

# SysWorks

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## System Management Guide

Order Number SWRK-SMG-35

**August 2009**

This manual provides information on OpenVMS system management using SysWorks™.

<b>Revision/Update Information:</b>	This manual supercedes the SysWorks™ V3.4-1 System Management Guide
<b>Operating System:</b>	OpenVMS VAX V7.2 or higher; OpenVMS Alpha V7.2 or higher; DECwindows/Motif V1.2-3 or higher
<b>Software Version:</b>	SysWorks™ V3.5

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## Send Us Your Comments

We welcome your comments on this manual or any SysWorks manual. If you have suggestions for improvements or find any errors, please indicate the chapter, section and page number (if available). Your input is valuable in improving future releases of our documentation.

You can send comments to us in the following ways:

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- **Phone**—+61 (03) 9411 4411
- **FAX** —+61 (03) 9411 4499
- **Postal service**

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## Preface

This manual provides information on OpenVMS system management using SysWorks™.

### Intended Audience

This manual is intended for OpenVMS system managers who use SysWorks™ to assist in system management and who have a good working knowledge of the underlying Digital products.

### Conventions

The following conventions are used in this document:

Conventions	Description
<code>Ctrl/X</code>	A sequence such as <code>Ctrl/X</code> indicates that you must hold down the key labeled <code>Ctrl</code> while you press another key or a pointing device button.
<code>[]</code>	In format descriptions, brackets indicate that whatever is enclosed is optional; you can select none, one or all of the choices. In system prompts indicates the default value which will be assumed if the Return key is pressed without first entering a value.
<code>{}</code>	In format descriptions, braces surround a required choice of options; you must choose one of the options listed.
<code> </code>	In format descriptions, vertical bars separate the options. If the options are enclosed in brackets (i.e. <code>[]</code> ) you can select none, one or all of the choices. If the options are enclosed in braces (i.e. <code>{}</code> ) you must choose one of the options listed.
<code>()</code>	In system prompts, parenthesis indicate the list of values one of which may be entered. The values are separated by a forward slash "/"
<code>...</code>	An elipsis indicates that a value within a range may be chosen or a syntax repeated. A range may be indicated by a pair of end values, or an end value and an end keyword. For example <code>Disk quota (0..unlimited)</code> indicates that the keyword <code>unlimited</code> may be used to represent the highest possible disk quota.
<i>italic text</i>	Italicized words and letters indicate that you should substitute a word or value of your choice.
UPPERCASE TEXT	Uppercase letters indicate the name of a command or routine.
monospace text	Normal monospace text indicates system prompts and output.
<b>bold monospace text</b>	Bold monospace text indicates user responses to system prompts.

---

<b>Conventions</b>	<b>Description</b>
<i>bold monospace</i> <i>italic text</i>	Bold monospace italic text indicates user responses to system prompts which need appropriate value substitution.
mouse	The term <i>mouse</i> is used to refer to any pointing device such as a mouse, a puck or a stylus.
MB1, MB2, MB3	MB1 indicates the left mouse button, MB2 indicates the middle mouse button, and MB3 indicates the right mouse button. (The buttons can be redefined by the user.)

---

Unless otherwise noted, all numeric values are represented in decimal notation.

# Part I

---

## Managing Meta objects

The following chapters describe how to manage systems objects.



---

## Introduction

A user who is a member of the `system_manager` system user class gets the pulldown menu illustrated in Figure 1-1 when they select the Manage menu from their session manager.

**Figure 1-1 Manage Pulldown Menu for System Managers**

---





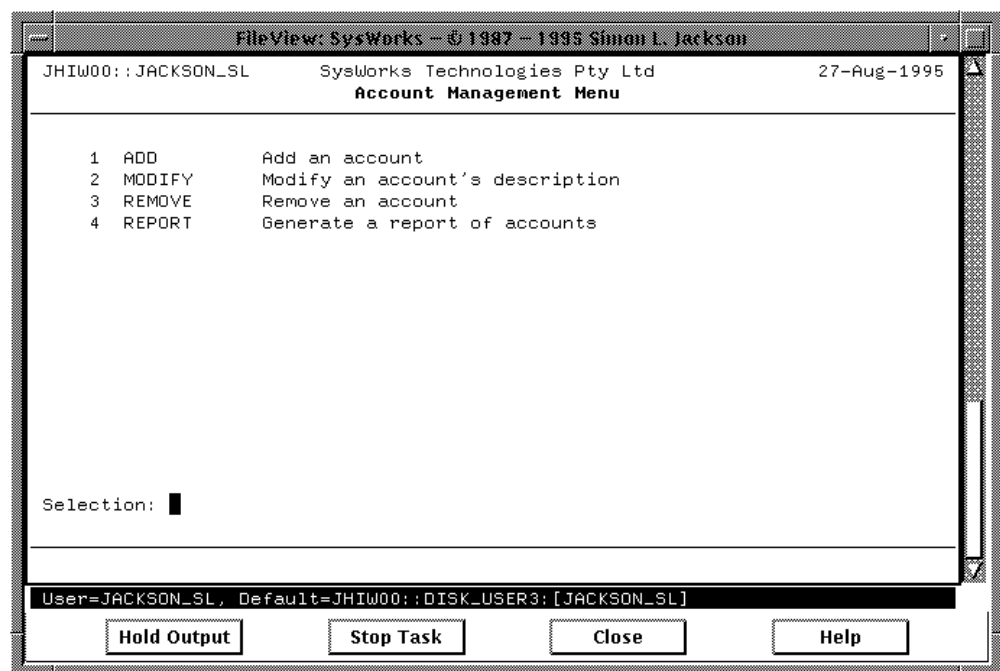
---

## Managing Accounts

This chapter describes how to use SysWorks to manage accounts.

The account management menu is selected using **Manage** ⇒ **Accounts** from the session manager. It displays the menu illustrated in Figure 2–1 and prompts for a selection.

**Figure 2–1 Account Management Menu**



---

### 2.1 Add an account

This task adds a new account to the network.

Example:

Account:

## 2.2 Modify an account's description

This task modifies an accounts details.

Example:

Account:

## 2.3 Remove an account

This task removes an account from the network.

Example:

Account:

## 2.4 Generate a report about accounts

This task generates a report about accounts.

Example:

Output [SYS\$OUTPUT]:

---

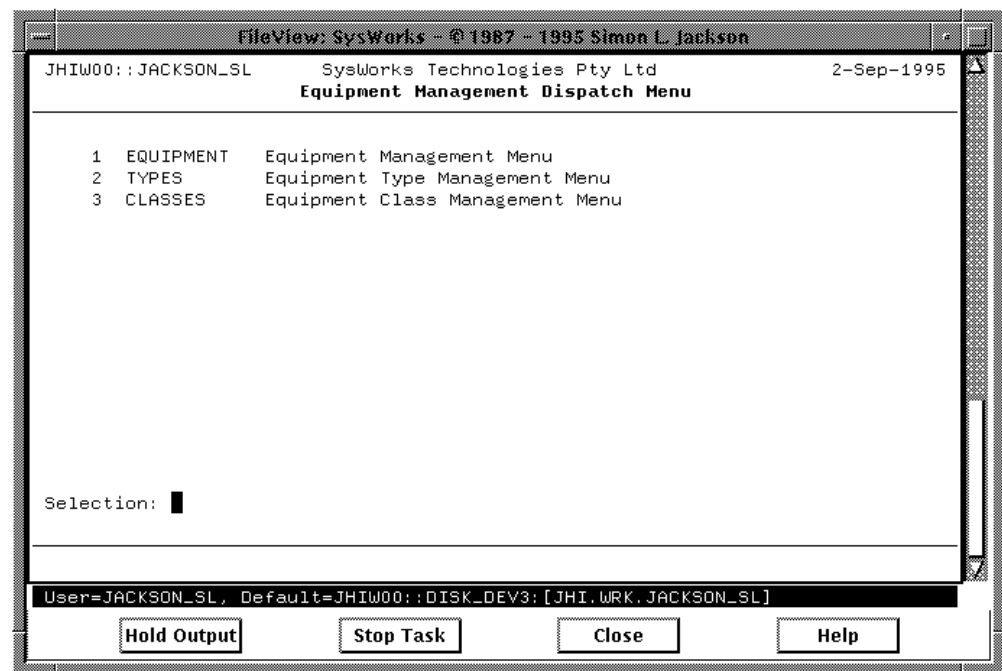
## Managing Equipment

This chapter describes how to use SysWorks to manage equipment.

The equipment management dispatch menu is selected using **Manage** ⇒ **Equipment** from the session manager. It displays the menu illustrated in Figure 3–1 and prompts for a selection.

**Figure 3–1** Equipment Management Dispatch Menu

---

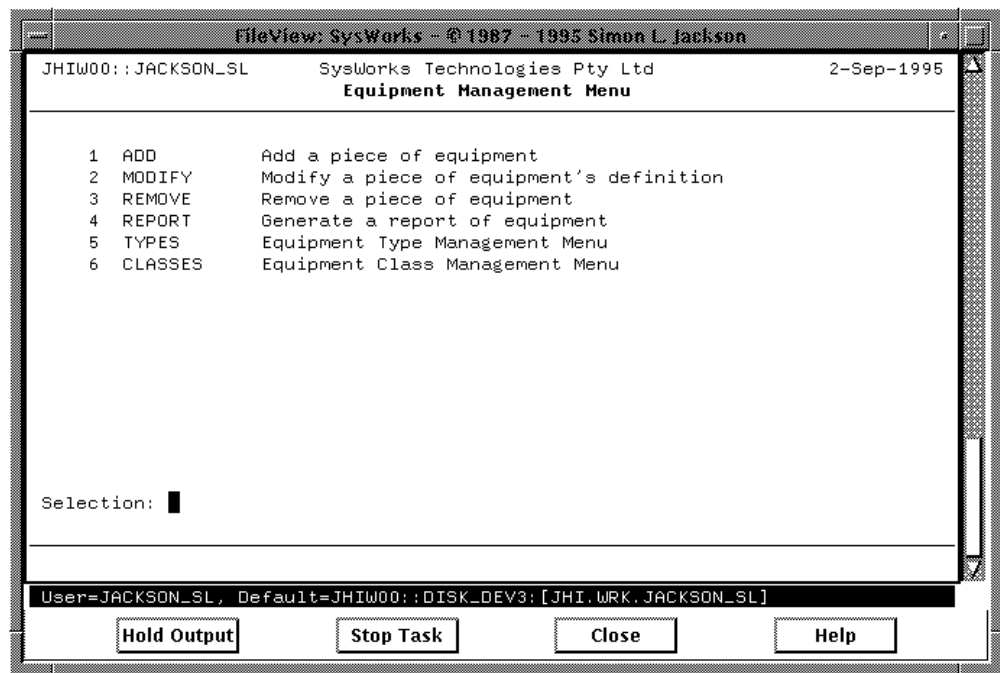


---

### 3.1 Managing Equipment

The equipment management menu is selected by entering `EQUIPMENT` at the selection prompt of the equipment management dispatch menu. It displays the menu illustrated in Figure 3–2 and prompts for a selection.

**Figure 3–2 Equipment Management Menu**



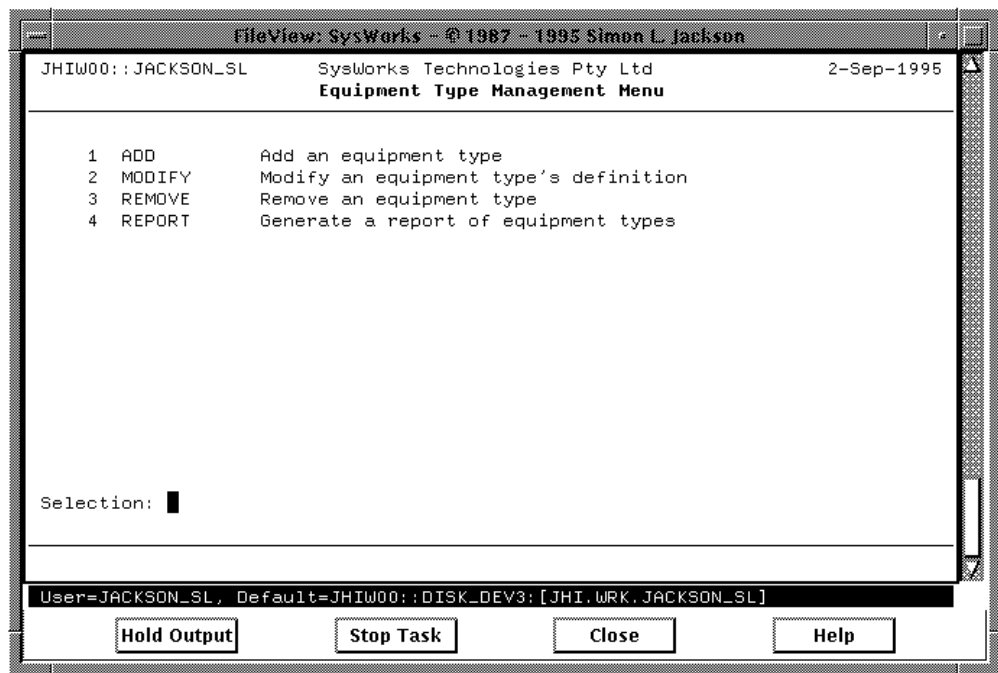
## 3.2 Managing Equipment Types

The equipment type management menu is selected by entering `TYPES` at the selection prompt of the equipment management dispatch menu. It displays the menu illustrated in Figure 3–3 and prompts for a selection.

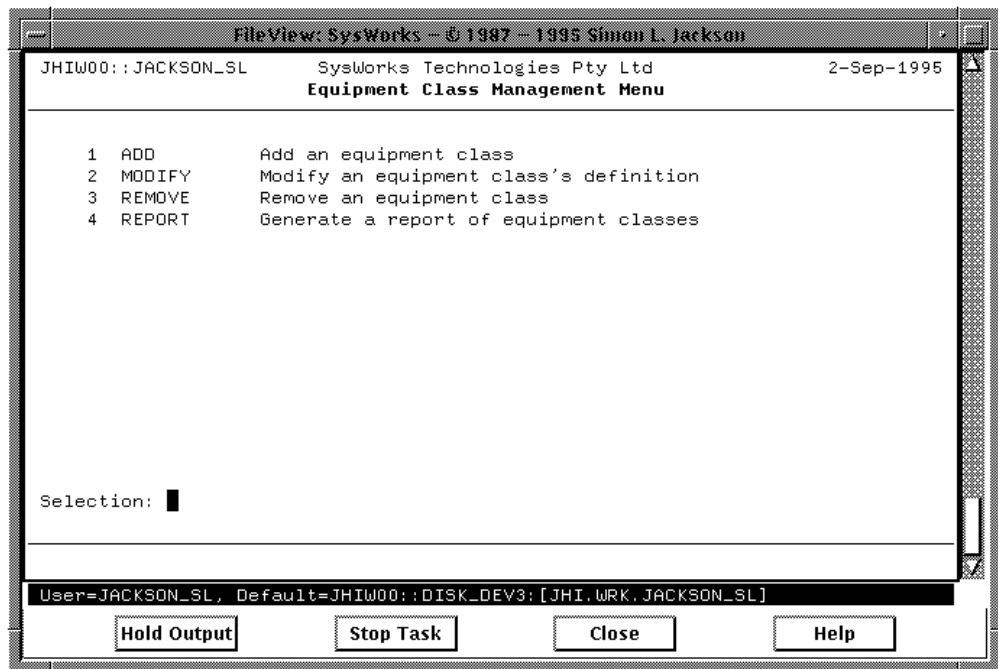
## 3.3 Managing Equipment Classes

The equipment class management menu is selected by entering `CLASSES` at the selection prompt of the equipment management dispatch menu. It displays the menu illustrated in Figure 3–4 and prompts for a selection.

**Figure 3-3 Equipment Type Management Menu**



**Figure 3-4 Equipment Class Management Menu**





---

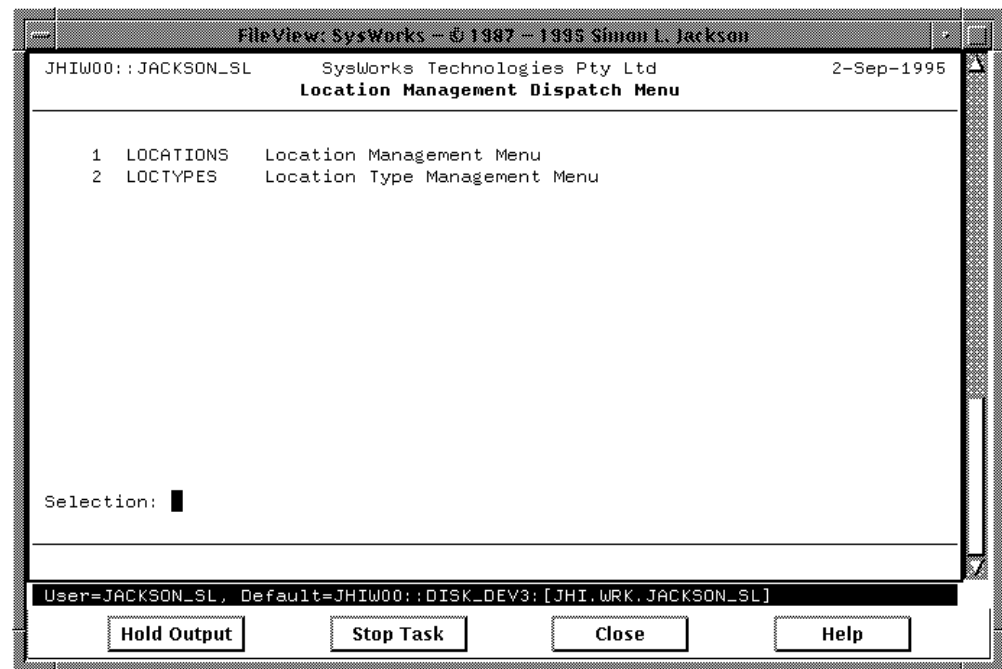
## Managing Locations

This chapter describes how to use SysWorks to manage locations and location types.

