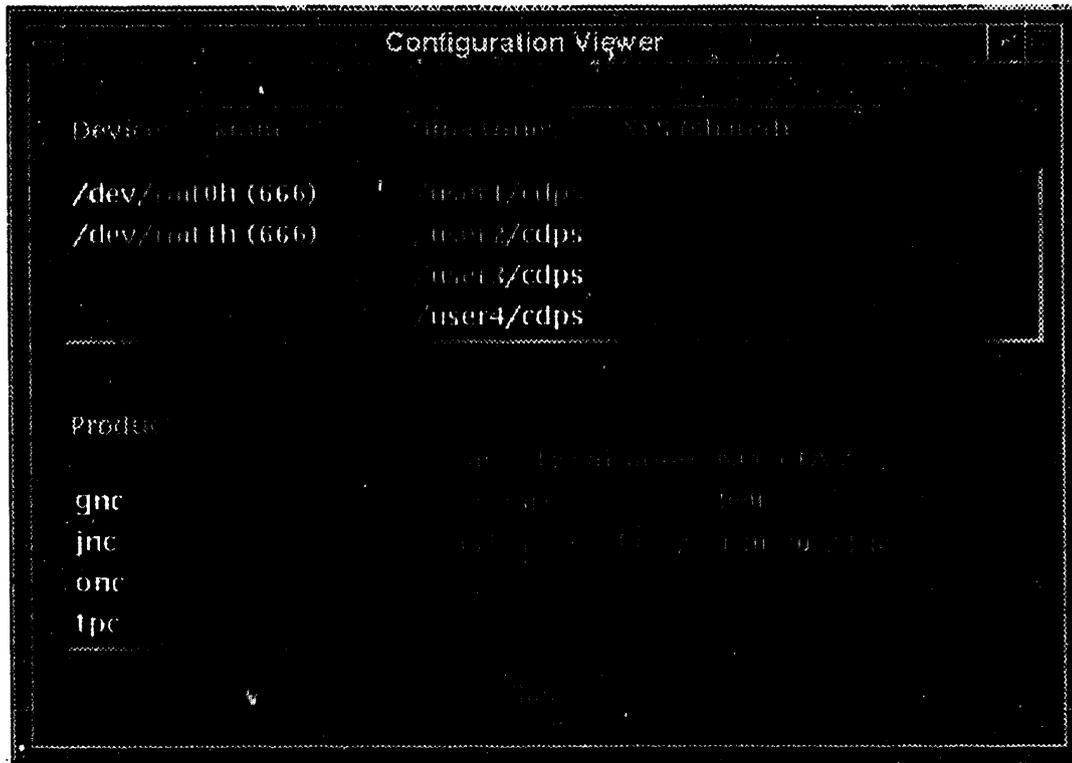


Figure 5-2. Configuration Viewer Window

To choose a device type, click and hold down the mouse button with the pointer over the **Devices** option menu button. The option menu then appears, shown for example in Figure 5-3. Select the type of device by releasing the mouse button when the desired device type is highlighted. The resulting list shows the names of all system devices of the specified type (for instance, all 8mm tape drives or all CD-ROMs).

To choose a directory, click and hold down the mouse button with the pointer over the **Directories** option menu button. The option menu will appear, as shown in Figure 5-4. Select the directory by releasing the mouse button when the desired directory is highlighted. The resulting list shows the names of all system directories of the specified type. Only the NFS, SCC Transfer, and PDC Transfer directories are available for a CPS system.



Figure 5-3. Devices Option Menu

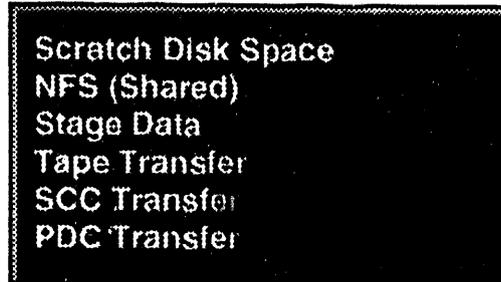


Figure 5-4. Directories Option Menu

Other data shown in the CONFIGURATION VIEWER window are the Site Classification, the Site ID, and the Ethernet Address of the site.

When you are finished viewing the configuration file, click on **Close** to exit the CONFIGURATION VIEWER window.

