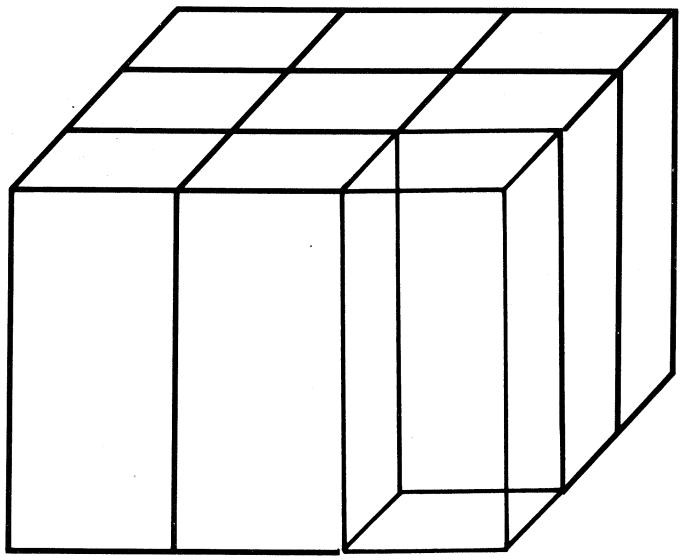
Planning
VSE/System Package



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VSE/System Package

Planning

Version 2 Release 1

Program Number 5666-316
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This is a major revision of and obsoletes, SC33-6177-0 (an edition which IBM has not made generally available). This edition applies to Version 2, Release 1 of IBM Virtual Storage Extended/System Package (VSE/SP), Program Number 5666-316, and to all subsequent releases and modifications until otherwise indicated in new editions. Changes are made periodically to the information herein; before using this publication in connection with the operation of IBM systems, consult the latest *IBM System/370, 30XX and 4300 Processors Bibliography,* GC20-0001, for the editions that are applicable and current.

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Preface

This book describes planning considerations for Virtual Storage Extended/System Package (VSE/SP) Version 2, Release 1. It provides information which helps you plan for the installation and general use of VSE/SP. It is intended for those who install the system and who perform administrative tasks. A knowledge of VSE and the program products in your system is required.

This book is divided into several parts.

Part I. Description of VSE/SP provides an overview of the structure and functions of VSE/SP and its component program products. It also describes some aspects of system organization.

Part II. Planning for Installation Tasks outlines the installation tasks for VSE/SP. It describes the hardware requirements for installing the system and outlines the VSE/SP initial installation process. Other tasks which are described include:

- VSE/SP Generation Feature installation.
- VSE/SP optional programs installation.
- Installation of additional VSE program products.
- IBM service.

Part III. Using the VSE/SP System contains introductory information about system tasks which you perform after installation. These tasks are grouped into specific task categories:

- IBM Personal Computer Support
- Resource Definition
- Operations
- Program Development
- Diagnosis

Part IV. VM Considerations provides information about installing and using VSE/SP as a guest machine under VM/SP.

Part V. System Tuning introduces different system aspects which may affect the performance of your system.

The **Appendixes** contain reference information about supported hardware, disk layouts, VSE/SP system options, skeletons, and reserved names.

VSE/SP Library

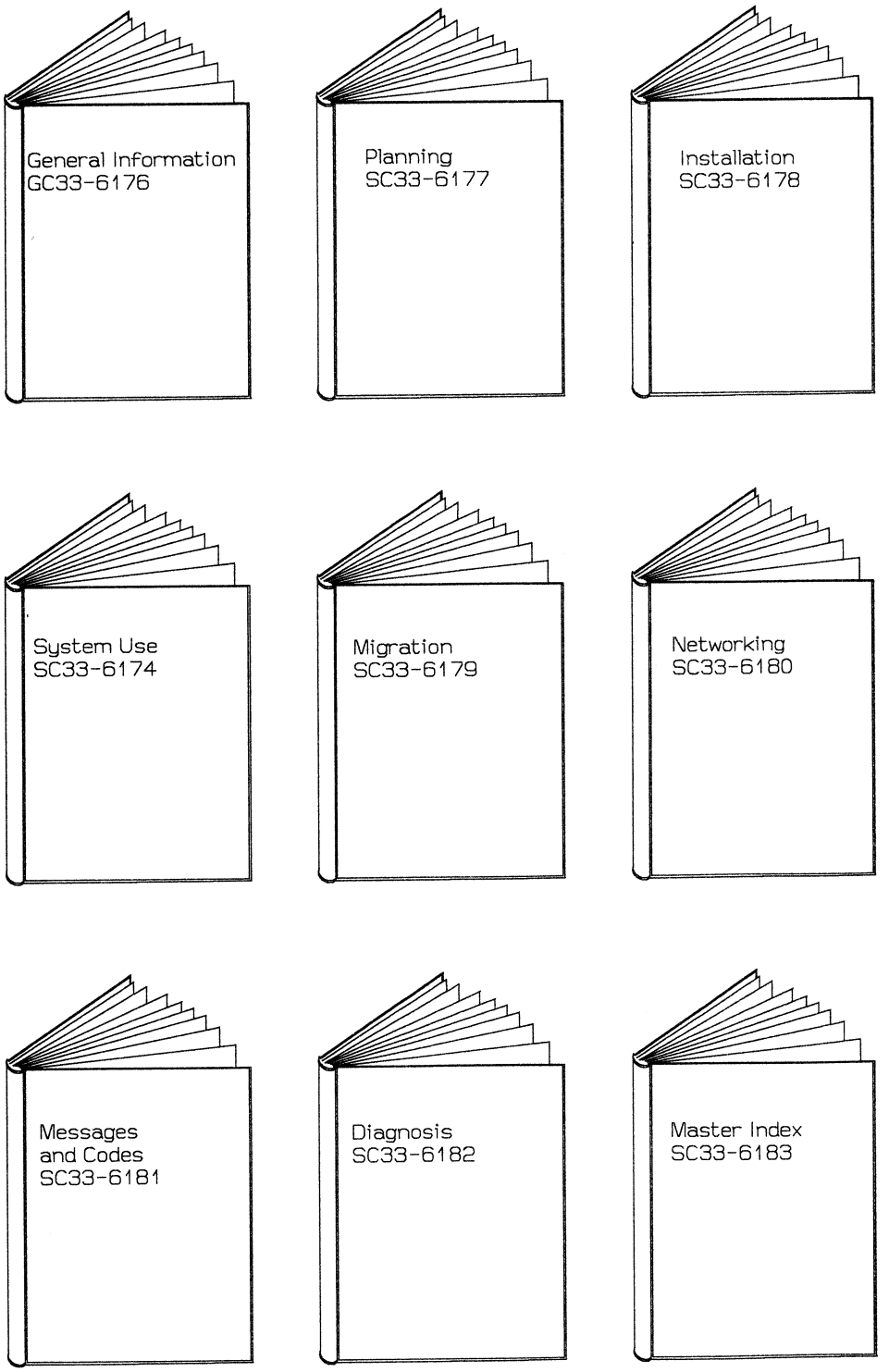

Figure 1. Overview of the VSE/SP Library

VSE/SP General Information — Introduces VSE/SP. It provides a general overview of the system, including:

- Why you should have VSE/SP.
- What functions VSE/SP offers.
- What types of VSE program products you can install.
- What hardware devices are supported.
- How you install and use VSE/SP.