The location management dispatch menu is selected using **Manage** ⇒ **Locations** from the session manager. It displays the menu illustrated in Figure 4–2 and prompts for a selection.

**Figure 4–1** Location Management Dispatch Menu

---

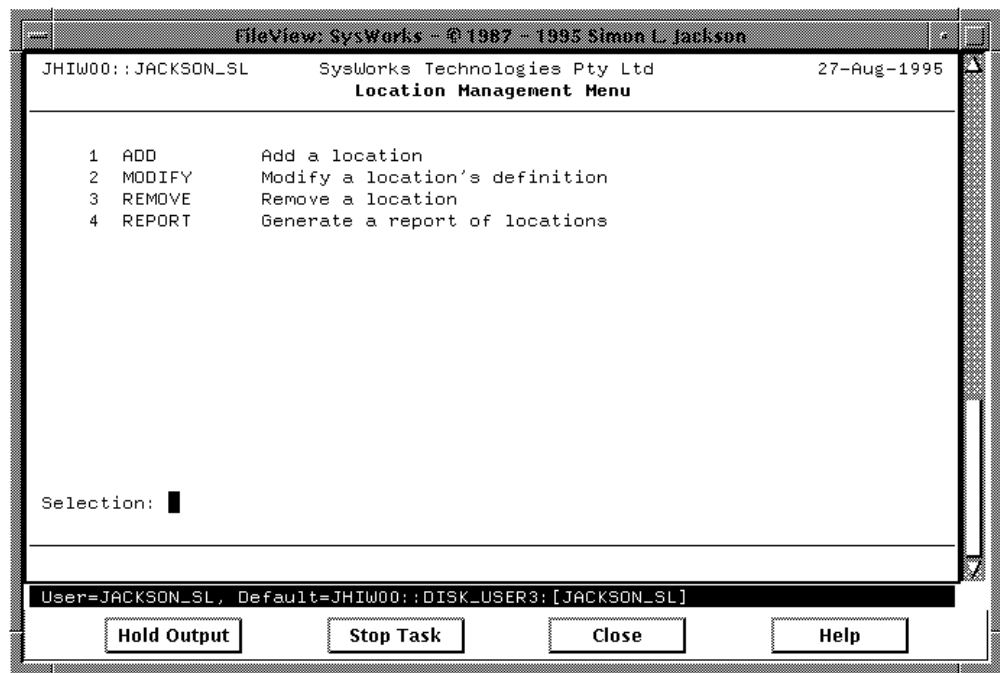


---

### 4.1 Managing Locations

The location management menu is selected using **Manage** ⇒ **Locations** from the session manager and selecting the `LOCATIONS` menu. It displays the menu illustrated in Figure 4–2 and prompts for a selection.

**Figure 4-2 Location Management Menu**



#### **4.1.1 Add a location**

This task adds a new location to the network.

Example:

Location:

#### **4.1.2 Modify a location's definition**

This task modifies a locations details.

Example:

Location:

#### **4.1.3 Remove a location**

This task removes a location from the network.

Example:

Location:

#### **4.1.4 Generate a report about locations**

This task generates a report about locations.

Example:

Output [SYS\$OUTPUT]:



## 4.2 Managing Location Types

The location management menu is selected using **Manage** ⇒ **Locations** from the session manager and selecting the `LOCTYPES` menu. It displays the menu illustrated in Figure 4–3 and prompts for a selection.

**Figure 4–3 Location Type Management Menu**

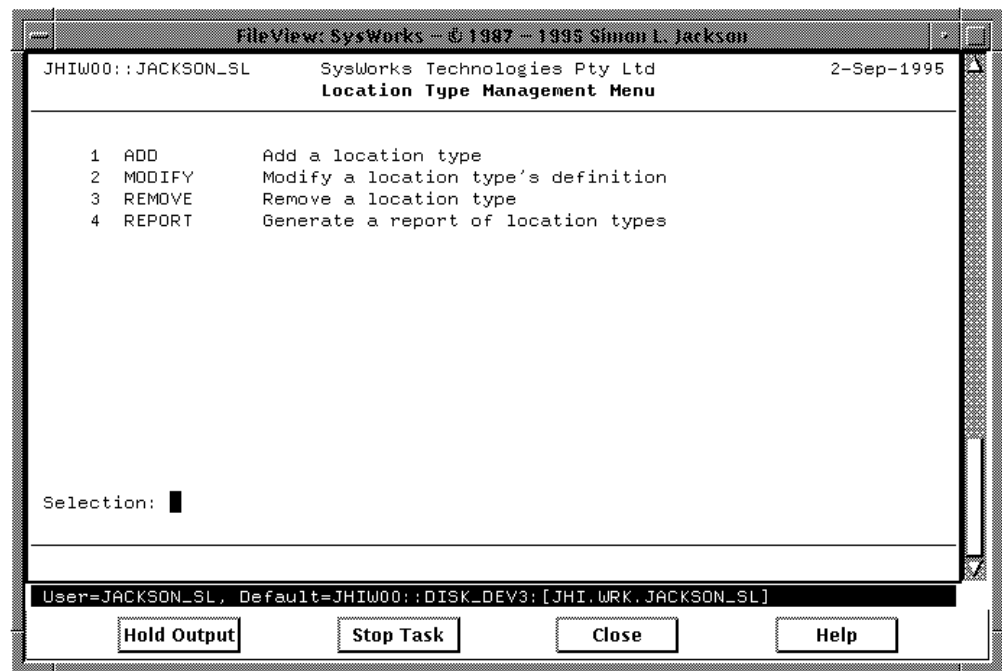


Table 4–1 lists initial and permanent locations types.

**Table 4–1 Location Types**

Location Type	Usage
ADDRESS	An address
BUILDING	A building
CITY	A city
COUNTRY	A country
FLOOR	A floor of building
GENERIC	Generic location type
MAILSTOP	A mailstop
POSTCODE	A postcode
PROVINCE	A province
ROOM	A room of floor
SITE	A site

**Table 4–1 (Cont.) Location Types**

Location Type	Usage
STATE	A state
SUBURB	A suburb
TOWN	A town
UNKNOWN	An unknown location Type

### 4.2.1 Add a location type

This task adds a new location type to the network.

Example:

Location type:

### 4.2.2 Modify a location type's definition

This task modifies a location types details.

Example:

Location type:

### 4.2.3 Remove a location type

This task removes a location type from the network.

Example:

Location type:

### 4.2.4 Generate a report about location types

This task generates a report about location types.

Example:

```
Cluster [JHIA]:
Output [SYS$OUTPUT]:
%SWRK-I-FROMNODE, Output from node JHIA

Code          Description
-----
ADDRESS       General address
BUILDING      Generic building
CITY          Generic city
COUNTRY       Generic country
FLOOR         Generic floor of building
GENERIC       Generic Location Type
MAILSTOP      Generic mailstop
POSTCODE      Generic postcode
PROVINCE      Generic province
ROOM          Generic room of floor
SITE          Generic site
STATE         Generic state
SUBURB        Generic suburb
TOWN          Generic town
UNKNOWN       Unknown Location Type

A total of 15 of location types
%SWRK-I-FROMNODE, Output from node JHIW00
```

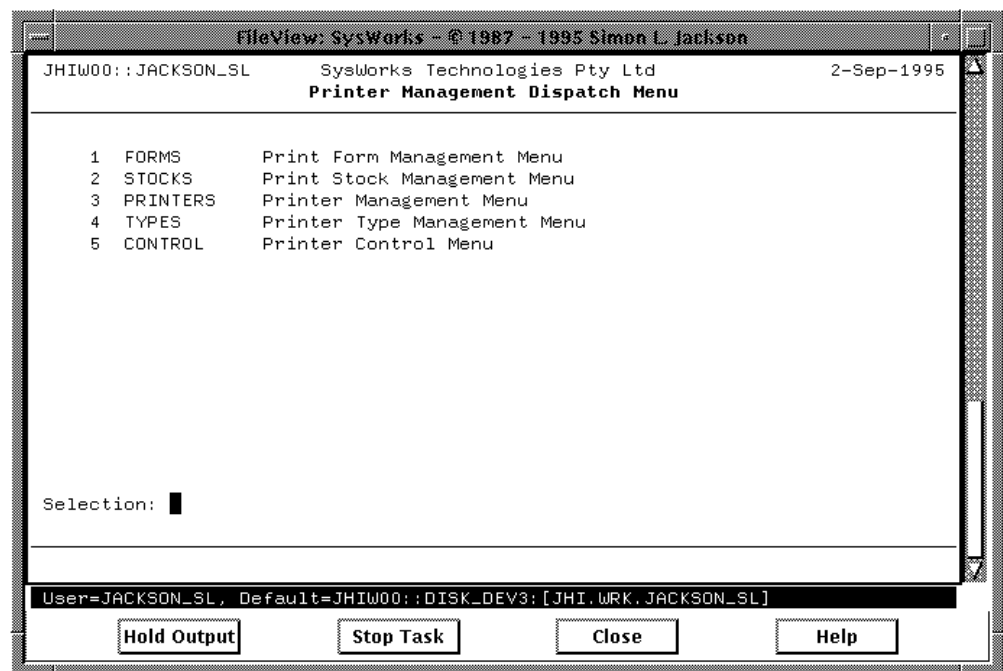
---

## Managing Printers

This chapter describes how to use SysWorks to manage printers.

The printer management dispatch menu is selected using **Manage** ⇒ **Printers** from the session manager. It displays the menu illustrated in Figure 5-1 and prompts for a selection.

**Figure 5-1 Printer Management Dispatch Menu**

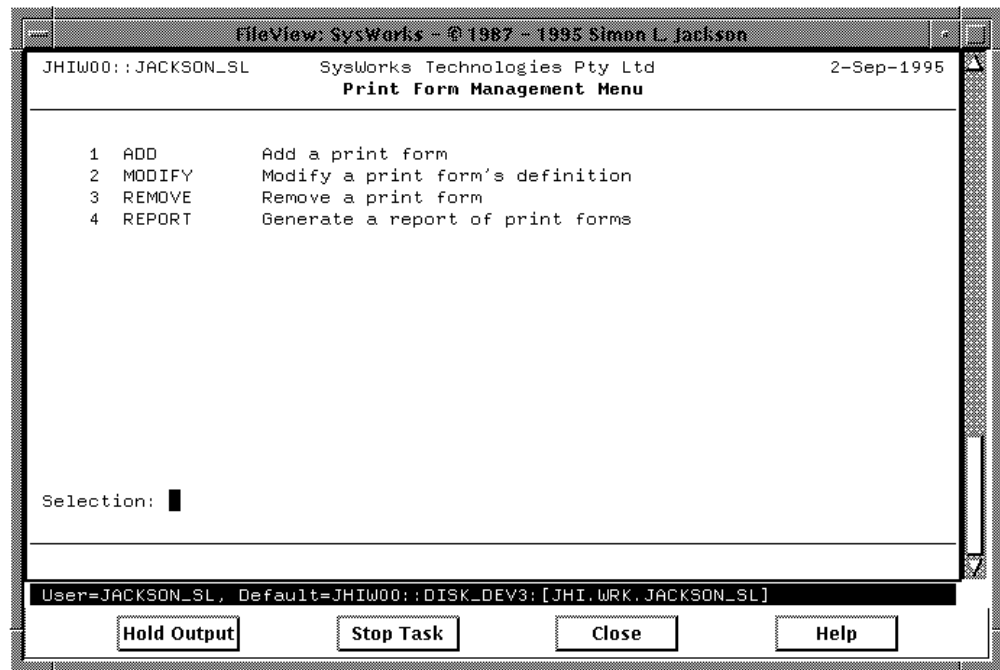


---

### 5.1 Managing Print Forms

The print form management menu is selected by entering `FORMS` at the selection prompt of the printer management dispatch menu. It displays the menu illustrated in Figure 5-2 and prompts for a selection.

**Figure 5-2 Printer Form Management Menu**



## 5.2 Managing Print Stocks

The print stock management menu is selected by entering STOCKS at the selection prompt of the printer management dispatch menu. It displays the menu illustrated in Figure 5-3 and prompts for a selection.

## 5.3 Managing Printers

The printer management menu is selected by entering PRINTERS at the selection prompt of the printer management dispatch menu. It displays the menu illustrated in Figure 5-4 and prompts for a selection.

## 5.4 Managing Printer Types

The printer type management menu is selected by entering TYPES at the selection prompt of the printer management dispatch menu. It displays the menu illustrated in Figure 5-5 and prompts for a selection.

Figure 5-3 Print Stock Management Menu

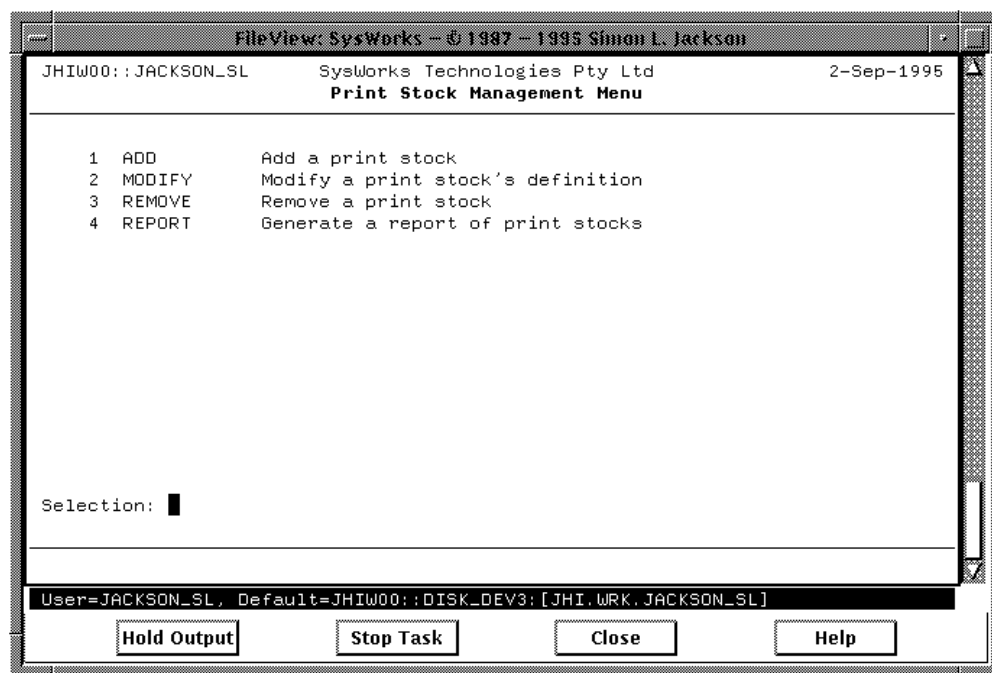
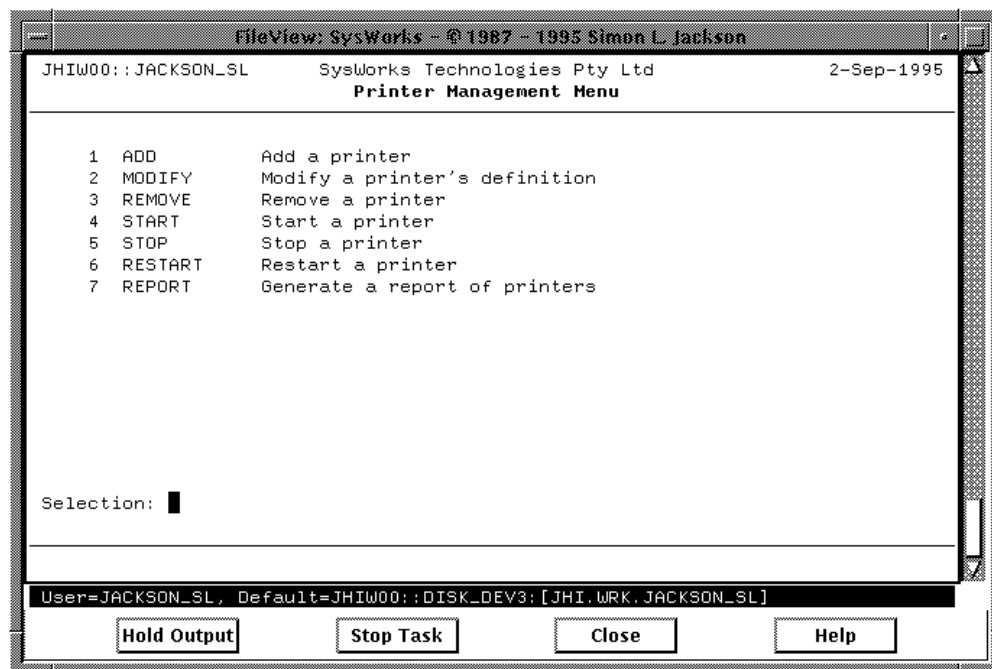
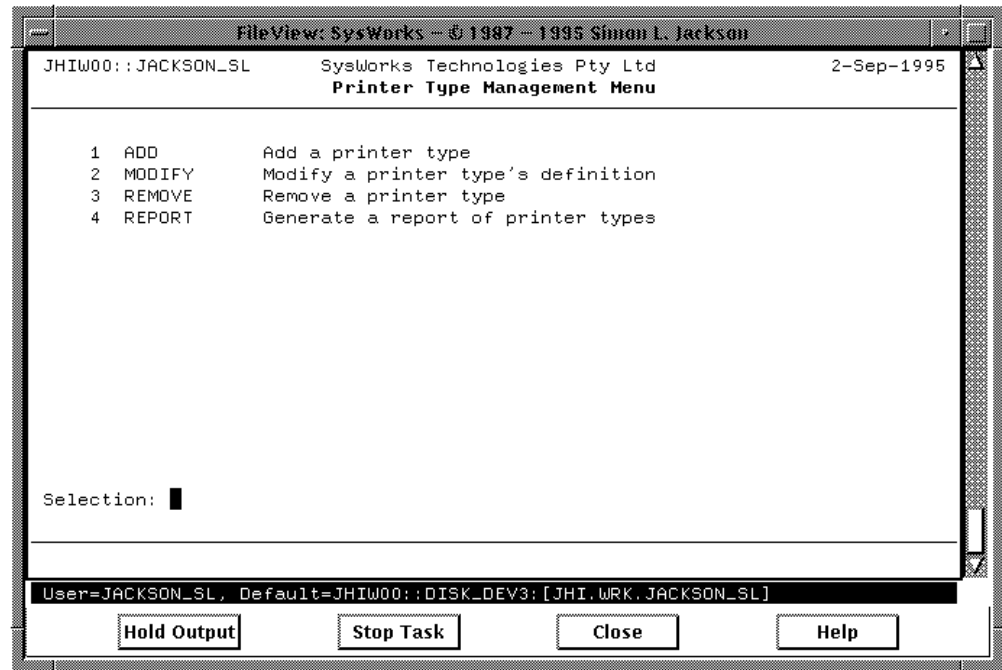