5.4 Backup/Restore System Files

The Backup/Restore System Files function allows you to copy CPS database files to an 8mm tape, for example, Media Log or Source Coverage Catalog. Critical files are defined as those essential to the system operation. The backup tape can be used to restore the files to the original directory or to another directory of your choice.

The BACKUP/RESTORE UTILITY window is shown in Figure 5-5. This window contains a message field indicating the current status of backup or restore operations. It contains buttons for backing up, restoring, and exiting the window.

Upon exiting the TAPE LOAD window, the screen returns to the BACKUP/RESTORE UTILITY window where you can perform other functions, such as file restoration.

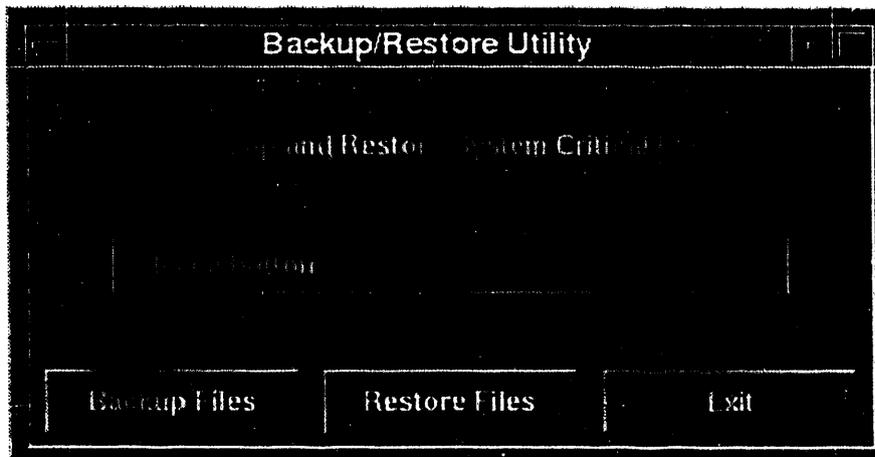


Figure 5-5. Backup/Restore Utility Window

To Backup critical CPS data files:

- 1- Select the **Backup/Restore System Files** menu item in the System Utilities menu.

The **BACKUP/RESTORE UTILITY** window then appears.

- 2- Click on **Backup Files**.

The **TAPE LOAD** dialog window opens with instructions to load a tape in the specified drive.

- 3- Load the tape in the drive.

CAUTION: All information currently on the tape will be overwritten by the backup files.

- 4- Click on **OK** to begin the backup, or **Cancel** to exit the **TAPE LOAD** window.

The message, **Backup completed**, then appears in the status area of the **BACKUP/RESTORE UTILITY** dialog box.

- 5- Use the **Exit** button to exit the **BACKUP/RESTORE UTILITY** window.

To Restore critical CPS files to the current system execution path:

- 1- Select the **Backup/Restore System Files** menu item in the System Utilities menu.

The **BACKUP/RESTORE UTILITY** window then appears.

- 2- Click on **Restore Files**.

The Restore dialog appears, containing an input field and a message field displaying the default path.

- 3- Click on **Default Path** to restore files to the current system execution path.

(To restore to a different path, see the hint that follows.)

(**Cancel** returns you to the **BACKUP/RESTORE UTILITY** window without performing a restore operation.)

The Tape Load dialog is displayed with instructions to load a tape in a specified drive.

CAUTION: Files with the same names in the default path will be overwritten by the backup files.

- 4- Click on **OK** to begin the restore, or **Cancel** to exit the **TAPE LOAD** dialog window.

A message indicating the status of the restore operation appears in the status area of the **BACKUP/RESTORE UTILITY** dialog box.

- 5- Use the **Exit** button to exit the **BACKUP/RESTORE UTILITY** window.

In some circumstances, you will need to restore the system files to a location other than the default path. To do this, you need to specify a user path, as described in the following hint:

Hint About Restoring Files Through the User Path:

In the RESTORE MENU ITEM dialog window, click in the input field and type the path to be used, for example,

/user1/cps/copy_1

Note: The path name must be a directory that already exists.

*After typing the path name, click on **User Path**. The TAPE LOAD dialog window opens with instructions to load a tape in a specified drive. Complete the restore operation in the same manner as previously described in Steps 4 and 5 for the default path restoration.*

5.5 Rebuild Source Coverage Catalog Files

The Rebuild SCC function allows you to rebuild the Source Coverage Catalog for a selected product. This function can be used for any product, but it is required for products that are determined by CPS to be inaccurate. The SCC for a product is marked as inaccurate if either of the following toggle actions happen:

- 1) The status flag for a media log entry is toggled from USABLE to UNUSABLE and the CD-ROM or tape contributes to the SCC.
- 2) The status flag for a media log entry is toggled from UNUSABLE to USABLE.