VSE/SP Planning — Describes planning considerations for VSE/SP. The major sections of the book cover:

- Functions of VSE/SP.
- Functions of the component program products.
- Requirements for system installation.
- Overview of installation, operations, resource definition, programming, and diagnosis tasks.

VSE/SP Installation, *VSE/SP System Use*, and *VSE/SP Diagnosis* have detailed information for the specific tasks introduced in *VSE/SP Planning*. In addition, *VSE/SP Migration*, *VSE/SP Diagnosis*, and *VSE/SP Networking* contain planning information for their respective topics.

You will also sometimes need to use information in books for component program products to make a planning decision.

VSE/SP Installation — Detailed information for installing:

- VSE/SP.
- VSE/SP Generation Feature.
- VSE/SP optional programs and other VSE program products.
- IBM service.

VSE/SP System Use — Detailed information on how to do tasks like:

- Managing batch queues.
- Backing up and restoring data.
- Displaying system activity.
- Maintaining libraries and files.
- Tailoring the Interactive Interface.

VSE/SP Migration — Planning for migration to a VSE/SP system, with procedures and suggestions for actual migration. The book describes migration paths from several VSE-based systems and includes sample jobs.

VSE/SP Networking — Information on how to define remote devices and operate your system in a multiple-processor network. The book covers:

- Planning for networking.
- Using VSE/SP networking dialogs and skeletons.
- Network operation.

VSE/SP Diagnosis — Instructions for isolating the cause of operating problems and collecting data for further analysis. The book also describes utilities and aids for problem determination and resolution.

VSE/SP Messages and Codes — Messages which VSE/SP and the component program products issue and descriptions of what action, if any, you should take.

VSE/SP Master Index — An index for finding information in VSE/SP books and key publications for component program products. The entries in the index point to the books, not to specific page numbers. When you are referred to a book, you should use its more detailed index to locate page numbers.

Contents

Figures

Part I. Description of VSE/SP

VSE/System Package (VSE/SP) Version 2 Release 1 is a pregenerated VSE system which contains a number of VSE component program products and usability functions. VSE/SP makes it easier for you to install and use your VSE system.

The following information highlights VSE/SP:

1. VSE/SP provides the new Interactive Interface and newly developed productivity aids. Because these make it easier for you to use the system, you do not need extensive knowledge about individual component program products.

2. Major functional enhancements address data processing requirements. The virtual storage limitation of 16 megabytes has been removed. VSE/SP supports 40 megabytes of virtual storage in the 370 mode environment.

3. A new, easier to use librarian provides considerable functional and usability improvements.

4. New support for distributed data processing has been introduced.

5. VSE/SP provides support for the IBM 3270 Personal Computer and the IBM Personal Computer with the 3278/3279 Emulation Adapter. You can use these as display stations or intelligent workstations (IWS).

   Note: This book uses the following terms to refer to IBM 3270 Personal Computers and IBM Personal Computers with a 3278/3279 Emulation Adapter:

   - *IBM Personal Computer*
   - *Personal Computer*
   - *PC*

VSE/SP General Information provides more introductory information about VSE/SP. The following chapters describe the structure of VSE/SP and functions of its component program products.

Chapter 1 shows the content and structure of VSE/SP.

Chapter 2 describes the usability functions of VSE/SP and the improvements in the VSE/SP component program products.

Chapter 3 outlines the system organization. It describes storage allocations, VSE libraries, and disk layout information.

Chapter 1. VSE/SP Content and Structure

VSE/SP is a pregenerated system with an integrated set of VSE program products called component program products. In addition, there are VSE/SP optional programs and the VSE/SP Generation Feature.

Pregenerated System

VSE/SP is a complete VSE system. It is distributed on two tapes which you install using VSE/SP job streams. You can install it on various types of disk devices. The job streams start up the initial system with one of two telecommunication access methods: ACF/VTAM or BTAM-ES. After initial installation, you use the Interactive Interface for other installation or tailoring tasks.

The pregenerated VSE/SP system contains the component program products listed in Figure 2 on page 4. It includes modules and macros required for tailoring and using the system.

VSE/SP optional programs that you order with the system are stacked on one or more additional tapes. You can install them as part of initial installation or later using the Interactive Interface.

You can also order the VSE/SP Generation Feature. This is an optional feature which provides generation capability for the VSE/Advanced Functions supervisor and certain CICS/DOS/VS modules. It is distributed on a separate tape and can be installed using the Interactive Interface.

VSE/SP Component Program Products

The component program products in VSE/SP are illustrated in Figure 2 on page 4. The figure shows:

- Individual component program product names
- Component program product numbers
- Version, Release, Modification Level (VRM)
- Product ID
- Component ID
- VSE/SP default sublibrary