Figure 5-4 Printer Management Menu



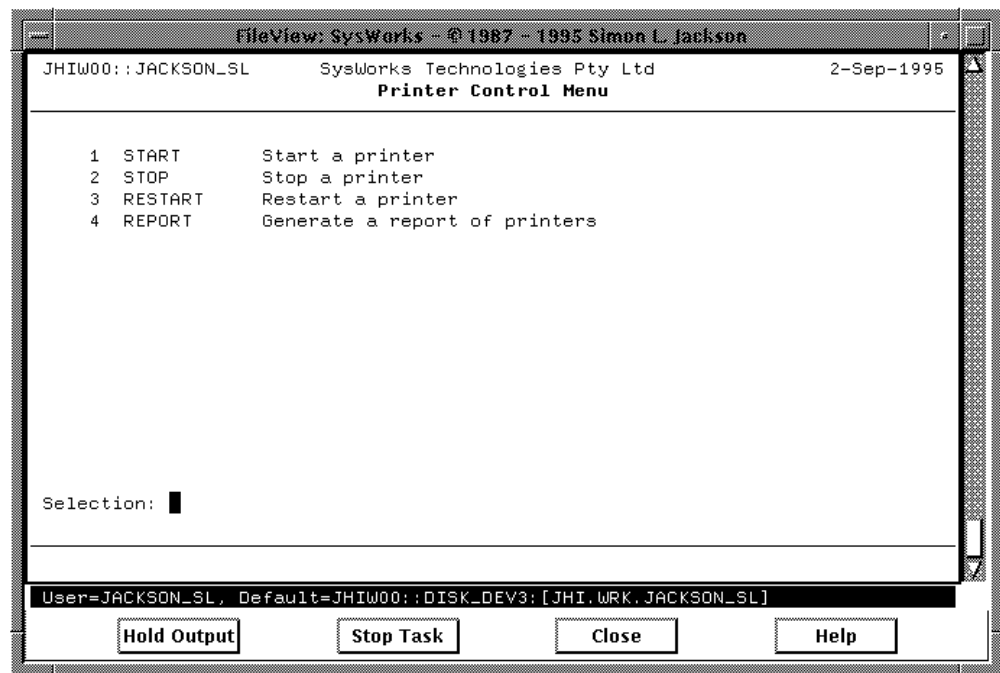
## 5.5 Controlling Printers

**Figure 5-5 Printer Type Management Menu**



The printer control menu is selected by entering CONTROL at the selection prompt of the printer management dispatch menu. It displays the menu illustrated in Figure 5-6 and prompts for a selection.

Figure 5-6 Printer Control Menu







---

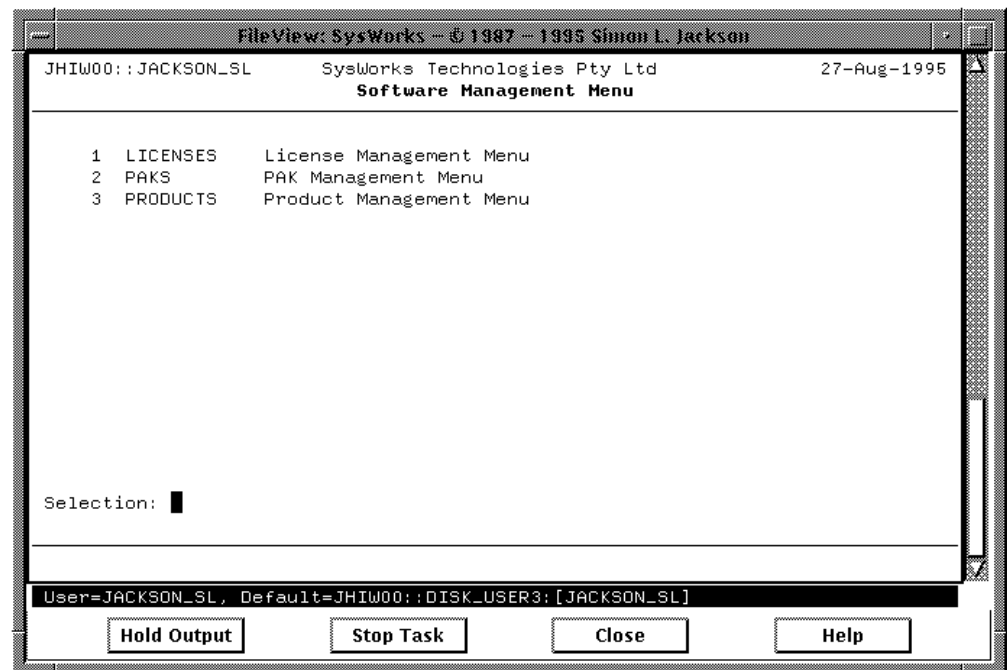
## Managing Software

This chapter describes how to use SysWorks to manage software.

### 6.1 Overview

The Software Management Menu is selected using **Manage** ⇒ **Software** from the session manager. It displays the menu illustrated in Figure 6–1 and prompts for a selection.

**Figure 6–1 Software Management Menu**



SysWorks manages software using the following objects:

- License
- PAK
- Product

### 6.1.1 Meta objects

Brief descriptions of these meta objects are given below. More detailed descriptions are available in the *SysWorks Model Reference*.

A **product** is a set of software purchased from a **supplier** and installed on a computer. For software created or modified for specific purposes, an **application** is used. See the *SysWorks Application Development Guide* for details about how to develop applications.

A **license** is a mechanism for products to determine if they can be used by a computer or user. Some licenses cover more than one product and similarly a product can check more than one license to validate its usage. Note that some products allow different levels of access based on different licenses.

A **PAK** is a mechanism for loading a license onto one or more computers. A PAK consists of the supplier code, the license name, the authorisation code (similar to a serial number) and a checksum.

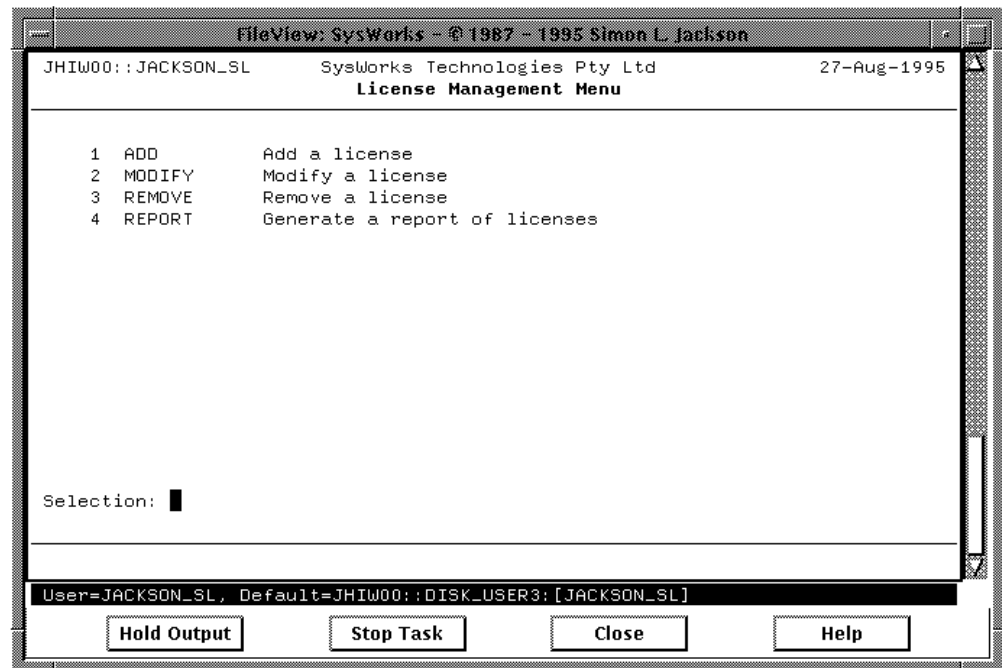
## 6.2 Managing Licenses

This chapter describes how to use SysWorks to manage licenses.

Since most licenses are already registered in SysWorks, it is not generally necessary to manage licenses.

The License Management Menu is selected from the Software Management Menu. It displays the menu illustrated in Figure 6–2 and prompts for a selection.

**Figure 6–2 License Management Menu**



### 6.2.1 Add a license

This task adds a new account to the network.

Example:

Account :

### 6.2.2 Modify a license

This task modifies a licenses details.

Example:

Account :

### 6.2.3 Remove a license

This task removes a license from the network.

Example:

Account :

### 6.2.4 Generate a report about licenses

This task generates a report about licenses.

Example:

Output [SYS\$OUTPUT] :

## 6.3 Managing PAKs

This chapter describes how to use SysWorks to manage product authorisation keys (PAKs).

Since most PAKs are already registered in SysWorks, it is not generally necessary to manage PAKs.

The PAK Management Menu is selected from the Software Management Menu. It displays the menu illustrated in Figure 6–3 and prompts for a selection.

### 6.3.1 Add a PAK

This task adds a new account to the network.

Example:

Account :

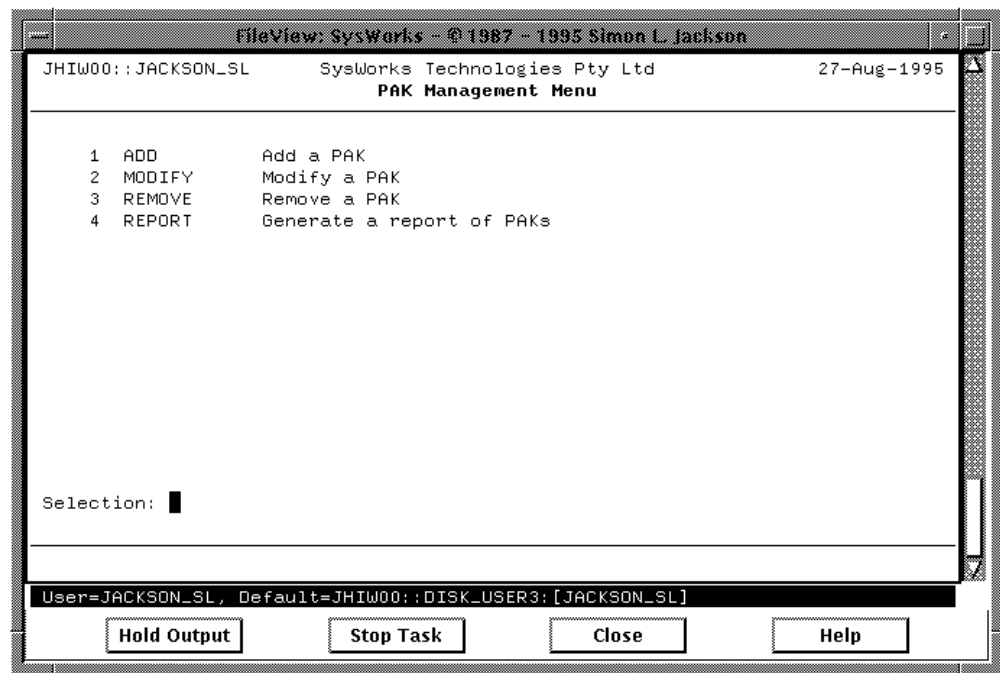
### 6.3.2 Modify a PAK

This task modifies a PAKs details.

Example:

Account :

**Figure 6–3 PAK Management Menu**



### 6.3.3 Remove a PAK

This task removes a PAK from the network.

Example:

Account:

### 6.3.4 Generate a report about PAKs

This task generates a report about PAKs.

Example:

Output [SYS\$OUTPUT]:

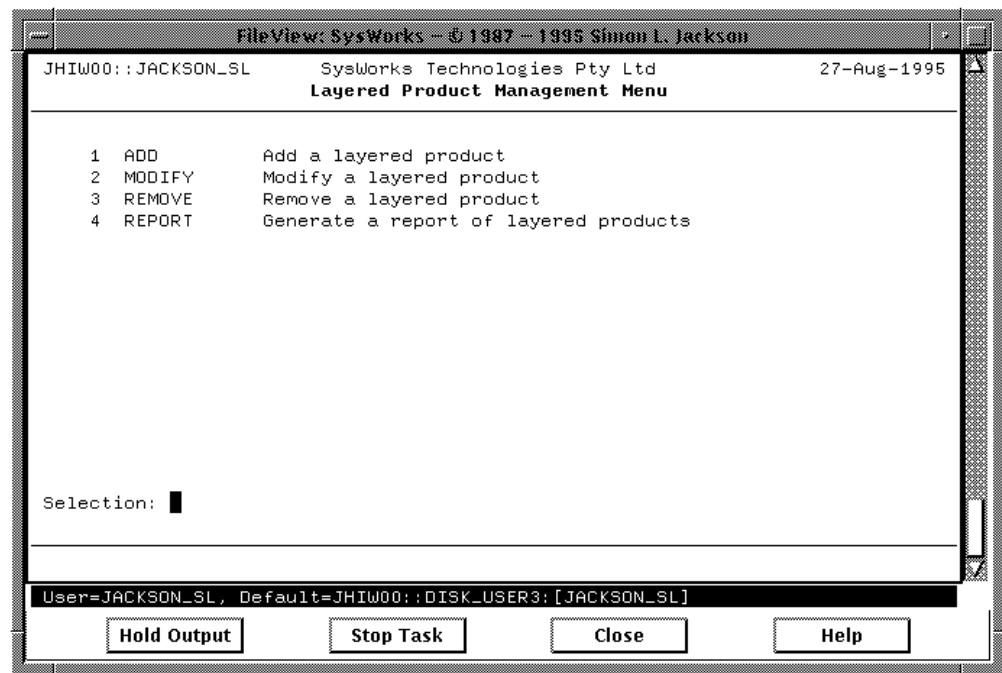
## 6.4 Managing Layered Products

This chapter describes how to use SysWorks to manage layered products.

Since most layered products are already registered in SysWorks, it is not generally necessary to manage layered products.

The Layered Product Management Menu is selected from the Software Management Menu. It displays the menu illustrated in Figure 6–4 and prompts for a selection.

**Figure 6-4 Layered Product Management Menu**



#### **6.4.1 Add a layered product**

This task adds a new account to the network.

Example:

Account:

#### **6.4.2 Modify a layered product**

This task modifies a layered products details.

Example:

Account:

#### **6.4.3 Remove a layered product**

This task removes a layered product from the network.

Example:

Account:

#### **6.4.4 Generate a report about layered products**

This task generates a report about layered products.