The REBUILD SCC dialog window lists all products that CPS has marked as inaccurate. The CPS does not allow task execution for a product until its respective SCC is rebuilt. The REBUILD SCC dialog window is shown in Figure 5-6.

The process of rebuilding the SCC for a product consists of reading chronologically (by scan date) all entries in the media log for a product (skipping those marked as UNUSABLE) and adding the relevant data to the SCC.

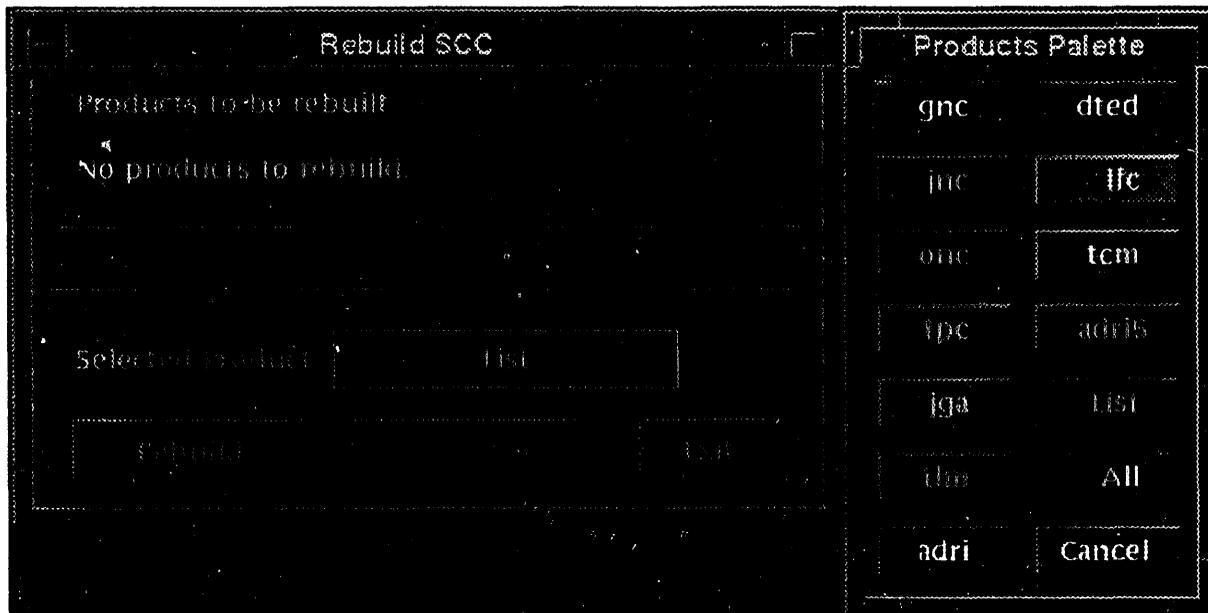


Figure 5-6. Rebuild SCC Dialog Window

To Rebuild SCC:

- 1- Select the **Rebuild Source Coverage Catalog (SCC)** menu item from the System Utilities menu (Figure 5-1).

The **REBUILD SCC** dialog window then appears.

- 2- Click on **Select Product** to display the **PRODUCTS** window.
- 3- In the **PRODUCTS** window, select product by clicking on the desired product button. Use **All** to rebuild all products. (By default, **List** is selected for rebuilding all products marked for rebuilding.)

- 4- Use the **Rebuild** button in the **REBUILD SCC** dialog window.

Status is updated in the **REBUILD SCC** window.

- 5- When the status message indicates the operation is complete, click on **Exit** to exit the **REBUILD SCC** window.

Hint About Inaccurate Products:

Although you cannot perform task execution on a product marked as inaccurate, other CPS operations that use SCC data may still be performed. The CPS operations that are not affected by inaccurate SCC data are:

*Scan Media
Define Task*

Thus, you do not have to rebuild SCC files for an inaccurate product, prior to scanning media or defining a task.