COMPONENT PROGRAM	PROGRAM NUMBER	VRM	PROD ID	COMP ID	VSE/SP SUBLIBRARY
VSE/Advanced Functions	5666-301	2.1.0	301A42	5666-30-102-A42 TO 5666-30-108-A42 5745-SC-ASM-A42	IJSYSRS.SYSLIB
ACF/VTAM	5666-280	2.1.0	280E27	5666-28-001-E27	PRD1.BASE
BTAM-ES	5746-RC5	1.1.0	CG1I08	5745-SC-BTM-I08	PRD1.BASE
CICS/DOS/VS	5746-XX3	1.6.0	XX3A46	5746-XX-300-A46	PRD1.BASE
VSE/ICCF	5666-302	2.1.0	302H02	5666-30-201-H02	IJSYSRS.SYSLIB
VSE/POWER	5666-273	2.2.0	273A45	5666-27-301-A45	IJSYSRS.SYSLIB
VSE/VSAM	5746-AM2	1.3.0	AM2I93	5745-SC-AMS-I93 5745-SC-VSM-I93 5745-SC-VCM-I93	IJSYSRS.SYSLIB
VSE/VSAM Space Management	5746-AM2	---	AM2I78	5745-SC-AMS-I78 5745-SC-VSM-I78	IJSYSRS.SYSLIB
VSE/VSAM Backup/Restore	5746-AM2	1.2.0	AM2I79	5745-SC-AMS-I79	IJSYSRS.SYSLIB
DITTO for VSE and VM	5668-917	1.1.0	917I27	5668-91-701-I27	PRD1.BASE
VSE/Fast Copy	5746-AM4	1.2.0	AM4F98	5745-AM-400-F98	PRD1.BASE
VSE/SP Unique Functions	---	---	316A41	5666-31-602-A41	IJSYSRS.SYSLIB
VSE/SP NLS (for English)	---	---	316A39	5666-31-602-A39	IJSYSRS.SYSLIB
Device Support Facilities	5747-DS2	1.7.0	DS2149	5745-SC-DSF-149	IJSYSRS.SYSLIB
EREP	5656-260	3.1.0	260167	5656-26-001-167	PRD1.BASE
EREP Functional Feature 2	5656-260	---	260968	5656-26-001-968	PRD1.BASE
VSE/OLTEP	5656-092	1.1.0	092923	5656-09-201-923	PRD1.BASE
BTAM-ES SCP	5747-CG1	1.1.0	CG1I08	5745-SC-BTM-I08	PRD1.BASE

Figure 2. VSE/SP Component Program Products

Notes:

1. *The last three characters of the COMP ID were known as the MSHP pre-Version 2 VSE/Advanced Functions CLC number.*

2. *The DOS/VSE System Control Programming (5745-030) has been integrated into VSE/Advanced Functions 2.1.0.*

3. *The VSE/POWER Shared Spool Feature is part of VSE/POWER 2.2.0.*

4. *The following prerequisite System Control Programming components are shipped with VSE/SP. However, they are not part of the licensed program specifications of VSE/SP.*

   - *BTAM-ES SCP*
   - *Device Support Facilities*
   - *EREP*
   - *VSE/OLTEP*

VSE/SP Generation Feature

The VSE/SP Generation Feature is an optional feature of VSE/SP. It provides generation capability for the VSE/Advanced Functions supervisor and certain CICS/DOS/VS control programs. If you want to change the generation defaults, you can order, without cost, the Generation Feature. It is shipped on an additional tape.

The components which make up the VSE/SP Generation Feature are shown in Figure 3.

COMPONENT PROGRAM	VRM	PROD ID	COMP ID	SUBLIBRARY
VSE/Advanced Functions Generation Feature	2.1.0	301A43	5666-30-106-A43	PRD2.GEN1
CICS/DOS/VS Generation Feature	1.6.0	XX3A47	5746-XX-300-A47	PRD2.GEN1

Figure 3. VSE/SP Generation Feature Components

You only need the VSE/SP Generation Feature if the options in the pregenerated system are not adequate for your needs. The supervisor options in the pregenerated system are shown in Appendix C, "VSE/Advanced Functions Supervisor Generation" on page 165.

Figure 14 on page 28 lists the CICS/DOS/VS modules you can generate if you install the Generation Feature.

You usually order and install the VSE/SP Generation Feature at the same time as the initial VSE/SP system. **This is the recommended way to install it.** However, you can order and install it at a later time. VSE/SP supports the installation of the feature on a running system. Chapter 5, "Generation Feature Installation" on page 53 describes the installation in more detail.

VSE/SP Optional Programs

Certain VSE program products are designated as VSE/SP optional programs. These are tested together and supported for simplified installation. Figure 4 on page 6 is a preliminary list of VSE/SP optional programs. This is a tentative list which may change after this book is available. For more information about VSE/SP optional programs and their Version, Release, and Modification Levels, refer to the *Program Directory* or contact your IBM representative.

In Figure 4 on page 6, the sublibrary is the default sublibrary for the program product if you automatically install VSE/SP optional programs during initial installation. If you install them later using the Interactive Interface, you can specify the sublibrary.

PROGRAM NAME	PROGRAM NUMBER	VRM	PROD ID	COMP ID	SUBLIBRARY
ACF/NCP 3705	5735-XX9	2.1.0	NC2E81	5748-NC-216-E81	PRD2.COMM
EP Feature for 3705 (NCP/SSP SCP)	5747-CH2		CH1554	5735-SC-100-554	PRD2.COMM
ACF/SSP	5735-XXA	2.1.1	SP2E78	5745-SP-215-E78	PRD2.COMM
ACF/NCP 3725	5735-XX9	2.1.0	NC2E77	5748-NC-215-E77	PRD2.COMM2
			NC2H77	5748-NC-215-H77	
EP 3725	5735-XXB	1.1.0	EP1E02	5748-EP-115-E02	PRD2.COMM2
			NC2H77	5748-NC-215-H77	
CSP/AD	5668-944	---	944F49	5668-94-401-F49	PRD2.DBASE
CSP/AE	5668-945	---	945F50	5668-94-501-F50	PRD2.DBASE
CSP/Q	5668-918	---	918F66	5668-91-801-F66	PRD2.DBASE
(See Notes on next page)					
DB/DC Data Dictionary	5746-XXC	1.4.0	XXCE43	5746-XX-C00-E43	PRD2.DBASE
Decision Support/VSE	5666-311	1.1.0	311A40	5666-31-101-A40	PRD2.DBASE
Unique Code					
QMF		1.1.0	292F67	5666-29-201-F67	
SQL/DS		1.2.0	SD1H68	5748-SD-1Y0-H68	
GDDM		1.4.0	GD1I39	5748-GD-101-I39	
			GD1I40	5748-GD-102-I40	
			GD1I41	5748-GD-103-I41	
DISOSS	5666-270	3.2.0	270H76	5666-27-001-H76	PRD2.COMM
DL/I DOS/VS	5746-XX1	1.7.0	XX1H57	5746-XX-100-H57	PRD2.DBASE
(See Notes on next page)					PRD2.G1$XX1
DMS/CICS/VS-DOS	5746-XC4	1.4.0	XC4I90	5746-XC-400-I90	PRD2.DBASE
DMS/CICS/VS-IAG	5746-XC4	1.4.0	XC4I91	5746-XC-400-I91	PRD2.DBASE
(See Notes on next page)					
DOS/VS COBOL	5746-CB1	1.3.0	CB1E44	5746-CB-100-E44	PRD2.PROD
			LM4E45	5746-LM-400-E45	
DOS PL/I Compiler/Libs	5736-PL3	1.6.0	PL3N74	5736-PL-161-N74	PRD2.PROD
			PL3N73	5736-LM-561-N73	
			PL3N72	5736-LM-461-N72	
DOS PL/I Opt. Compiler	5736-PL1	1.6.0	PL3N74	5736-PL-161-N74	PRD2.PROD
DOS PL/I Res. Library	5736-LM4	1.6.0	PL3N72	5736-LM-461-N72	PRD2.PROD
DOS PL/I Trans. Library	5736-LM5	1.6.0	PL3N73	5736-LM-561-N73	PRD2.PROD