Example:

Output [SYS\$OUTPUT]:

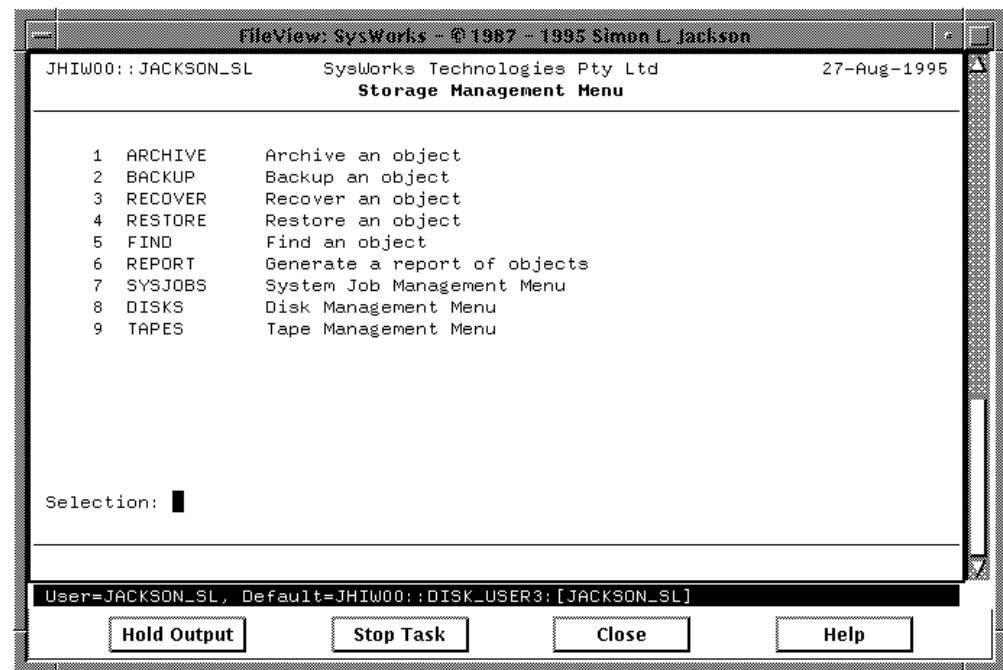


---

## Managing Storage

This chapter describes how to use SysWorks to manage storage. The storage management menu is selected using **Manage** ⇒ **Storage** from the session manager. It displays the menu illustrated in Figure 7-1 and prompts for a selection.

**Figure 7-1 Storage Management Menu**



---

### 7.1 Overview

SysWorks manages storage on disks and tapes using a number of objects. Those which are similar for all disks and tapes include:

- Device
- Device Type
- Media

- Media Type
- Volume
- Volume Set

Objects shared by disks tapes and other objects include:

- Equipment
- Equipment Type
- OpenVMS Device Type

Objects specific to tapes and removable disks include:

- Pool
- Save-set
- Storage Model
- System Job

Objects specific to disks include:

- Logical Disk
- Logical Sub-Disk
- Shadow Set (RAID-0)
- Stripe Set (RAID 1)

Other objects include:

- Catalog
- Journal

Standard operations include:

- Archive
- Backup
- Recover
- Report
- Restore

### 7.1.1 Meta objects

Brief descriptions of these meta objects are given below. More detailed descriptions are available in the *SysWorks Model Reference*.

A **device** is a piece of computer hardware and as such is also represented as equipment. Its includes information such as location, serial number and supplier etc.

A **device type** is the model for a device and as such is also represented an equipment type. Its description includes the OpenVMS device type (not to be confused with the SysWorks device type). SysWorks has a pre-installed list of all Digital disk and tape devices supported by OpenVMS.



Disk or tape **media** is the actual disk, diskette, tape cartridge, cassette or reel which is loaded into a device and initialized or mounted. Note that for fixed disk drives, the media is present inside the device. The media has a name or label which is usually affixed to its outer packaging.

The **media type** is the model for some media. Particular device types can use one or more media types and media types can be used by one or more device types. For instance, each newer model of a device type typically supports the media types of its previous models, although not always with the same functionality. An example is the TK70 tape drive (device type) which can read and write TK70 tapes (media type) while providing read only access to TK50 tapes (media type).

A **volume** is the information container placed on some media. A new media is initialized with a volume. Generally there is a one to one correspondence between a media and a volume. As such the volume name and the media name are the same. An exception to this model might be a software distribution package in which the same volume may exist on multiple media. A tape volume may have an expiry date at which it changes from the used state to the unused state.

A **volume set** is a set of two or more volumes which are bound together to form a larger storage container than a single volume. A volume set is referred to as a volume for most discussions.

A **logical disk** is a set of broadly related data spanning one or more disk volumes. For example SysWorks supports a user logical disk and a Pathworks logical disk. A logical disk is represented as a search list of logical sub-disks.

A **logical sub-disk** is a root directory on a disk volume which is placed in the search list which constitutes a logical disk.

A **save-set** is a special file created by a backup which contains the files which were backed up. With tape media a tape volume may contain one or more save sets. The last save set on the tape may be continue onto another tape i.e. a save-set may span two (or more) tape volumes. This practice is discouraged since it complicates storage management. By default, SysWorks creates one or more backup save-set for a single backup operation on a single tape volume.

A **catalog** is a list of the files placed in storage. When each save-set is created, the backup utility produces a journal of which files have been stored in the save set. SysWorks later reprocesses this journal to add entries to the catalog. When a tape volume is erased or reused (i.e. re-initialized), all file entries belonging to all save-sets which were on the volume are removed from the catalog. A catalog can be searched from a number of perspectives including file name and type or extension, directory name, application environment, group or user name, disk volume, disk device, save-set, tape volume etc.

A **pool** is a set of media from which media can be selected. Attributes include the default tape media name format (eg. BCK###) and last used (eg. 000). When tape media are added to a tape pool, the tape media name defaults to the next unused name (eg. BCK001).

A **storage model** describes a backup which is used regularly and is usually executed as a system job. Attributes include expiry interval (eg. 10 days, 40 days, 366 days).

A **system job** is an operation performed on a regular basis. It includes frequency (eg. daily, weekly, monthly), start window (eg. must start between 2am and 4am), finish window (eg. must finish before 8am) etc. The operation can be represented by a DCL command procedure or a storage model.

## 7.1.2 Operations

Brief descriptions of the operations relating to storage management are given below. More detailed descriptions are available in the *SysWorks Object Model Glossary*.

A **backup** makes copies of files onto removable media for storage. With SysWorks each backup operation creates one or more save-sets. Multiple save-sets are created when a backup spans more than one logical data structure. An example of this is when a disk volume is backed up - a disk volume may have multiple logical sub-disks so one save-set is created for each logical sub-disk. A backup may be based around an appropriate object including:

- Application environment
- Database
- Disk device
- Disk volume
- Environment
- File
- Group
- Logical disk
- User

An **archive** is a backup operation followed by a delete of all the files which were backed up.

A **recover** operation brings back files from storage. Where the files constitute a database, a roll forward may be used to recover the latest data.

A **restore** operation brings back a total set of files from storage. Where the files constitute a database, a roll backward to the database state at backup may be used.

## 7.2 Starting to use Storage

This section describes how to start using SysWorks storage management.

First you need to register all your tapes with SysWorks. To do this, use the Add a tape media task from the Tape Media Management Menu.

For tapes which are new or are being recycled (i.e. the existing contents can be destroyed) answer yes to the Initialize prompt.

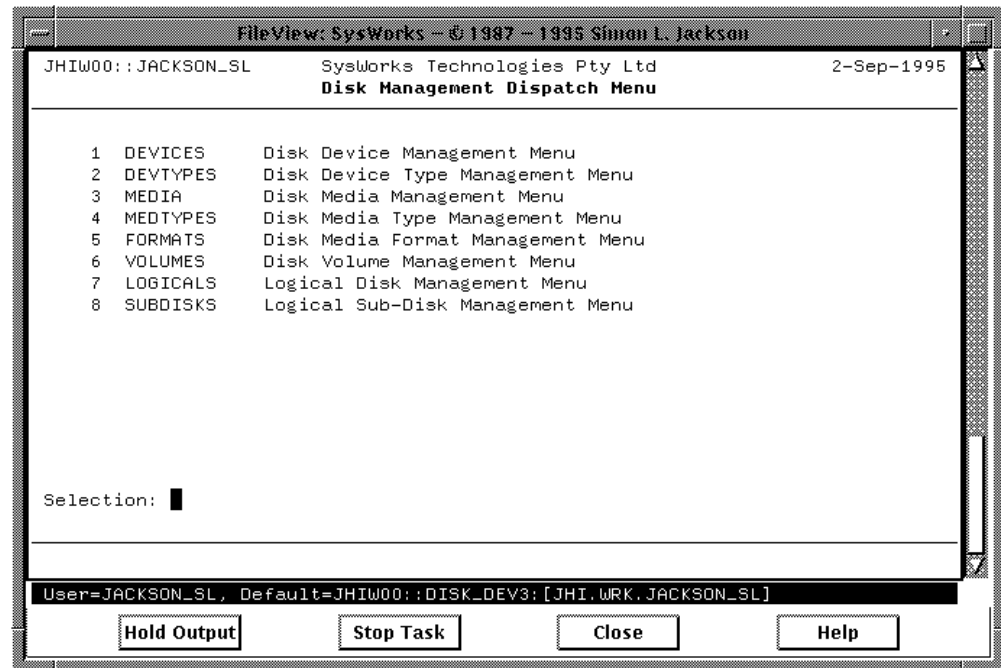
```
Tape pool [GENERAL]:  
Tape media [BCK001]:  
Tape volume [BCK001]:  
Initialize (Yes/No) [No]:  
State (Used/Offsite/Unused) [Used]:  
Expires (DD-MMM-YYYY/DDDD/Never) [30]:
```

## 7.3 Managing Disks

This chapter describes how to use SysWorks to manage disks.

The disk management dispatch menu is selected using **Manage** ⇒ **Disks** from the session manager or by using **Manage** ⇒ **Storage** from the session manager and selecting the DISKS menu. It displays the menu illustrated in Figure 7–2 and prompts for a selection.

**Figure 7–2 Disk Management Dispatch Menu**



### 7.3.1 Managing Disk Devices

The disk device management menu is selected by entering `DEVICES` at the selection prompt of the disk management dispatch menu. It displays the menu illustrated in Figure 7–3 and prompts for a selection.

### 7.3.2 Managing Disk Device Types

The disk device type management menu is selected by entering `DEVTYPES` at the selection prompt of the disk management dispatch menu. It displays the menu illustrated in Figure 7–4 and prompts for a selection.

Figure 7-3 Disk Device Management Menu

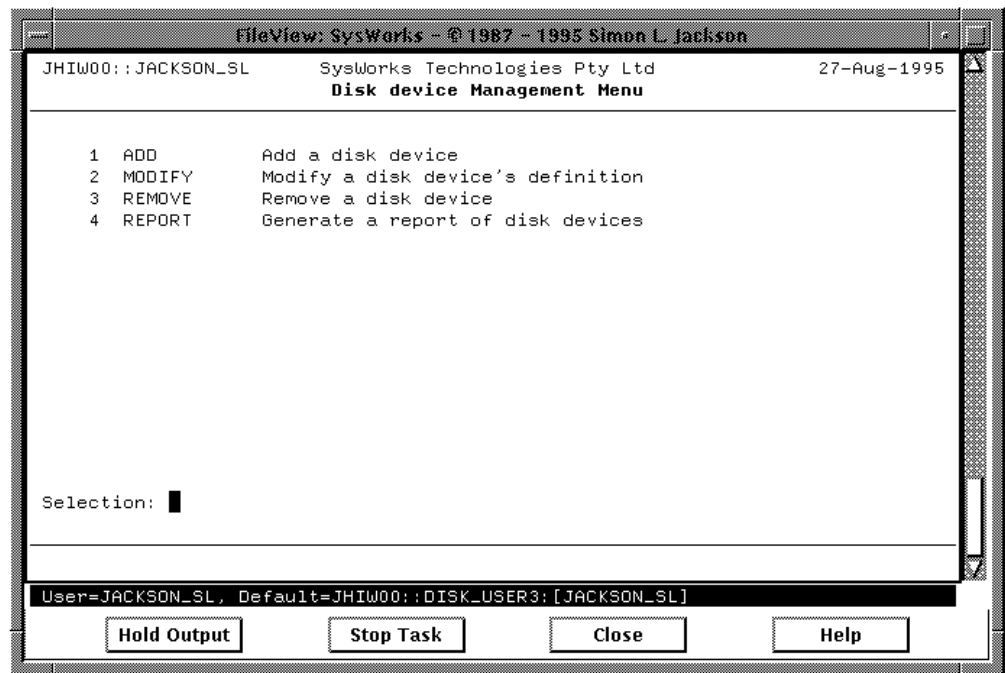
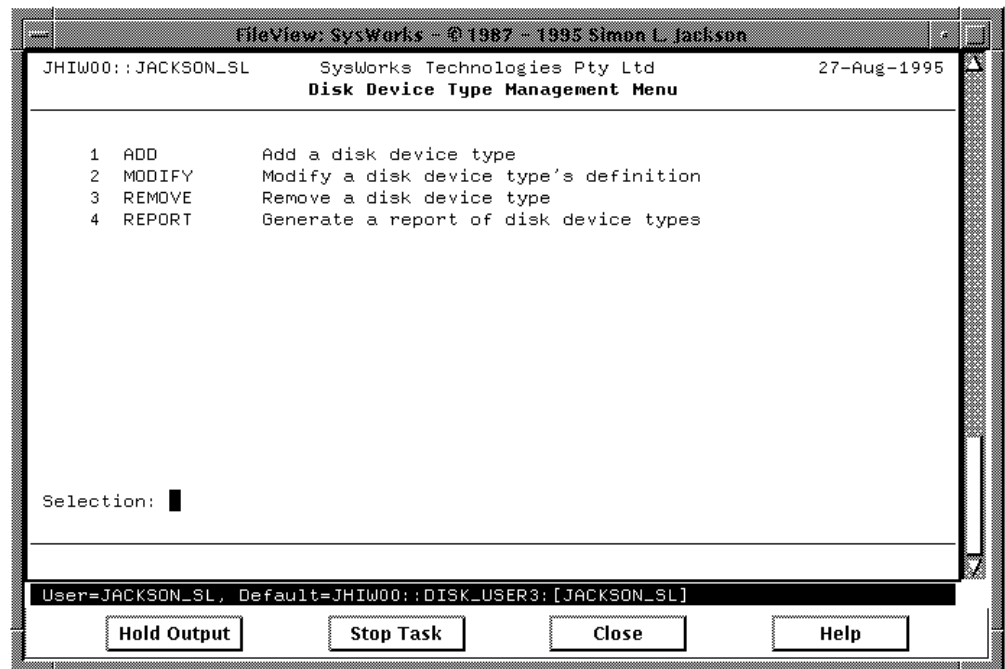


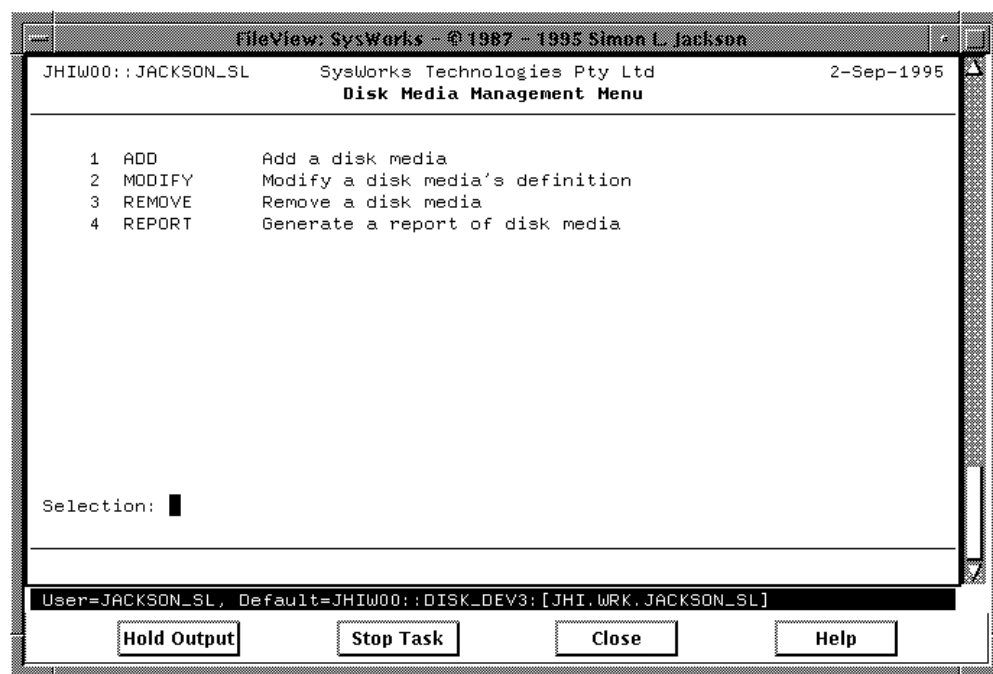
Figure 7-4 Disk Device Type Management Menu



### 7.3.3 Managing Disk Media

The disk media management menu is selected by entering MEDIA at the selection prompt of the disk management dispatch menu. It displays the menu illustrated in Figure 7-5 and prompts for a selection.