5.6 Import CDS Processed Data Catalog Files

When CDS informs CPS that CDS PDC files are available for copying, an **Alert** message is displayed. To begin the copy process, click on the **Import Processed Data Catalog (PDC)** menu item in the utility pull-down menu. The system displays an **Alert** message in the CPS Executive (Figure 2-8) when the copy completes successfully.

5.7 Export Source Coverage Catalog Files

When CPS SCC files have been updated, a copy should be made available for use by CDS. To do so, simply click on the **Export Source Coverage Catalog (SCC)** menu item in the utilities pull-down menu. When the coverage data are successfully copied, an **Alert** message is displayed (Figure 2-8). This function allows the CDS system to display current geographic coverage for CPS source data.

Note: When scanning operations are performed, it is necessary to execute the Export SCC files function at least once a day.

Appendix A: System Messages

Five types of system messages are defined for CPS (refer to Table A-1). As shown in the table, system messages are color-coded according to the message type. All messages, except diagnostic messages, appear on the system message line of the CPS Executive display. All system messages (including diagnostics) encountered in the current session are listed in the SYSTEM MESSAGE HISTORY LOG window. To view this window, click on the **Log** button on the second line of the CPS Executive display. Figure A-1 is an example of the SYSTEM MESSAGE HISTORY LOG window.

Table A-1. System Message Types

<u>Error Code</u>	<u>Type of Message</u>	<u>Color</u>	<u>Message Description</u>
D	Diagnostics	Green	Informational, but not essential
A	Alerts	White	Informational
W	Warnings	Yellow	Potential problem that may require user intervention
E	Errors	Red	System recoverable error
F	Fatal Errors	Red	Nonrecoverable error; user should restart system

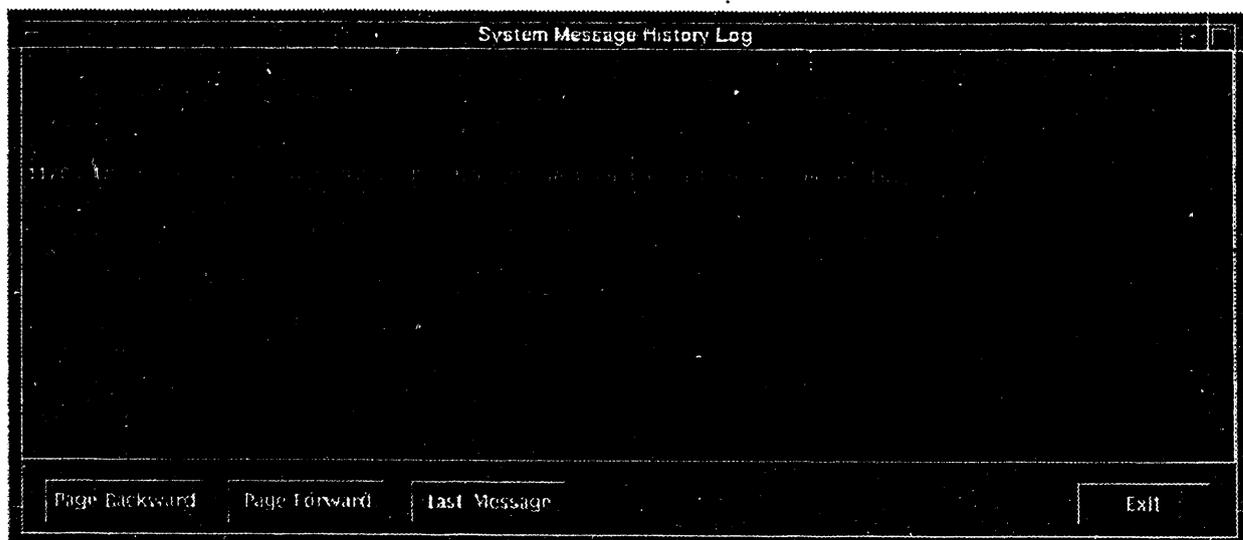


Figure A-1. System Message History Log Window

Appendix B: Glossary

B.1 List of Acronyms

<u>Acronym</u>	<u>Definition</u>
ADRI5	ARC Digital Taster Imagery (5 meters)
ADRI	ARC Digital Raster Imagery (10 meters)
ARC	Equal Arc-second Raster Chart/Map
CDPS	CMS Data Production System
CDROM	CD-ROM, Compact Disk Read-Only Memory
CDS	CMS Distribution Subsystem
CMS	Common Mapping Standard
CPS	CMS Preprocessing Subsystem
DAC	Device Allocation Control
DTED	Digital Terrain Elevation Data
EOD	Erasable Optical Disk
GNC	Global Navigation Chart
GUI	Graphical User Interface
ICD	Interface Control Document
IDL	International Date Line
JNC	Jet Navigation Chart
JGA	Joint Operations Graphics - Air
LFC	Low Flying Chart
MSS IIA	Mission Support System IIA
NFS	Network File System
ONC	Operational Navigation Chart
OSF	Open Software Foundation
PDC	Processed Data Catalog
PFF	Partial Frames Flag
SCC	Source Coverage Catalog
TCM	TLM (100 meters)