Figure 4 (Part 1 of 2). VSE/SP Optional Programs

PROGRAM NAME	PROGRAM NUMBER	VRM	PROD ID	COMP ID	SUBLIBRARY
DOS/VS RPG II	5746-RG1	1.3.0	RG1O42	5746-RG-100-O42	PRD2.PROD
Info/System	5735-OZS	1.1.2	OZ1H29	5745-OZ-135-H29	PRD2.DBASE
ISPF	5666-960	1.1.0	960A14	5666-96-002-A14	PRD2.PROD
ISPF/PDF	5666-281	1.1.0	281H75	5666-28-101-H75	PRD2.PROD
NCCF	5735-XX6	1.2.0	XX6G44	5745-XX-600-G44	PRD2.COMM
NPDA (See Notes below)	5666-295	3.1.0	295H08	5666-29-501-H08	PRD2.COMM
SDF/CICS	5746-XXT	1.4.0	XXTF92	5746-XX-T00-F92	PRD2.PROD
Sort/Merge II	5746-SM2	2.5.0	SM2F46	5746-SM-200-F46	PRD2.PROD
SQL/DS	5748-XXJ	1.2.0	SD1H68	5748-SD-1Y0-H68	PRD2.DBASE
VSE/Access Control-Logging and Reporting	5746-XE7	1.2.0	XE7H06	5746-XE-700-H06	PRD2.PROD
VSE/OCCF (See Notes below)	5746-XC5	1.2.0	XC5H03	5746-XC-500-H03	PRD2.PROD PRD2.G1$XC5
X.25 VTAM feature (See Notes below)	5666-316	1.1.0	280A10	5666-28-001-A10	PRD2.COMM

Figure 4 (Part 2 of 2). VSE/SP Optional Programs

Notes:

1. *For current availability information about CSP/AD, CSP/AE, and CSP/Q, refer to the Program Directory or consult your IBM representative.*
2. *The DL/I generation sublibrary is PRD2.G1$XX1.*
3. *DMS/CICS/VS-IAG requires DMS/CICS/VS-DOS.*
4. *NPDA requires NCCF.*
5. *The VSE/OCCF generation sublibrary is PRD2.G1$XC5.*
6. *X.25 VTAM feature is ordered as a feature of VSE/SP, but it is installed as a VSE/SP optional program.*

Additional VSE Program Products

You can also install additional VSE program products which are not VSE/SP optional programs. Chapter 6, "Installing Additional VSE Program Products" on page 55 describes these VSE program products and the ways in which you can install them.

Chapter 2. New Functions

VSE/SP Functions

The installation, use, and maintenance of your VSE system is now much easier. VSE/SP provides the following to help you:

- Installation support.
- Interactive Interface.
- Skeletons and procedures for using the system.

Installation Support

VSE/SP provides many procedures and dialogs to help you with installation tasks.

Initial Installation

The initial installation of VSE/SP involves little interaction from you. After initializing the disk volumes and restoring SYSRES, you IPL from DOSRES. VSE/SP automatically chooses the correct IPL procedure. It also uses *device sensing* to automatically define the hardware devices on your system. The system stores the device information which is later used by the Interactive Interface.

After IPL, jobs automatically run to install VSE/SP. The installation process 'remembers' the responses you enter, so that the decisions and responses you have to make are minimal.

You complete the initial installation using the Interactive Interface. VSE/SP provides a special user-id which performs special processing.

"Initial Installation Overview" on page 50 provides an overview of initial installation.

Installing VSE/SP Optional Programs

VSE/SP supports the automatic installation of VSE/SP optional programs during the initial installation process. You can also choose to install the optional programs later using the Interactive Interface. Chapter 6, "Installing Additional VSE Program Products" on page 55 describes the installation process in more detail.

Installing the VSE/SP Generation Feature

The Interactive Interface provides the *Install Generation Feature* dialog to help you install the VSE/SP Generation Feature. The installation is discussed in Chapter 5, "Generation Feature Installation" on page 53.

Fast Service Upgrade

The Interactive Interface provides the *Fast Service Upgrade* dialog which helps you install a *system refresh*. The refresh is an upgraded version of VSE/SP.

The Fast Service Upgrade (FSU) simply replaces VSE/SP information without changing your user libraries or unique information. Refer to Chapter 7, "IBM Service" on page 58 for more information about IBM service for VSE/SP.

Interactive Interface

The VSE/SP Interactive Interface makes it easier for you to use VSE/SP and its component program products. You select the task you want to perform from selection panels. A dialog asks you for information to complete the specific task. The dialogs which VSE/SP ships as part of the Interactive Interface are called *Function Processors*.

Some dialogs perform interactively and display the information you need at your terminal. Some dialogs create a job which is submitted to the system to complete the task. You can usually store the job in a VSE/ICCF library member.

The Interactive Interface handles many system functions internally. By using the Interactive Interface, many users do not need extensive training or knowledge about the component program products of VSE/SP. Of course, you can also use the component program products directly in *native mode*.

VSE/SP User Profiles

VSE/SP provides four user profiles. A user profile defines a user to the Interactive Interface. The user profile record includes a user-id and password which you use to *sign on* to the system. It also defines what the system invokes when you sign on and the authorization you have to access various parts of the system.

The user profiles which VSE/SP provides are shown in Figure 5 on page 11.

Profile	User-id	Password
Model system administrator	SYSA	SYSA
Model programmer	PROG	PROG
Model operator	OPER	OPER
Complete initial installation	POST	BASE

Figure 5. VSE/SP User Profiles

The passwords are defined with no expiration date. However, you should change the passwords during initial installation. *VSE/SP Installation* describes how you do this.

The POST user-id is a reserved ID. It is used **only** during initial installation. It is defined to perform special processing. You **should not** use it for any other tasks.

You can use the other three user-ids (SYSA, PROG, and OPER) as models to define your own user-ids for an administrator, programmer, and operator. *VSE/SP System Use* describes how you use the *Maintain User Profiles* dialog to define a user-id. It is recommended that you do not use SYSA, PROG, or OPER. They may be affected when you perform a Fast Service Upgrade.