**Figure 7-5 Disk Media Management Menu**



### 7.3.4 Managing Disk Media Formats

The disk media format management menu is selected by entering FORMATS at the selection prompt of the disk management dispatch menu. It displays the menu illustrated in Figure 7-6 and prompts for a selection.

### 7.3.5 Managing Disk Media Types

The disk media type management menu is selected by entering MEDTYPES at the selection prompt of the disk management dispatch menu. It displays the menu illustrated in Figure 7-7 and prompts for a selection.

Figure 7-6 Disk Media Format Management Menu

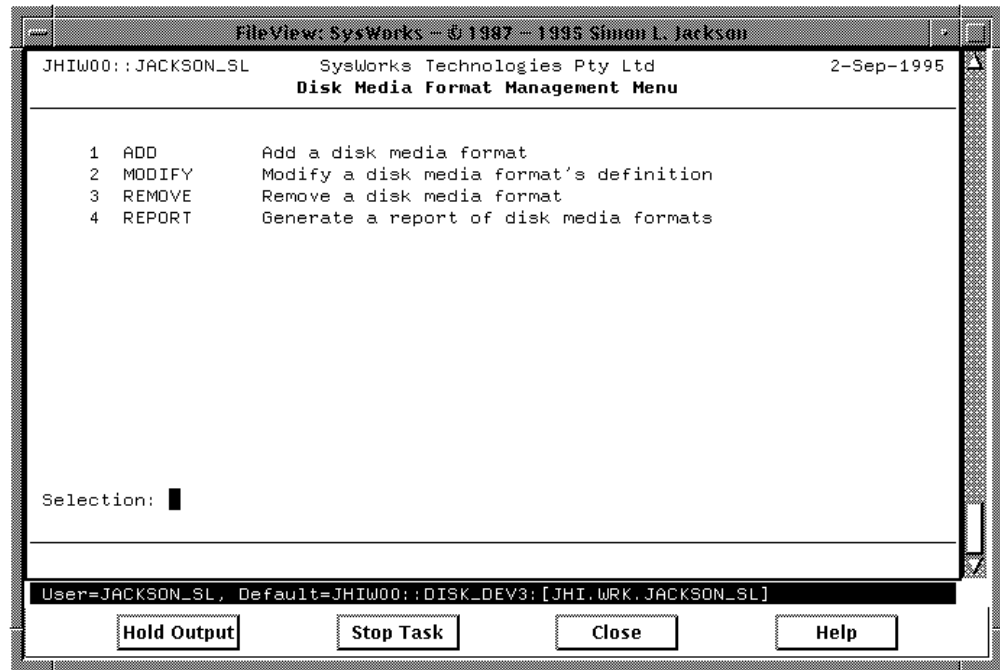
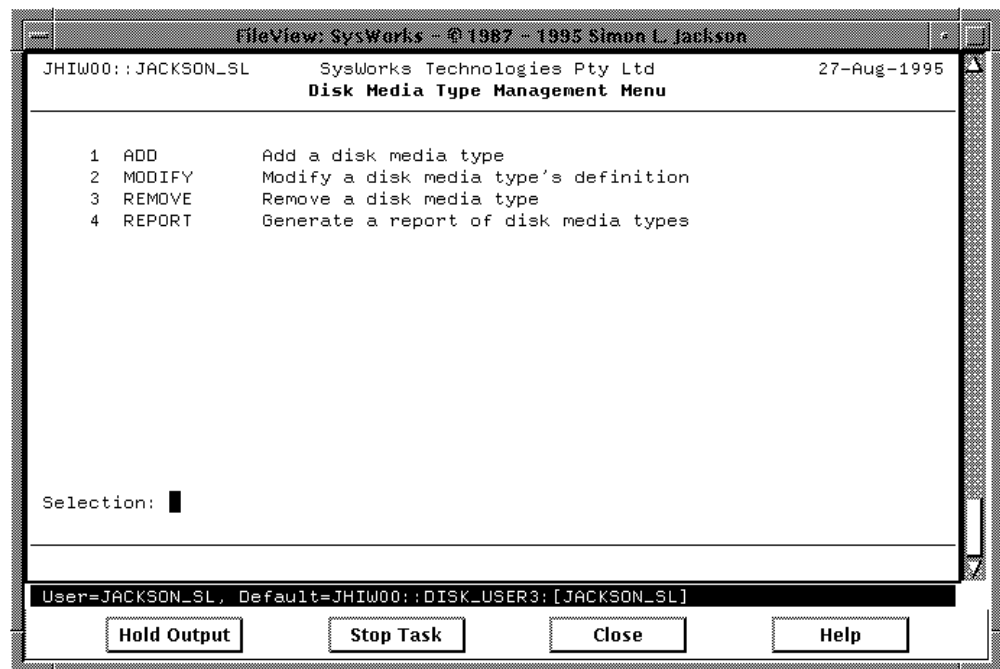
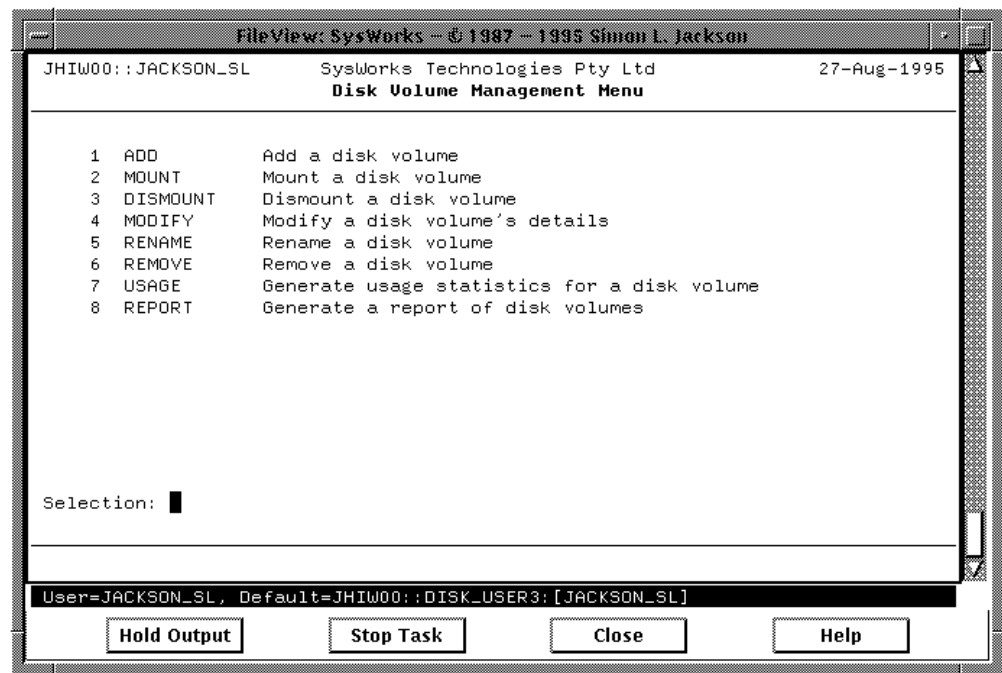


Figure 7-7 Disk Media Type Management Menu



### 7.3.6 Managing Disk Volumes

**Figure 7–8 Disk Volume Management Menu**



The disk volume management menu is selected by entering `VOLUMES` at the selection prompt of the disk management dispatch menu. It displays the menu illustrated in Figure 7–8 and prompts for a selection.

### 7.3.7 Managing Logical Disks

The logical disk management menu is selected by entering `LOGICALS` at the selection prompt of the disk management dispatch menu. It displays the menu illustrated in Figure 7–9 and prompts for a selection.

### 7.3.8 Managing Logical Sub-Disks

The logical sub-disk management menu is selected by entering `SUBDISKS` at the selection prompt of the disk management dispatch menu. It displays the menu illustrated in Figure 7–10 and prompts for a selection.

## 7.4 Managing Tapes

This chapter describes how to use SysWorks to manage tapes.

The tape management menu is selected using **Manage** ⇒ **Tapes** from the session manager or by using **Manage** ⇒ **Storage** from the session manager and selecting the `TAPES` menu. It displays the menu illustrated in Figure 7–11 and prompts for a selection.

Figure 7-9 Logical Disk Management Menu

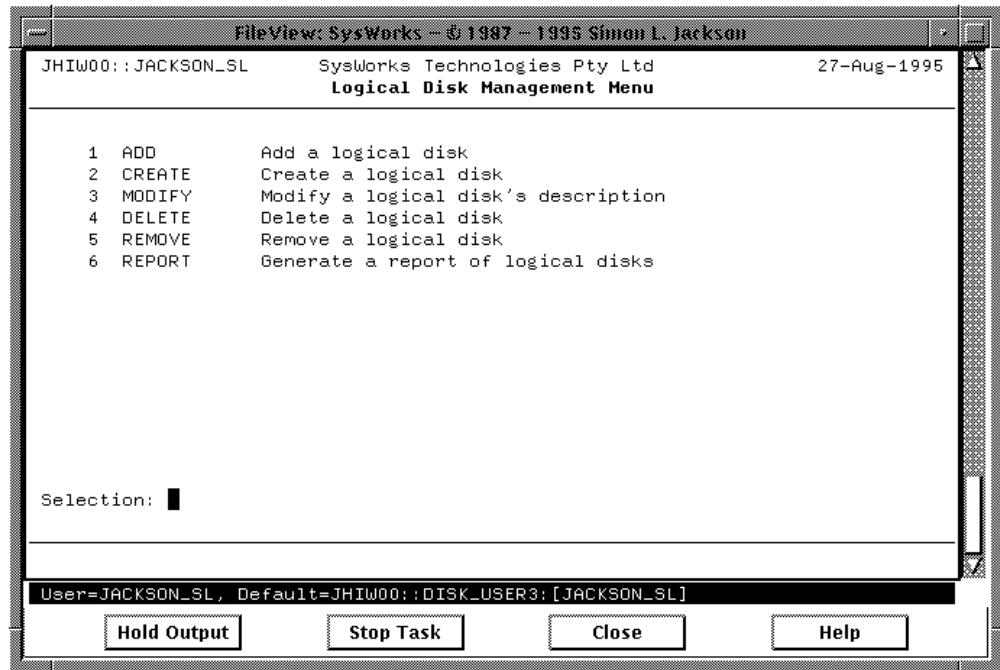
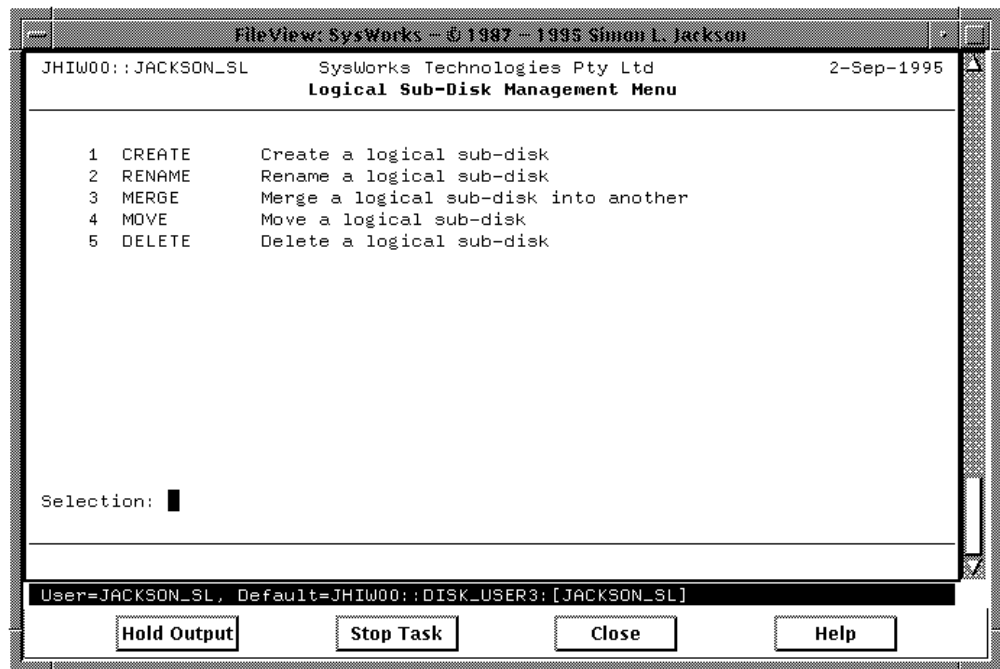


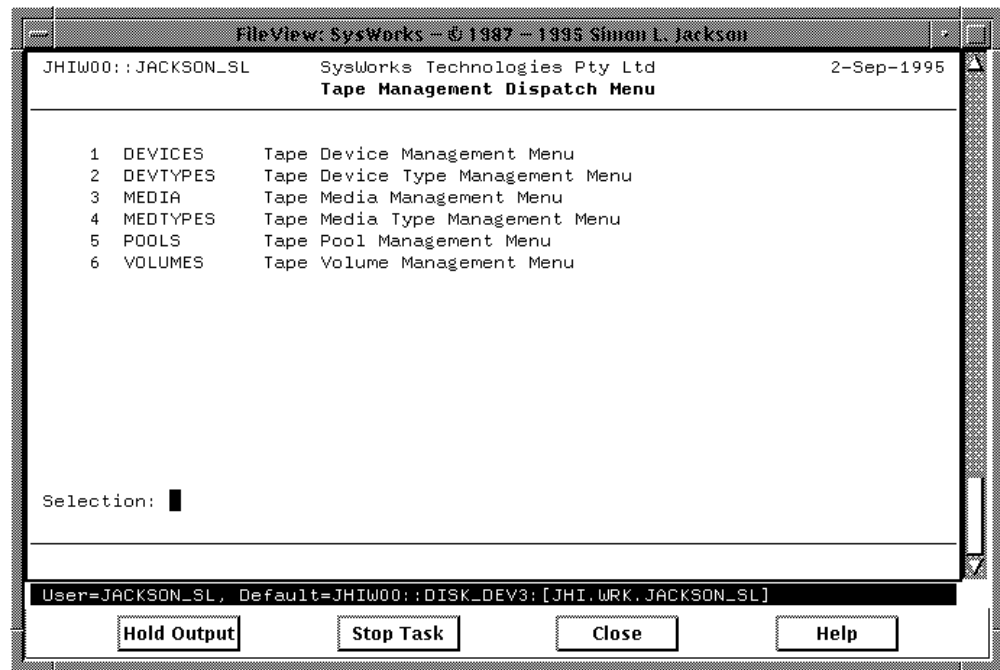
Figure 7-10 Logical Sub-Disk Management Menu



## 7.4.1 Managing Tape Devices



**Figure 7–11 Tape Management Dispatch Menu**



The tape device management menu is selected by entering `DEVICES` at the selection prompt of the tape management dispatch menu. It displays the menu illustrated in Figure 7–12 and prompts for a selection.

### 7.4.2 Managing Tape Device Types

The tape device type management menu is selected by entering `DEVTYPE` at the selection prompt of the tape management dispatch menu. It displays the menu illustrated in Figure 7–13 and prompts for a selection.

### 7.4.3 Managing Tape Media

The tape media management menu is selected by entering `MEDIA` at the selection prompt of the tape management dispatch menu. It displays the menu illustrated in Figure 7–14 and prompts for a selection.