<u>Acronym</u>	<u>Definition</u>
TLM	Topographic Line Map
TPC	Tactical Pilotage Chart
WWMCS	World Wide Media Cell Database

B.2 Definitions of Frequently Used Terms

<u>Term</u>	<u>Definition</u>
Cascade menu	A pull-down menu within another pull-down menu (not currently used in the CDPS).
Click	Act of rapidly pressing and releasing one of the buttons located on the mouse.
Degraded mode	Mode in which CPS and CDS have no socket connection for transferring frames.
Device box	Another name for pushbuttons on the SCAN MEDIA window, each indicating a specific device (CD-ROM or 8mm tape).
Display	See Window.
Dragging	Act of pressing and holding down the first mouse button while moving the mouse.
Frame	Unit of distribution for CMS data.
Icon	Window that has been shrunk into a small button on the display for conserving space.
Media Locator	Label assigned to each CD-ROM or tape in the Media Log that uniquely identifies that media. The media locator identifies the media type (CD-ROM or 8mm tape), the product type of the source data, and the unique number of the media.
Media Log	An alphanumeric database that contains a historical record of all media scanned by the CPS.
Motif	Commercial toolkit of graphical functions for writing applications using X Windows.
Mouse	Device used to move the pointer across the screen for selecting items and moving windows.

<u>Term</u>	<u>Definition</u>
Option menu button	One that looks like a pushbutton, except it has a minus sign that appears three-dimensional to the right of the button text.
Pane	A portion of a window that can be resized by the user.
Pointer	Screen image controlled by the mouse to allow user interaction with applications running in X Windows.
Pop-up menu	Menu displayed when the right mouse button is depressed (not currently used in the CDPS)
Preprocessing	CPS function for converting data in various formats to the CMS format.
Processed data	Source data that has been converted by CPS (preprocessed) to the CMS frame file format.
Processed Data Archive	Collection of EODs and 8mm tapes that store CMS frame data.
Processed Data Catalog	Database containing coverage information about the processed CMS data that are available.
Pull-down menu	One activated by pressing the left mouse button and dragging the pointer to highlight or outline the desired selection.
Pushbutton	Generally associated with a single action. Activated by clicking on it with the mouse.
Radio button	Set like a toggle button; click on diamond or text to change diamond color; can only be reset by choosing another radio button from the group.
Root Window	Background against which all other windows are displayed. Also, known as the desktop.
Separator line	Horizontal line often used on menus to separate items into similar groupings.
Socket	A program-level interface for interprocess communication.
Source Coverage Catalog	A database containing coverage information about the source data that are available for preprocessing.
Source Data Archive	Digital map, imagery, and elevation data available for preprocessing. The data are available in various formats and contained on various media types.

<u>Term</u>	<u>Definition</u>
Task Definition	Process of selecting source data to be preprocessed.
Task Number	Unique number assigned to a task when created.
Toggle button	Used to set a state or ON or OFF; in appearance a small square pushbutton with text label to the right.
Unix	Operating system that controls the computer and translates user commands into commands the computer understands.
Widget	An object within a screen display (such as a toggle button).
Window	Region on the screen used to display information to the user.
X Windows	Network-based graphical interface developed by MIT in 1984.
World Wide Media Cell Database	A database that geographically partitions the world into areas of CMS data coverage that fit on an EOD side.

DISTRIBUTION

**No. of
Copies**

**No. of
Copies**

**2 DOE Office of Scientific
and Technical Information**

Onsite

Offsite

5 Pacific Northwest Laboratory

**6 Lt. Marc Fisher
ESC/YVD
SMEF 3 Bldg.
Hanscom AFB, MA 01731-5000**

**D. R. Adams (2) K7-28
Publishing Coordination
Technical Report Files (2)**

END

DATE

FILMED

3/22/94