In addition, VSE/SP ships two VSE/ICCF IDs which are used only for maintenance. They are:

- AAAA
- AZZZ

Do not use or change these two profiles.

Interactive Interface Hierarchy

VSE/SP ships three sets of selection panels for the three user profiles it provides. An overview of the selection panel hierarchies is shown in the foldout at the back of the book.

Types of Interactive Interface Panels

The Interactive Interface uses different types of panels.

Selection Panels

A selection panel displays up to nine options that you can select. Each option represents either a dialog or another selection panel. The options on the panel are numbered. You make your selection by entering the appropriate number at the bottom of the panel.

Figure 6 on page 12 shows an example of a selection panel.

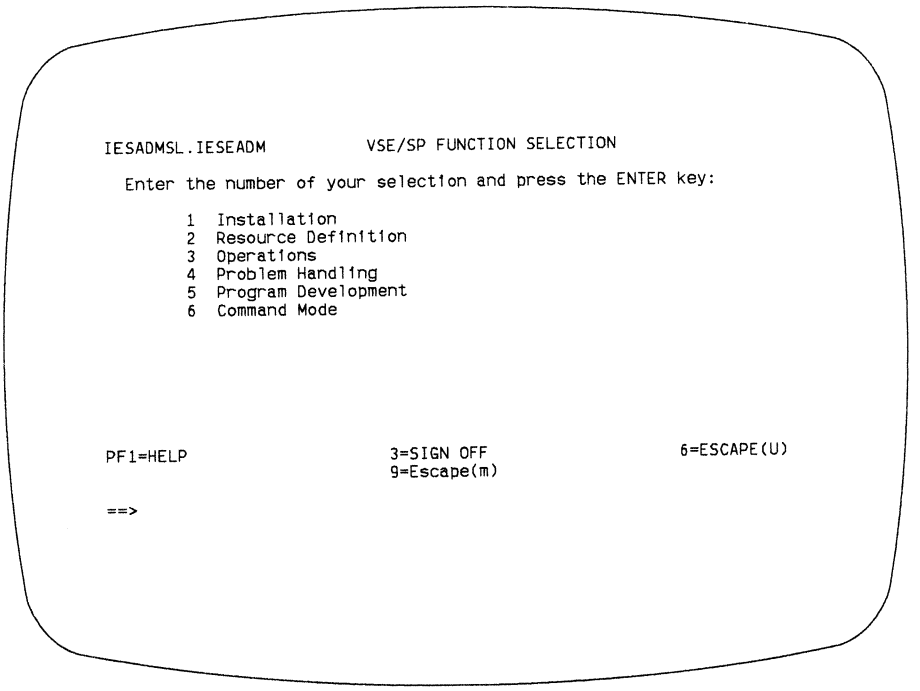

Figure 6. Example of a Selection Panel

Data Entry Panels

The dialogs use data entry panels to obtain information about the task you are performing. You enter the input in particular fields on the panel. For example, if you are restoring a library, you enter the tape unit address.

HELP panels

From certain panels, you can press **PF1** to display a HELP panel. The HELP panel provides an explanation about the task you are performing.

Sometimes, a HELP panel provides information about a message which the system displays. For example, if you enter incorrect data, the system displays a message. If you press **PF1**, the HELP panel may explain the error.

Function Lists (FULISTs)

A FULIST is a special type of data entry panel. It displays a list of items which you can process. It also displays a list of functions which you use to process the items. Each function corresponds to a specific number. You enter the number of the function you want to perform next to the item you want to process. Figure 7 on page 13 shows an example of a FULIST.

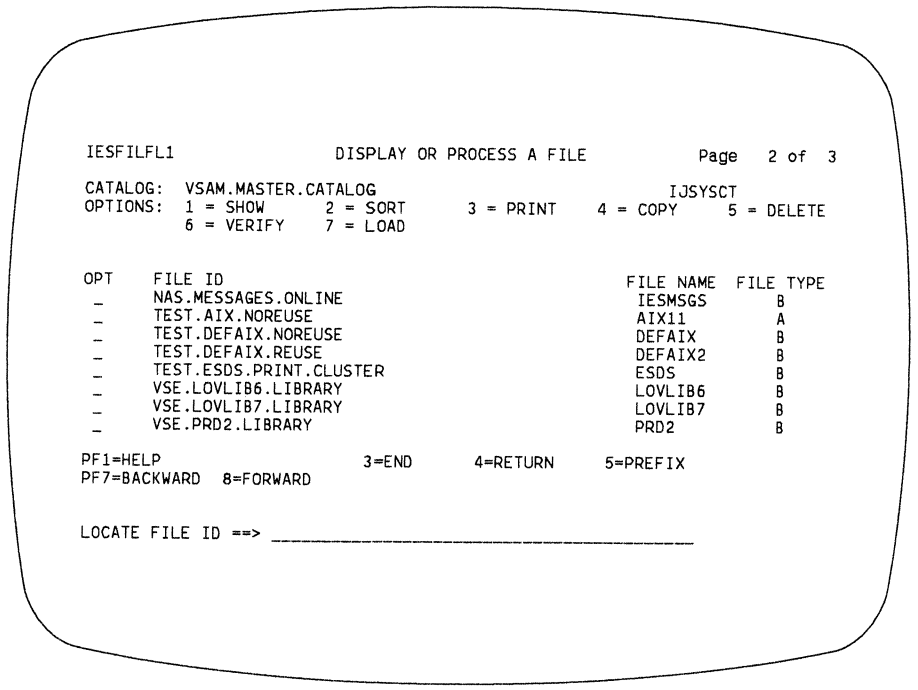

Figure 7. Example of a FULIST

User Interface Tailoring

Although VSE/SP ships three panel hierarchies, these may not accurately reflect your environment. All systems are different and users perform various types of work on a system. VSE/SP provides a feature known as *user interface tailoring*. This allows you to change the Interactive Interface so that it is more useful for you. It allows you to:

- Define user profiles.

  You can specify what the system displays when the user signs on, what functions can be accessed, and which CICS/DOS/VS security entries the user has.

- Create selection panels.

  You can create entire panel hierarchies for different types of users on your system. The panels can invoke VSE/SP dialogs or your own CICS/DOS/VS applications which you have defined to the Interactive Interface.

- Add CICS/DOS/VS applications.

  You can include your own CICS/DOS/VS applications in the Interactive Interface. You simply define a profile record for the application. You can then access the application from the Interactive Interface.

"User Interface Tailoring" on page 67 discusses this feature in more detail.

Access Rights in the Interactive Interface

The Interactive Interface uses several levels of access rights for the security of your system.