Figure 7-12 Tape Device Management Menu

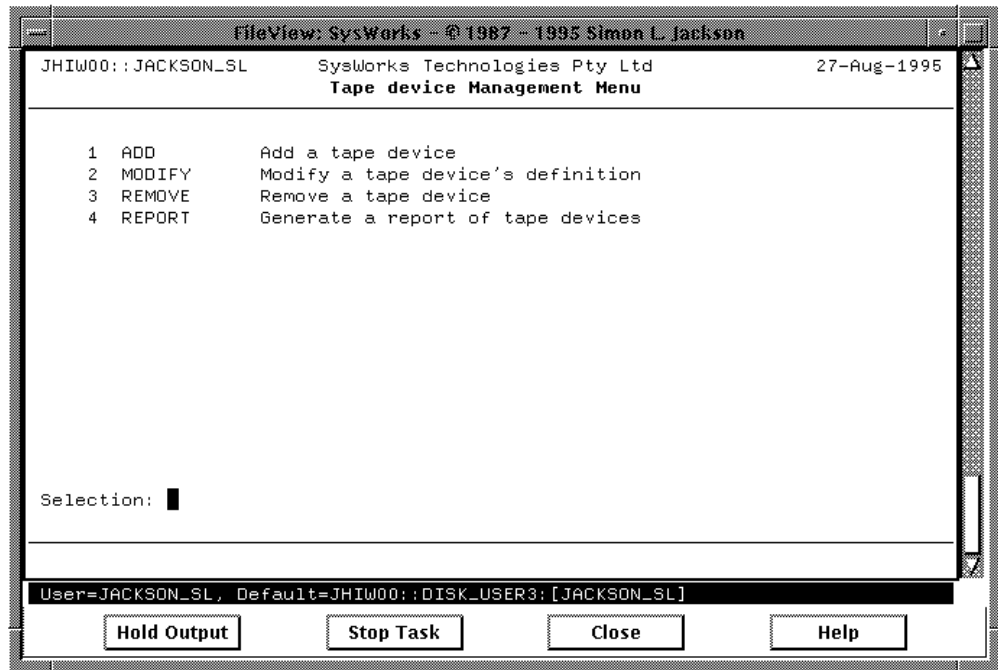
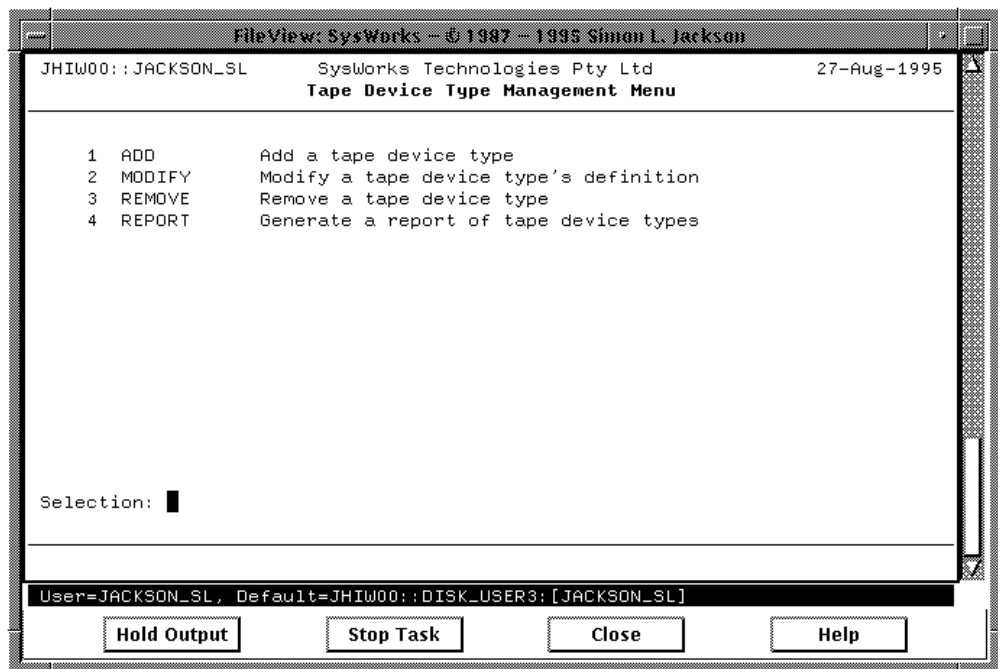
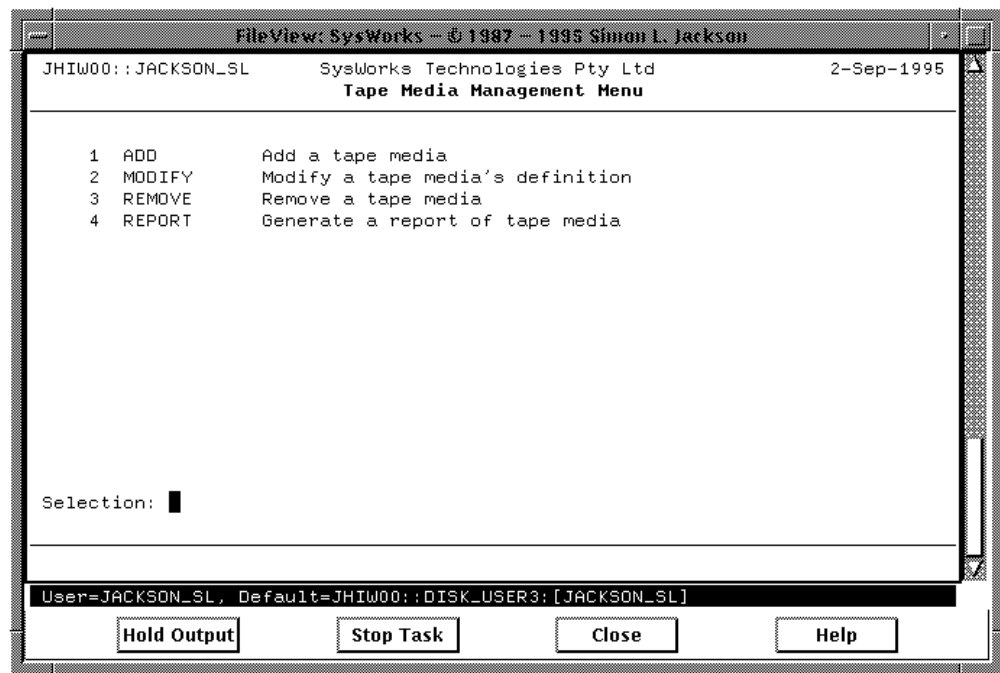


Figure 7-13 Tape Device Type Management Menu



## 7.4.4 Managing Tape Media Types

**Figure 7–14 Tape Media Management Menu**



The tape media type management menu is selected by entering `MEDTYPES` at the selection prompt of the tape management dispatch menu. It displays the menu illustrated in Figure 7–15 and prompts for a selection.

### 7.4.5 Managing Tape Pools

The tape pool management menu is selected by entering `POOLS` at the selection prompt of the tape management dispatch menu. It displays the menu illustrated in Figure 7–16 and prompts for a selection.

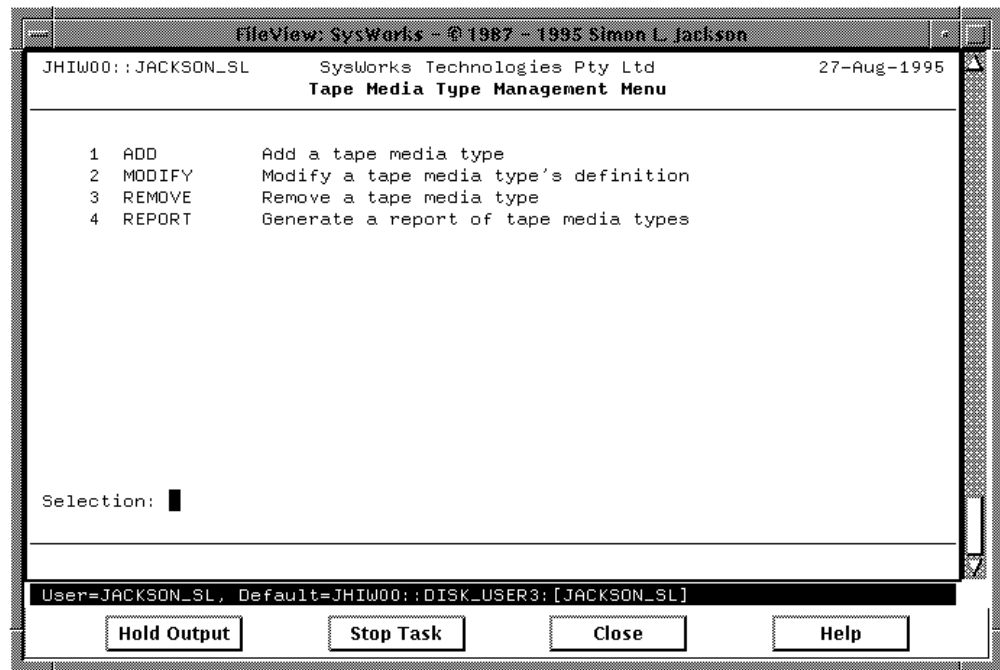
### 7.4.6 Managing Tape Volumes

The tape volume management menu is selected by entering `VOLUMES` at the selection prompt of the tape management dispatch menu. It displays the menu illustrated in Figure 7–17 and prompts for a selection.

## 7.5 Managing Storage Models

This chapter describes how to use SysWorks to manage storage models.

**Figure 7-15 Tape Media Type Management Menu**



**Figure 7-16 Tape Pool Management Menu**

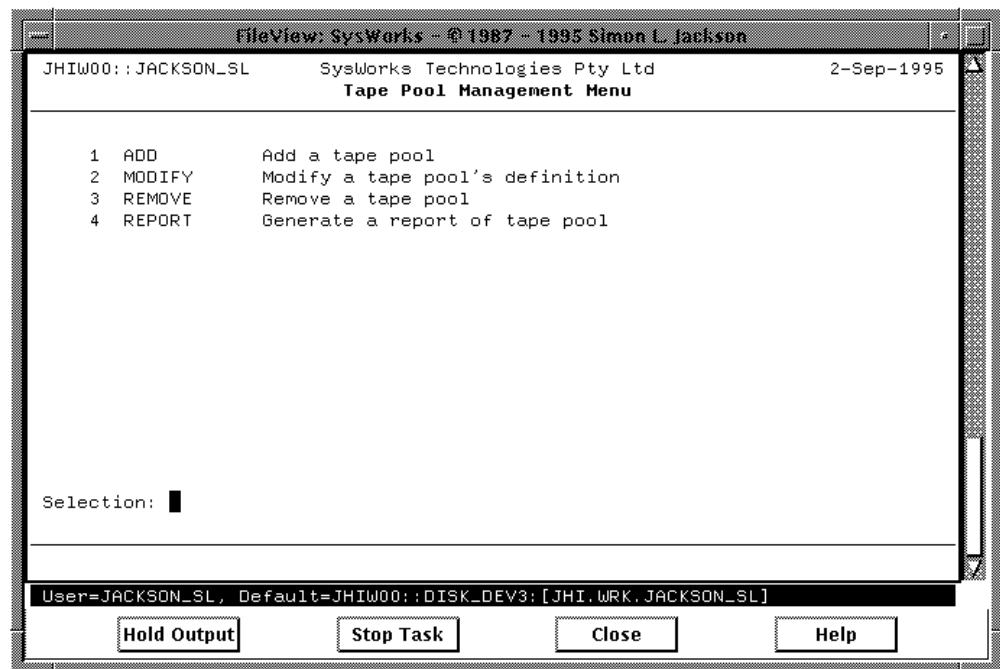
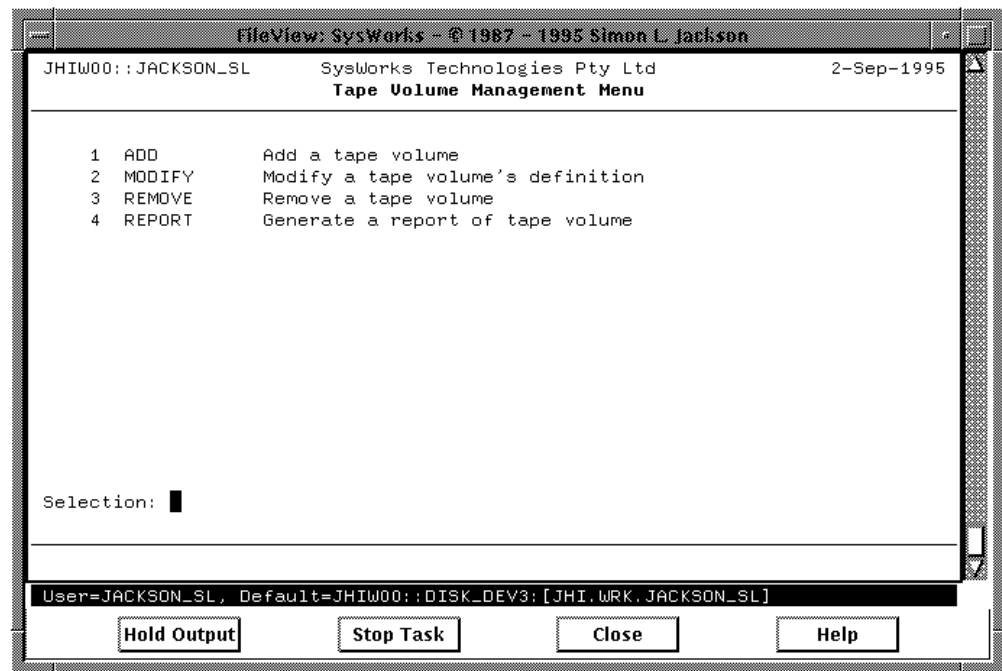


Figure 7-17 Tape Volume Management Menu





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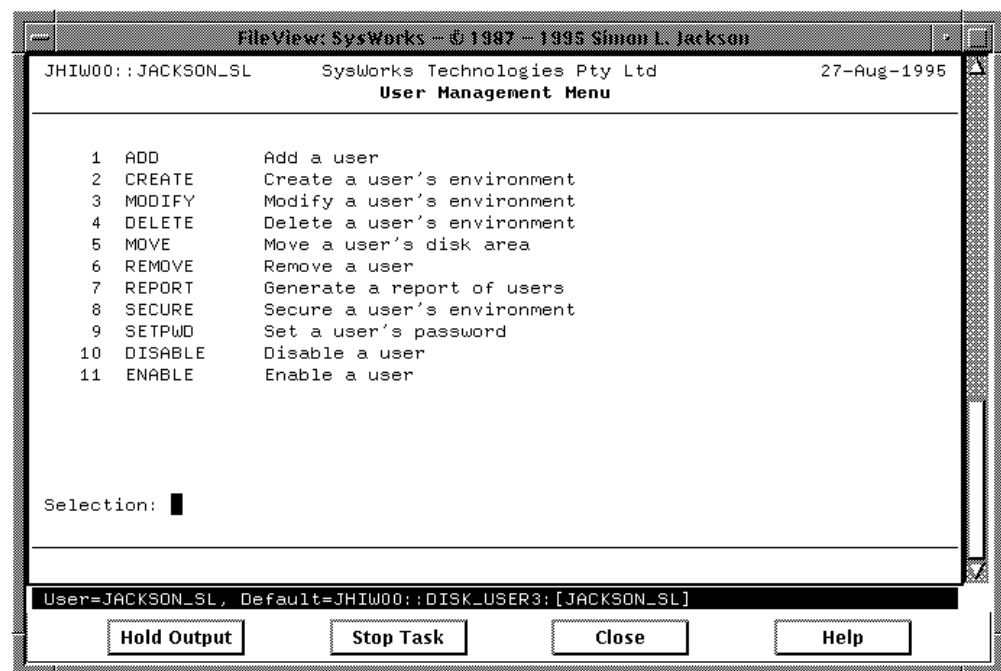
## Managing Users

This chapter describes how to use SysWorks to manage users.

A user is the basic mechanism which allows a person to access computers on the network. Each user must be registered on the network, and that registration has a variety of attributes which control when and to what the user has access.

The user management menu is selected using **Manage** ⇒ **Users** from the session manager. It displays the menu illustrated in Figure 8-1 and prompts for a selection.

**Figure 8-1 User Management Menu**



The following concepts need to be understood before managing users:

- Accounts - see Chapter 2
- Layered Products - see Section 6.4

- System User Classes - see Chapter 9

## 8.1 Add a user

This task adds a new user to the network. It optionally creates the users home environment.

Example:

```
User: JONES_AB
Member type (Organization/Person/Position): PERSON
Surname: Jones
Given name: Andrew
Middle names: Brian
Is this a new member (Yes/No) [Yes]: YES
Title:
Date of birth:
Salutation:
%SWRK-I-FROMNODE, Output from node SWRKA
%SWRK-I-MBRADD, Member IJONES AB added
%SWRK-I-FROMNODE, Output from node MELA01
Owner [Andrew B. Jones]:
Initials [ABJ]:
Telephone:
Account: SWRK
Location: UNKNOWN
Create environment (Yes/No) [Yes]:
Cluster [SWRKA]:
❶ Initial logical sub-disk (2,3) [3]:
Disk quota (0..unlimited) [5000]: UNLIMITED
Password [9A4BE2FE]: WELCOME
System user classes: USER, PATHWORKS
%SWRK-I-FROMNODE, Output from node SWRKA
❷ %SWRK-I-USGUIC, Using UIC [1000,51]
%SWRK-I-USGID, Using identifier %X000100EB
%SWRK-I-VMSUADD, OpenVMS username JONES_AB added
%SWRK-I-OWNADD, Owner Andrew B. Jones added
%SWRK-I-USRADD, User JONES_AB added
%SWRK-I-FROMNODE, Output from node MELA01
%SWRK-I-FROMNODE, Output from node SWRKA
%UAF-I-ADDMSG, user record successfully added
%UAF-I-MDFYMSG, user record(s) updated
%UAF-I-RDBADDMSGU, identifier JONES_AB value: [001000,000051] added to rights database
%UAF-I-RDBADDMSG, identifier U_JONES_AB value: %X800100EB added to rights database
%UAF-I-GRANTMSG, identifier U_JONES_AB granted to JONES_AB
%SWRK-I-VMSUGRTSUC, OpenVMS username JONES_AB granted membership of system user class BASE
%UAF-I-GRANTMSG, identifier S_BASE granted to JONES_AB
%SWRK-I-VMSUGRTSUC, OpenVMS username JONES_AB granted membership of system user class USER
%UAF-I-GRANTMSG, identifier S_USER granted to JONES_AB
%SWRK-I-VMSUGRTSUC, OpenVMS username JONES_AB granted membership of system user class PATHWORKS
%UAF-I-GRANTMSG, identifier S_PATHWORKS granted to JONES_AB
%UAF-I-MDFYMSG, user record(s) updated
%UAF-I-MDFYMSG, user record(s) updated
❸ %SWRK-I-VMSUGRTPRD, OpenVMS username JONES_AB granted membership of product MAILWORKS
%SWRK-I-TRYGRT, Trying to grant access to MAILWORKS
%SWRK-I-VMSUGRTPRD, OpenVMS username JONES_AB granted membership of product VMSMAIL
%SWRK-I-TRYGRT, Trying to grant access to VMSMAIL
❹ Job SWRK_MANAGE_VMSMAIL_GRANT_USER (queue SWRK$BATCH_MELA01, entry 159) started on SWRK$BATCH_ME
%CLI-S-NORMAL, normal successful completion
%SWRK-I-VMSUGRTPRD, OpenVMS username JONES_AB granted membership of product PCSA
%SWRK-I-VMSUGRTPRD, OpenVMS username JONES_AB granted membership of product MSA
%SWRK-I-TRYGRT, Trying to grant access to MSA
%SWRK-I-VMSUGRTPRD, OpenVMS username JONES_AB granted membership of product PATHWORKS
%SWRK-I-TRYGRT, Trying to grant access to PATHWORKS
❺ 02000029.$$$ was shared successfully.
❻ JONES_AB was shared successfully.
The command completed successfully.
The command completed successfully.
%UAF-I-MDFYMSG, user record(s) updated
%SWRK-I-FROMNODE, Output from node MELA01
```



- ❶ Note that logical sub-disks on the system disk are not used as defaults. As a result, a single disk system will never have a default initial logical sub-disk. Under those circumstances it would be necessary to explicitly enter the only available value, which is usually 2.
- ❷ SysWorks determines the UIC for the user.
- ❸ After granting access to the various system user classes, SysWorks determines which products the user has access to and attempts to grant access to each of the products. For the USER and PATHWORKS system user classes combined, it was determined that the user needed to be registered for the following products:
  - VMSMAIL
  - MAILWORKS
  - PCSA
  - MSA
  - PATHWORKS
- ❹ A batch job is submitted under the new users name to set their OpenVMS mail configuration as this must be done under the users OpenVMS username.
- ❺ This share name is based on the users UIC. It is a hidden share, and is used as the users home share when the username is greater than 8 characters in length.
- ❻ If the username is greater than 8 characters in length, only the UIC based share name will be created, otherwise this username based share will become the users home share.

## 8.2 Create a user's environment

This task create a users home environment. The use must have already been added to the network.

Example:

```
User: JONES_AB
Cluster [SWRKA]:
Initial logical sub-disk (2,3) [3]:
Disk quota (0..unlimited) [5000]: UNLIMITED
Password [9A4BE2FE]: WELCOME
System user classes: USER, PATHWORKS
```

See the example for Add a user for the remainder of this example.

## 8.3 Delete a user's environment

This task deletes a users home environment. It optionally removes the user from the network. If the remove option is not used, the user will remain registered on the network.

Example:

```
User: JONES_AB
```

## 8.4 Modify a user's environment

This task modifies a users network details and/or their home environment.

Example:

```
User: JONES_AB
```

## 8.5 Move a user's disk area

This task moves a users disk area from one disk to another.

Example:

```
User: JONES_AB
```

## 8.6 Remove a user

This task removes a user from the network. It optionally deletes the users home environment first if necessary. If the option to delete is not used and a home environment for the user is found, the user will not be removed from the network.

Example:

```
User: JONES_AB
```

## 8.7 Rename a user

This task renames a user. Some external actions are implemented using a rename. These include renaming the username in the authorization file, and renaming the disk directory. Other external actions such as Pathworks registration require deleting the old username and creating the new one.

Example:

```
User: JONES_AB  
New username: AJONES
```

## 8.8 Generate a report about users

This task generates a report about users.

Example:

```
Output [SYS$OUTPUT]:
```

## 8.9 Secure a user's environment

This task sets the security of the users home area to the standard user security model.

Example:

```
User: JONES_AB
```

## 8.10 Set a user's password

This task sets the users password. If the user is registered for products which also require passwords (such as Pathworks (LAN Manager)), they will also be changed.

Example:

User: JONES\_AB

## 8.11 Disable a user

This task disables a users home environment, which means that the cannot login. No other actions are taken. The users home environment and network management remain intact. Use the Enable a user task to reverse the effect of this task.

Example:

User: JONES\_AB

## 8.12 Enable a user

This task enables a users home environment. It is used to reverse the effect of the Disable a user task.

Example:

User: JONES\_AB



---

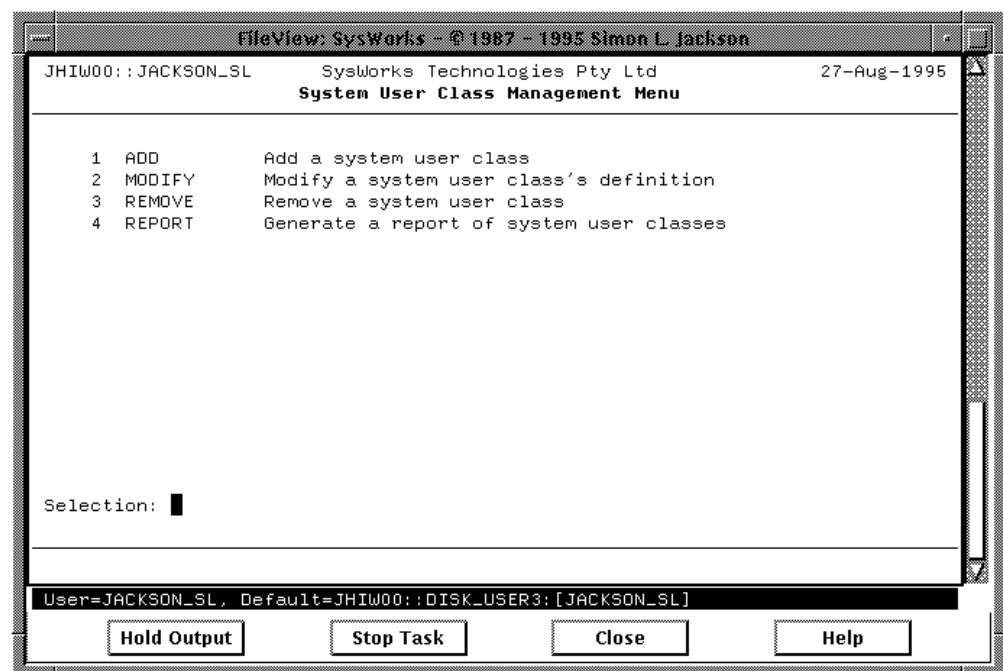
## Managing System User Classes

This chapter describes how to use SysWorks to manage system user classes.

Note that the set of system user classes provided with SysWorks is normally sufficient for most organizations, so a full understanding of how they work is generally unnecessary.

The system user class management menu is selected using **Manage ⇒ System User Classes** from the session manager. It displays the menu illustrated in Figure 9-1 and prompts for a selection.

**Figure 9-1 System User Class Management Menu**



The following concepts need to be understood before managing system user classes:

- Layered Products - see Section 6.4

The following standard pre-defined System User Classes exist:

System User Class	Usage
ACMS	ACMS user - provides access to ACMS.
ALL	All users - provides base level functions for all users.
ALLIN1	All-In-1 user - provides access to All-In-1.
APPLICATION	Applications - provides base level functions for all applications.
BASE	Automatically granted to provide basic OpenVMS authorization details.
CAPTIVE	Captive users - provides reduced base level functions for captive users.
DBA	Database Administrator - allows a users to use the SysWorks database administration features.
DCL	DCL user - allows a user access to DCL. Note that this system user class is only necessary when the USER system user class does not allow access to DCL by default.
DEVELOPER	Allows a users to use the SysWorks development features.
GROUP	Groups - provides base level functions for all groups.
OPERATOR	Operator - almost full read access and limited read/write access to all information.
PATHWORKS	Pathworks user - provides access to Pathworks including LAN Manager, PCSA and Macintosh variants.
PRINTER_CONTROLLER	Printer controller - may start and stop print queues and print jobs.
SYSTEM_MANAGER	System manager - full read/write access to all information.
USER	User recognized by SysWorks - All users should be a member of this system user class - the exception being Digital and other third party product usernames.
USER_REGISTRAR	User registrar - may add, create, delete and remove users from clusters and the security domain. Note that although a user registrar may register any user, they may only grant access to system user classes which they are a member of. Thus only members of the SYSTEM_MANAGER system user class may register other system managers. The exception to this rule is that a member of the SYSTEM_MANAGER system user class is an implicit member of all system user classes, so they can grant a user access to any system user class.

## 9.1 Add a system user class

This task adds a new system user class to the network.

Example:

```
System user class:
```

## 9.2 Modify a system user class's definition

This task modifies a system user class's details.

Example:

```
System user class:
```

### **9.3 Remove a system user class**

This task removes a system user class from the network.

Example:

```
System user class:
```

### **9.4 Generate a report about system user classes**

This task generates a report about system user classes.

Example:

```
Output [SYS$OUTPUT]:
```





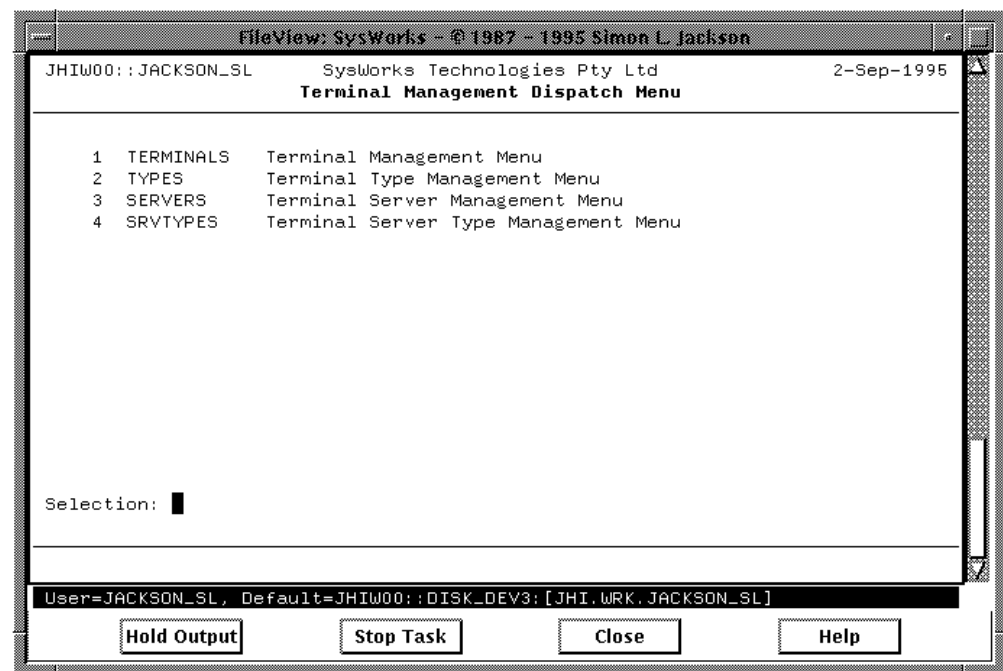
---

## Managing Terminals

This chapter describes how to use SysWorks to manage terminals.

The terminal management dispatch menu is selected using **Manage** ⇒ **Terminals** from the session manager. It displays the menu illustrated in Figure 10–1 and prompts for a selection.

**Figure 10–1 Terminal Management Dispatch Menu**

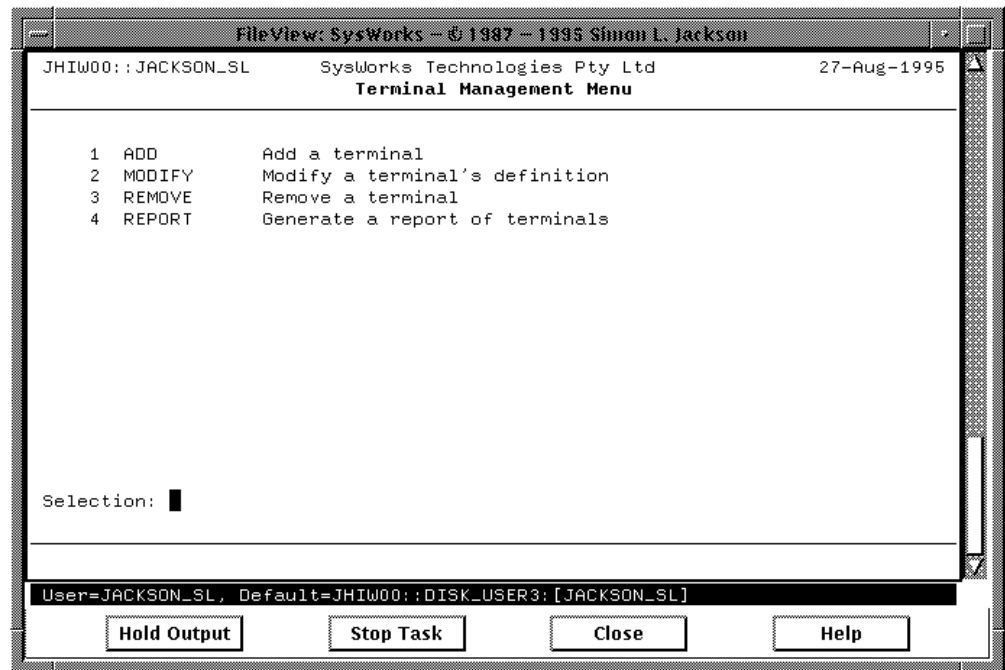


---

### 10.1 Managing Terminals

The terminal management menu is selected by entering `TERMINALS` at the selection prompt of the terminal management dispatch menu. It displays the menu illustrated in Figure 10–2 and prompts for a selection.

**Figure 10–2 Terminal Management Menu**



## 10.2 Managing Terminal Types

The terminal type management menu is selected by entering `TYPES` at the selection prompt of the terminal management dispatch menu. It displays the menu illustrated in Figure 10–3 and prompts for a selection.

## 10.3 Managing Terminal Servers

The terminal server management menu is selected by entering `SERVERS` at the selection prompt of the terminal management dispatch menu. It displays the menu illustrated in Figure 10–4 and prompts for a selection.

## 10.4 Managing Terminal Server Types

The terminal server type management menu is selected by entering `SRVTYPES` at the selection prompt of the terminal management dispatch menu. It displays the menu illustrated in Figure 10–5 and prompts for a selection.