1. Sign on using a unique user-id and corresponding password.
2. The user-id is four characters. The password is from 3 - 6 characters.
3. Three different user profile types. They define different levels of authorization which the user has to access various parts of the system.
4. When you create selection panels, you can limit the selections which a particular user can access. In this way, users have access only to the functions with which they need to work.

The system administrator defines the user-id and password as part of a user profile. The authorization which the user has to access specific parts of the system is also defined in the profile. The password can be defined with an expiration date.

When your password is about to expire, you can change it. If you do not change the password and it expires, you cannot sign on to the system. When you change the password, you cannot repeat one of the last twelve passwords that you have used.

If you have a CICS/DOS/VS Signon Table (SNT), you can use the security facilities which it supports. In addition, VSE/SP allows only one user at a time to be signed on under one user-id.

VSE/SP Skeletons

VSE/SP provides many skeletons to help you complete tasks.

A skeleton is a member in an ICCF library. You use it to create a job to perform a task. It is not a complete job itself. It contains parameters and variables which you specify for your own system. The skeletons also contain comments which describe the JCL statements and variables and which explain how you make the necessary changes.

When you use a skeleton, you copy it from the library it resides in to your own library. You can then edit the copy and make the necessary changes.

After you make your changes, you invoke the DTRSEXIT macro. The macro deletes all the comments from the file. You can then file the member and submit it to the VSE system. By using a skeleton, you do not have to create your own jobs.

VSE/SP ships most skeletons in ICCF library 59. There are compile skeletons in library 2 and Personal Computer related members in library 68.

The following sections outline some of the VSE/SP skeletons. Refer to Appendix F, "List of VSE/SP Skeletons" on page 196 for a complete list of skeletons.

VSE/SP System Use and *VSE/SP Networking* describe the individual skeletons in detail.

System Startup

VSE/SP provides skeletons for several startup procedures:

- Background partition, 370 mode (for VAE implementation)
- Background partition, VM and E mode
- VSE/POWER
- ACF/VTAM
- Foreground batch partitions
- CICS/ICCF

Component Tailoring

VSE/SP provides skeletons to tailor VSE/POWER and VSE/ICCF.

The skeleton SKICFGEN contains the ICCF generation parameters which VSE/SP uses. The skeleton is in ICCF library 59.

The skeleton SKPWRGEN contains the VSE/POWER generation parameters which VSE/SP uses. VSE/SP also provides additional skeletons to define BSC connections and the network definition table for PNET. These skeletons are also shipped in ICCF library 59.

The VSE/ICCF and VSE/POWER generation skeletons are shown in Appendix G, "VSE/POWER and VSE/ICCF Tailoring Skeletons" on page 202.

Compile Skeletons

The *Program Development Library* dialog has a *compile* function. This allows you to submit an ICCF library member for assembly or compilation. Before you use the compile function, you must specify the various options you want. VSE/SP provides compile skeletons in ICCF library 2 which support the compile task. You can tailor these skeletons for your system. Programmers can then compile their work in batch partitions without having to use JCL or JECL. The compile skeletons support:

- COBOL
- PL/I
- Assembler
- RPG-II
- FORTRAN

You can use them for:

- Online programs
- BMS map definition

- Batch programs
- Batch subroutines

Refer to "Tailoring the Compile Skeletons" on page 108 for more information.

CICS/DOS/VS Tables and Skeletons

VSE/SP provides predefined table entries for the CICS/DOS/VS tables shown in Figure 8. As shown in the figure, each table is represented by an ICCF library member in library 59. Except for the System Initialization Table (SIT), two parts of each ICCF library member are of interest to you:

- An assembler COPY statement.

  This COPY statement refers to a copy book shipped in the system library. The copy book contains the table entries needed by VSE/SP and **should not** be modified. Since there are no predefined SIT entries, the ICCF member which represents the SIT does not contain such a COPY statement.

- Comments for your entries.

  The comments indicate where your table entries should be placed.

ICCF members representing the following tables contain a second assembler COPY statement which includes entries for intelligent workstation (IWS) support.

- Program Control Table (PCT)
- Processing Program Table (PPT)
- File Control Table (FCT)
- Destination Control Table (DCT)

Two FCTs are shipped so that you can easily establish a second CICS/DOS/VS partition with read only access to special VSE/SP files.

Figure 8 shows each of the pregenerated CICS/DOS/VS tables and the corresponding ICCF member and VSE library member(s). These tables provide the functions which VSE/SP requires. Appendix D, "CICS/DOS/VS Tables" on page 166 shows the options which are used.

CICS/DOS/VS Table	ICCF Library Member	VSE Library Members	
		VSE/SP Related	IWS Related
Program Control Table (PCT)	DFHPCTSP	IESZPCT	IESWPCT
Processing Program Table (PPT)	DFHPPTSP	IESZPPT IESZPPTL	IESWPPT IESWPPTL
File Control Table (FCT) Main CICS/ICCF Additional CICS	 DFHFCTSP DFHFCTSO	 IESZFCTP IESZFCTO	 IESWFCT
Program List Table (PLT) Initiation Shutdown	 DFHPLTPI DFHPLTSD	 IESZPLTI IESZPLTS	 --- ---
Destination Control Table (DCT)	DFHDCTSP	IESZDCT	IESWDCT IESWDCTC
Transaction List Table (XLT)	DFHXLTSP	IESZXLT	---
System Initialization Table (SIT)	DFHSITSP	---	---

Figure 8. CICS/DOS/VS Tables and Corresponding VSE/SP Names

Note: The TCT is created by the Interactive Interface dialogs. Therefore, no sample is provided here.

CSD File

The VSE/SP installation process creates and initializes a CSD (CICS/DOS/VS System Definition) file with the DFHPPTSP and DFPCTPCTSP entries. These entries are placed into group VSESPG which can then be manipulated by the CICS/DOS/VS CEDA transaction. The name of the file is CICS.CSD.

The JCL used to create the CSD file is shown in Figure 9.

```
// EXEC DFHCSDUP,SIZE=AUTO      INIT CICS CSD VSAM FILE
  INITIALIZE
  MIGRATE TABLE(DFHPPTSP) TOGROUP(VSESPG)
  MIGRATE TABLE(DFHPCTSP) TOGROUP(VSESPT)
  COPY GROUP(VSESPT) TO(VSESPG)
  ERASE GROUP(VSESPT)
  LIST ALL
/*
```

Figure 9. JCL to Create CSD File

CICS/DOS/VS Error Collection Program

VSE/SP uses the program DFHPEP to support Online Problem Determination (OLPD). If you have your own PEP routines, you may want to modify the library member DFHPEP. It is shown in "Program Error Program (DFHPEP)" on page 192. The changes you can make are discussed in "Using DFHPEP" on page 111.