Figure 10–3 Terminal Type Management Menu

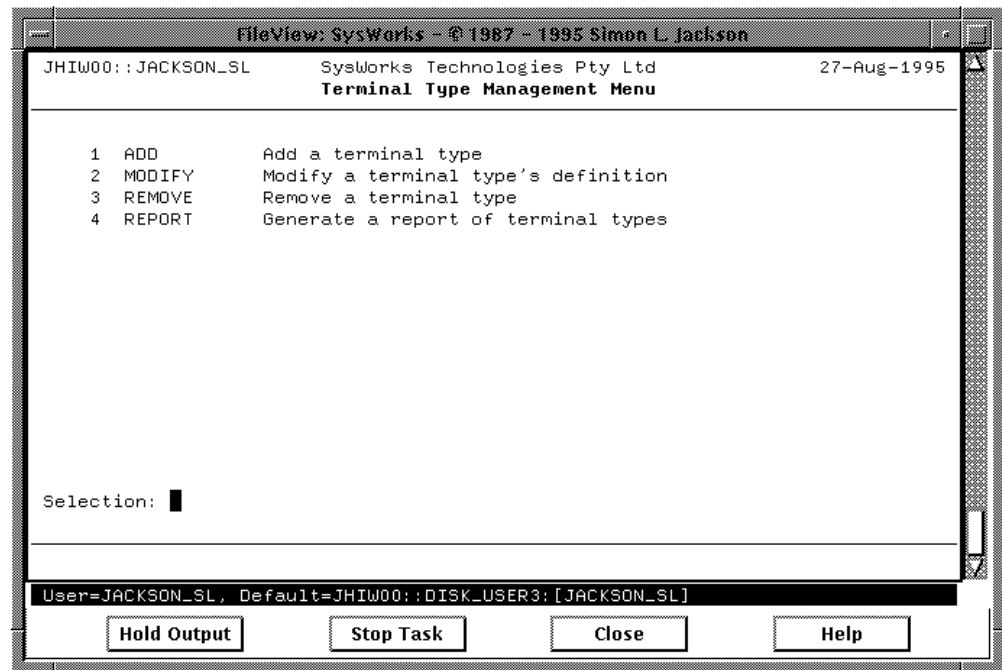
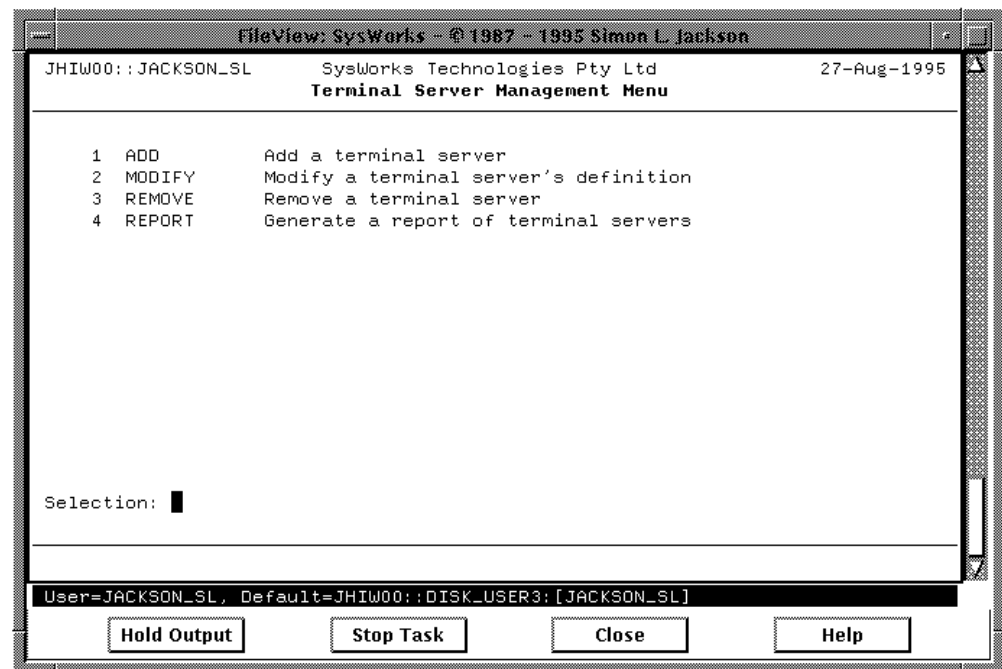
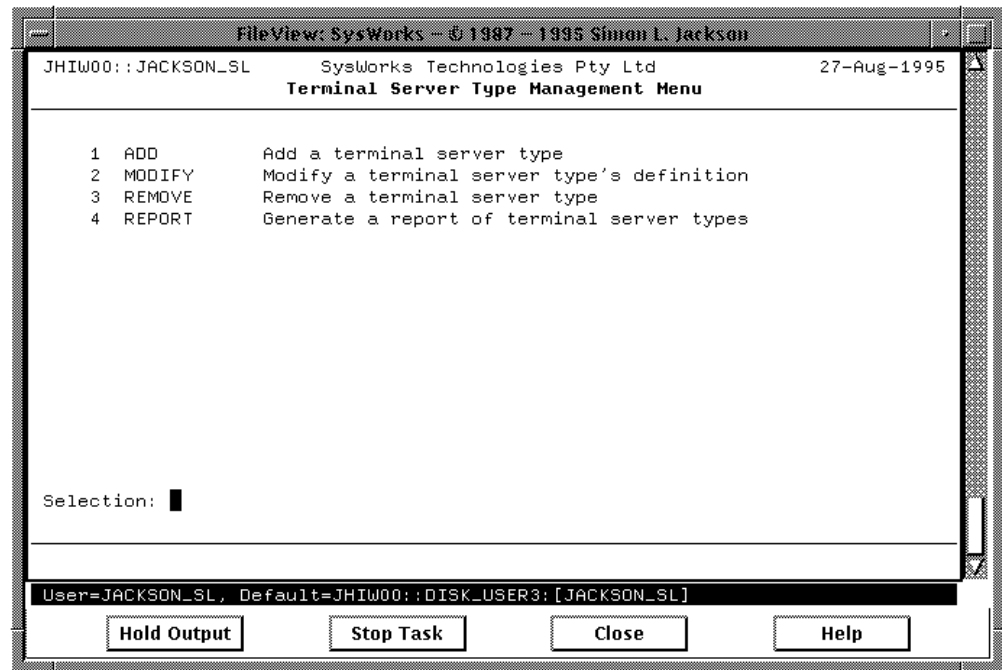


Figure 10–4 Terminal Server Management Menu



**Figure 10–5 Terminal Server Type Management Menu**



# Part II

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## Managing OpenVMS

The following chapters describe how to use SysWorks™ to manage other (i.e. non system object) aspects of an OpenVMS system.



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## Managing Multiple System Disks

This chapter describes how to use multiple system disks.

Each node has an assigned system disk from which it boots. In some clusters a node may be moved between system disks so that when it is rebooted, it has a different set of software and/or performance characteristics. SysWorks™ supports this concept by using separate system disks in conjunction with a three layer hierarchy within a cluster.

Each point within this hierarchy of **node**, **tuning domain** and **cluster** may have its own system disk. Each node has an assigned system root number. Where a node can be booted from multiple system disks, the same root must exist on each such system disk.

Table 11–1 lists the logical names defined for system roots which may reside on an alternative system disk.

**Table 11–1 Logical Names for System Roots**

Logical Name	Notes
SYS\$SPECIFIC_TNDM	Equivalent of SYS\$SPECIFIC on the tuning domain primary system disk.
SYS\$COMMON_TNDM	Equivalent of SYS\$COMMON on the tuning domain primary system disk.
SYS\$SPECIFIC_CLUS	Equivalent of SYS\$SPECIFIC on the cluster primary system disk.
SYS\$COMMON_CLUS	Equivalent of SYS\$COMMON on the cluster primary system disk.
SYS\$SYSROOT_LIST	A search list with up to 6 equivalences which spans the full hierarchy of system roots for a node.

Table 11–2 lists the logical names defined for system files which may reside on an alternative system disk.

**Table 11–2 Logical Names for System Files**

Logical Name	Notes
ACMSAAF, ACMSDDF, ACMSUDF	If ACMS is present.
AUDIT_SERVER	

**Table 11–2 (Cont.) Logical Names for System Files**

<b>Logical Name</b>	<b>Notes</b>
LMF\$LICENSE	File type of .LDB.
NETCIRC, NETCONF, NETLINE, NETLOGING, NETNODE_LOCAL, NETNODE_ REMOTE, NETOBJECT	Used by DECnet Phase IV. Normally located in node specific system directory.
NETPROXY	Used by DECnet Phase IV. Normally located in common system directory.
NET\$PROXY	Used by DECnet/OSI (i.e Phase V).
QMAN\$MASTER	Only device and directory defined - no file name or type. Device and directory are unconcealed.
RIGHTSLIST	
SYSALF	
SYSUAF	
VMSMAIL_PROFILE	File type of .DATA.
VMS\$PASSWORD_ HISTORY	File type of .DATA.



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## Layered Product Specifics

This chapter describes actions specific to managing individual layered products.

### 12.1 DECfax

If SysWorks is installed at the Turnkey level or at the System level and overnight processing is enabled, it will manage the cleanup of the DECfax database in place of the default DFX\$CLEANER procedure provided with DECfax. To enable the correct operation of overnight processing it is necessary to edit the following DECfax startup command procedure to stop submission of the DFX\$CLEANER job:

```
SYS$STARTUP:DFX$START_COMPONENTS.COM
```

Normally this command procedure starts various DECfax components and then submits the DFX\$CLEANER job. Placing the DCL command line `$ exit` after the last DECfax manager utility and before the use of the lexical `f$getqui(...)` will stop the command procedure from submitting the DFX\$CLEANER job.

### 12.2 Pathworks (LAN Manager)

SysWorks provides a utility to directly access the LAN Manager share database from DCL so that the `SWRK_MANAGE_PATHWORKS.COM` command procedure can manage share as appropriate.

### 12.3 Pathworks (Macintosh)



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## Monitoring the System

This chapter describes what and how to use SysWorks to monitor the system.

The monitor process watches various activities on the system and takes appropriate action when an undesirable state exists. Basically, a scan of the system is made every `SWRK_MONITOR_INTERVAL` (usually 1) minutes. The following notes outline the activities watched and the actions to be taken.

### 13.1 Application and Group Control Jobs

Application and group control jobs (eg. `BOOT` and `SHUTDOWN`) are submitted to the `SWRK$BATCH` batch queue. These control jobs should be aborted if they accumulate more than `SWRK_CONTROL_JOB_TIMEOUT` worth of elapsed time. Note that the queues are scanned each `SWRK_CONTROL_JOB_TIMEOUT` minutes rather than `SWRK_MONITOR_INTERVAL`, except that when jobs are detected which would timeout before the next `SWRK_CONTROL_JOB_TIMEOUT` minutes are elapsed, the time until the next batch queue scan is reduced from `SWRK_CONTROL_JOB_TIMEOUT` minutes down to a time which should match the timeout time of the next job to timeout. This algorithm reduces the overhead of checking the batch queues every `SWRK_MONITOR_INTERVAL` minutes. Note also that if the node is a cluster member, a check is only made of batch queues executing on the local node.

### 13.2 Disk Free Space Low

Every `SWRK_DISK_CHECK_INTERVAL` minutes all the disk volumes directly attached to the local node, or served by a non host (eg `HSC` or `DSSI`) and having the appropriate allocation class are checked for a low space condition. This low space threshold is specified as a percentage of total disk space. Each volume may have a specific low space level, or by default a system wide low space level is used.

This scan takes some time which is why it is done only every `SWRK_DISK_CHECK_INTERVAL` minutes rather than `SWRK_MONITOR_INTERVAL` minutes - the main weakness being the increased time to detection.

### 13.3 Node Shutdown or Reboot

A check is made to see if the node is to be shut down. Appropriate warning messages are sent to all users, and at the indicated time, the monitor shuts down the node.

## 13.4 Restart

A check is made to see if the monitor should be restarted. The restart flag is set by the "Restart monitor" task in the operations menu, and by installations (or downloads) of the SWRK software.

## 13.5 Special Times

A number of special times are detected and appropriate action taken. These times include system wide application start (typically 8:00 am), system wide application stop (typically 6:00 pm), midnight (at which time the overnight system analysis and repair job is submitted and the monitor is automatically restarted), and a security domain time synchronization.

## 13.6 DECfax Servers

Every `SWRK_DECFAQ_CHECK_INTERVAL` minutes a check is made that all of the defined DECfax servers are running. If any server is not running, a message is broadcast and that server is started using the `FAX/MANAGER START SERVER` command.

This scan takes some time which is why it is done only every `SWRK_DECFAQ_CHECK_INTERVAL` minutes rather than `SWRK_MONITOR_INTERVAL` minutes - the main weakness being the increased time to detection.

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## Miscellaneous Management Tasks

This chapter describes the remaining miscellaneous system management tasks that are not directly related to meta objects or described elsewhere in this manual.



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## Prompts

This glossary contains an alphabetic list of all the common prompts used in task dialogs. If a task has a specific prompts not used elsewhere, it is documented under that task. All other prompts are documented here.

### Account

An account code may be entered. When adding an application environment, group or user, or when managing an account, this item is mandatory.

### Application

### Argument list

### Arguments

Batch queue [SYS\$BATCH]

Boot device

Boot type (Normal/Backup) [Normal]

Build (Yes/No) [Yes]

Change process UIC (Yes/No)

Check state(s)

Class (MGR,USR,REP) [USR]

### Cluster

A cluster name should be entered. By default, the cluster name from which the operation is being initiated is assumed. Note that this question will not be asked on clusters which are below the site level within the network.

## Prompts

Command

Compaction (Yes/No)

Confirm (Yes/No) [No]

Connection (Device/Node)

Connection (Direct/LAT)

Console flag (Yes/No)

Create environment (Yes/No) [Yes]

Indicates whether the associated environment should also be created. This question is only asked for add operations where an associated create operation also exists.

Create search list (Yes/No) [Yes]

Date of birth

An optional value for a members details. The format is the DEC standard absolute date which is DD-MMM-YYYY.

Debug (Yes/No) [Yes]

Delete environment if required (Yes/No)

Delete users application disk area (Yes/No) [No]

Delete users group disk area (Yes/No) [No]

Description

A free text single line description may be entered. When adding an object, this attribute should be used, although some objects use a default description if this attribute is left blank.

Destination type (Disk\_Directory/Tape)

Destination

Device control library



Device

Digital conformant license (Yes/No)

Directories to move

Directory code list

Directory name

Disk access

Disk quota (0..unlimited)

Disk volume type

Display from [TODAY]

Display width (80 or 132 characters)

Display

Does the new member match the above (Yes/No) [No]

Element file spec

Enter the member's number (1../None)

Environment

Ethernet address

Execution

File specification

File(s) to edit

## Prompts

From sources or work area (Source/Work) [Source]

From sources or work area (Source/Work)

### Given name

A required value for a member's details. The first letter of the given name is used to form part of the member lookup key. It also forms part of the default owner name.

### Group

Highwater marking (Yes/No)

Meta object file spec

Initial logical sub-disk

Initialize (Yes/No)

Initials

Is this a new member (Yes/No) [Yes]

Is this the member you are looking for (Yes/No) [Yes]

Keep current maintenance version (Yes/No) [Yes]

LAN Manager usage (Yes/No)

LAT service identification

Label prefix

Layup style (NORMAL or HOLES)

### Location

A location code may be entered. When adding an application environment, group or user, or when managing a location, this item is mandatory.

Log (Yes/No)

Logical sub-disk number

Login limit

Master node

Member type (Organization/Person/Position)

Merge into logical sub-disk number

Message file

Method (Ascii/Binary) [Ascii]

Middle names

An optional value for a member's details. The first letter of the each middle name is used to form part of the member lookup key. These first letters also form part of the default owner name.

Mount disk after (Yes/No) [Yes]

Move\_type

Multiple variants (Yes/No)

Multiple versions (Yes/No)

New disk volume name

New file spec

New logical sub-disk number

New password

New state

New username

## Prompts

Node level

Node

Nodes to

Notice Code

Number of copies (1-20)

Number of pages per side (1-4)

Number

Old password

Orientation (Portrait or Landscape)

Output [SYS\$OUTPUT]

A specific output file specification may be entered. By default, SYS\$OUTPUT (the standard output stream) is assumed.

Override CMS reservation check (Yes/No) [No]

Owner

The free format full name of the member. Where the member is a user who is granted access to the PATHWORKS system user class, this name is used as the AppleShare network alias name.

Paper size (A4 or A3)

Password

A password may be entered. By default, a random password is used when objects are being added. Note that the minimum and maximum password lengths can be set as system wide parameters. In general the minimum password length is 6 characters. If AppleShare or Microsoft products are being used, the maximum password length is 8 characters.

Phase(s)

Prefetch CMS (Yes/No) [Yes]

Privileged (Yes/No) [No]

Privileged (Yes/No)

Public (Yes/No) [Yes]

Public software directory (Yes/No)

Qualifying logical sub-disk

Quota fill (Default/50..200)

Quotas (Yes/No)

Reason

Record now (Yes/No)

Remark

Remote system disk backup (Yes/No) [No]

Remove profile (Yes/No)

Report format

Required identifier

Root suffix

Salutation

An optional value for a members details. Used to indicate an alternative the the persons given name when generating a letter. For example the members given name may be William, but their salutation could be Bill.

Scope (Cluster/Standalone)

Scope (Common/Either/Specific)

## Prompts

Scope

Selection

Short environment type code

Since [BEGINNING]

Single or Double sided

Slave cluster

Standard code

Standard symbol

Structure id

Surname

A required value for a member's details. The surname is used to form part of the member lookup key. It also forms part of the default owner name.

Meta object database code (Appl/Group/Local/None/System)

System user classes

Target (s)

Telephone

Terminal server port name

Test name

Title

Type (Full/Incremental)

UAI flags

UAI quotas

UIC

Until [TODAY]

Use CMS library (Yes/No) [Yes]

Use application or user username (Application/User)

Use borders (Yes or No)

Use default or explicit security (Default/Explicit)  
[Default]

Indicates whether a secure task should secure files using the default action (i.e. SET SECURITY/DEFAULT) or an explicit action (i.e. SET SECURITY/ACL=(...)/OWNER=.../PROTECTION=(...)).

The advantage of the default secure action is that it is faster and does not change the modification dates of the secured files. This preservation of modification dates stops an incremental build following a secure task turning into an effective full build.

The advantage of the explicit secure action is that it is more thorough. It was also the action used in earlier versions of SysWorks. Note that an incremental build following a secure task using the explicit action effectively becomes a full build since all sources appear to be new.

By default the default action is used.

User

Value

Variant

Verification

Verify (Yes/No) [Yes]

Verify (Yes/No)

## Prompts

Version

Volume

Wait until completed (Yes/No) [No]

Warning level (Default/0..50)

Widget name

Widget owner

Widget type



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- Add an account, 2-1
- Generate a report about accounts, 2-2
- Modify an account's description, 2-2
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- Generate a report about licenses, 6-3
- Modify a license, 6-3
- Remove a license, 6-3

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- Modify a location's definition, 4-2
- Remove a location, 4-2

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- Add a location type, 4-4
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- Modify a location type's definition, 4-4
- Remove a location type, 4-4

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- Add a location type, 4-4
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- Add a PAK, 6-3
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- Add a user, 8-2
- Create a user's environment, 8-3
- Delete a user's environment, 8-3

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- Generate a report about layered products, 6-5
- Generate a report about licenses, 6-3
- Generate a report about locations, 4-2
- Generate a report about location types, 4-4
- Generate a report about PAKs, 6-4
- Generate a report about system user classes, 9-3
- Generate a report about users, 8-4
- Modify a layered product, 6-5
- Modify a license, 6-3
- Modify a location's definition, 4-2
- Modify a location type's definition, 4-4
- Modify an account's description, 2-2
- Modify a PAK, 6-3
- Modify a system user class's definition, 9-2
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- Remove a location, 4-2

- Remove a location type, 4-4
- Remove an account, 2-2
- Remove a PAK, 6-4
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- Remove a user, 8-4
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- Disable a user, 8-5
- Enable a user, 8-5
- Generate a report about users, 8-4
- Modify a user's environment, 8-4
- Move a user's disk area, 8-4
- Remove a user, 8-4
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