Modify the Sign-On Panel for CICS/DOS/VS Users

VSE/SP provides the IESELOGO skeleton in ICCF library 59. You use this skeleton to modify the Interactive Interface signon panel. You can implement your own logo design for the panel or have the panel display the PF6 and PF9 keys. These PF keys allow a user to leave the Interactive Interface and *escape* to native CICS/DOS/VS. By having PF6 and PF9, your end users can use your CICS/DOS/VS system without signing on to the Interactive Interface and having access to the dialogs.

In the IESELOGO skeleton, there is an 'ESCAPE SWITCH' statement which controls whether PF6 and PF9 are displayed on the signon panel. You can edit and change the skeleton to specify that the PF keys are displayed.

You do not have to use the PF keys for the escape facility. The skeleton also allows you to specify a 1 - 4 character string for escaping to CICS/DOS/VS. The user then simply enters the character string from the sign-on panel and enters native CICS/DOS/VS.

VM/VSE Interface

The VM/VSE Interface is a set of VSE phases and CMS modules which VSE/SP provides. It allows CMS users to communicate with the VSE/SP console. Chapter 15, "VM/VSE Interface" on page 127 describes the VM/VSE Interface in detail.

User Profile Migration Utility

VSE/SP provides the User Profile Migration Utility IESBLDUP. IESBLDUP is a batch program which creates VSE/SP user profiles. By using it, you do not have to use the *Maintain User Profiles* dialog and specify each individual profile.

The utility aids you in migrating your existing VSE users and defining new user profiles for them. If you are a new user, you can also benefit from the utility. You can define a large number of user profiles with the utility.

You can create user profiles from the following sources:

- VSE/SP ICCF DTSFILE
- Tape backup of ICCF DTSFILE (DTSRSTR)
- CICS/DOS/VS Sign On Table (DFHSNT)
- Add statements

"User Profile Migration Utility" on page 99 describes the utility in more detail.

VSE/Advanced Functions

VSE/Advanced Functions Version 2 Release 1 introduces the following improvements:

1. Virtual Addressability Extension (VAE).
2. Parallel page I/O.
3. New librarian.
4. Conditional job control, nested procedures, and checking of return codes.
5. Additional hardware support, extended disk sharing, and VM Linkage Enhancements (VMLE) for 370 mode.
6. MSHP improvements.

Virtual Addressability Extension

Overview of a System Without VAE

You can implement VAE in a 370 mode system.

This section highlights a 370 mode system without the implementation of VAE. This helps you understand any differences between 370 mode systems with and without VAE.

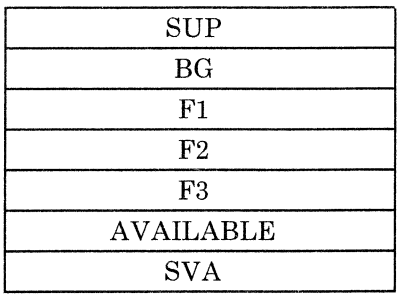

Figure 10. Non-VAE System

In Figure 10, the total size of the SVA, supervisor, BG, F1, F2, F3, and AVAIL (available) space is the value in the VSIZE parameter in the IPL procedure.

Overview of a System With VAE

Conceptually, VAE is up to three copies of the total virtual storage (called spaces) and the supervisor selects which space to use. A *non-VAE* system is actually a VAE system with only one space.

When a space is being used, it must have the supervisor and SVA in order for it to run. The concept is that each space has its own copy of the supervisor and SVA. However, there is only one SVA and one supervisor which are *shared* between the spaces.

Figure 11 on page 20 shows the basic idea of a VAE system.

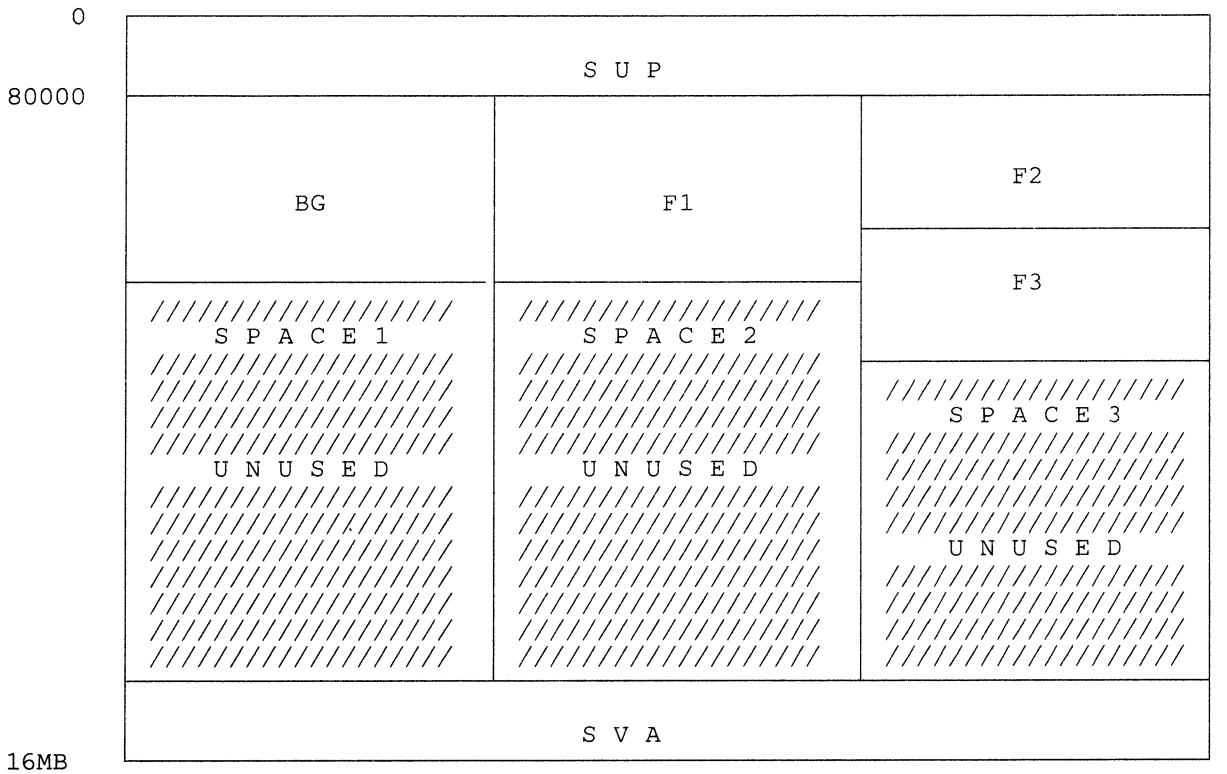

Figure 11. Basic Diagram of a VAE System

Amount of Virtual Storage Available

If the supervisor and the SVA together total 4M, then in a **non-VAE** system, the amount of virtual storage which is available for partitions is:

```
16M - 4M  =  12M
```

With VAE, there can be three spaces each of this size. In this case, the total virtual storage which is available is:

```
(3 * 12) + 4 = 40M
```

This is the upper limit for maximum virtual storage. However, it will usually be less than this.

For example, if the supervisor and SVA together total 6M, then the amount of virtual storage remaining in a space is:

```
16 - 6  =  10M
```

In this case, therefore, the maximum virtual storage which is available is:

```
3 * 10 + 6  =  36M
```

Addressability of Partitions

You should note that in Figure 11 on page 20, partitions BG, F1, and F2 all have the same virtual storage addresses. For example, there is an address 80000 in each of the three partitions because they are in different spaces.

Because programs run within one space, they do not have to have any programming considerations to run in a VAE environment. Programs which currently run in a system with a previous VSE release will usually run in the VSE/SP system.

An exception is when a program communicates with programs in other partitions. With a VAE system, these programs must all be in the same space.

Shared Partitions

VSE/POWER and ACF/VTAM must be able to communicate with all partitions in all spaces. In order for this to occur, they must run in a *shared* partition. A shared partition can be thought of in the same way that the supervisor and SVA are shared.

The shared partitions are placed adjacent to the SVA at the high end of storage.

For example, if F1 and F3 are shared partitions of 1M each, then the amount of virtual storage used by the supervisor, SVA, and the two partitions is:

```
6M (SUP + SVA) + 1 (F1) + 1 (F3)  =  8M
```

Therefore, the amount of virtual storage which is available for other partitions in a space is:

```
16 - 8M  =  8M
```

The total virtual storage available is:

```
3 * 8M + 8  =  32M
```

The use of VAE is shown in Figure 12 on page 22.

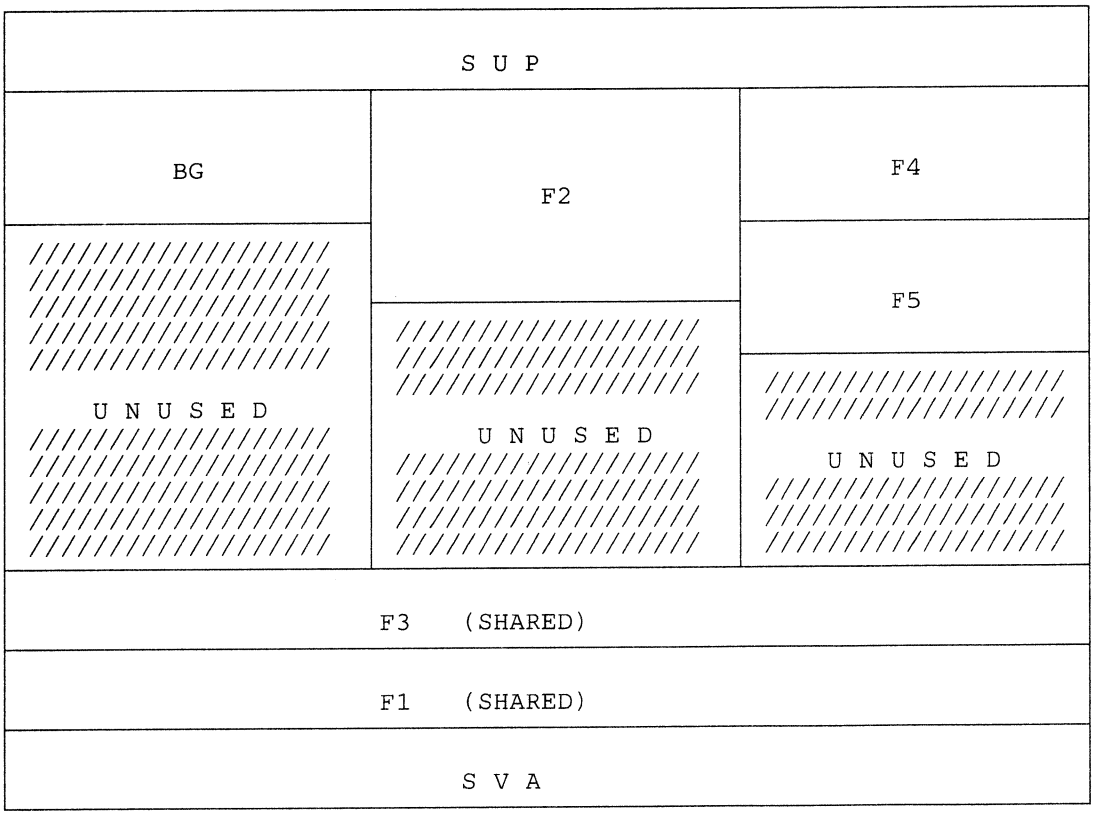

Figure 12. Example of a VAE System

Using VAE

If you want to use more than 16M virtual storage, you have to:

1. Change the VSIZE parameter at IPL

   AND

2. Add more extents to the page data set

You can use the *Tailor IPL Procedure* dialog to do this.

Having multiple extents for your page data set allows you to take advantage of the new parallel page I/O.

In 370 mode, the output of the MAP command is similar to that shown in Figure 13 on page 23. In the figure, **AVAIL** is the amount of virtual storage which is available on the page data set, but which is not yet allocated to a partition. This is the same for a non-VAE 370 system.

The **UNUSED** is the size between the highest address allocated in that space and the beginning of the shared partitions. You may not be able to use all of this because of the limit of the AVAIL space which is described above.

```
AR 015       SPACE AREA   PRTY   V-SIZE GETVIS   V-ADDR   R-SIZE R-ADDR NAME
AR 015         S   SUP             384K             0     276K      0 $$A$SUP3
AR 015         1   BG V     12     976K     48K   60000       0K        NO NAME
AR 015         1   UNUSED        10752K          160000
AR 015         2   F2 I      2    6096K     48K   60000       0K
AR 015         2   UNUSED         5632K          660000
AR 015         3   F4 I      4     976K     48K   60000       0K
AR 015         3   F5 I      5    2000K     48K  160000       0K
AR 015         3   UNUSED         8704K          360000
AR 015         S   F3 I      3     976K     48K  BE0000       0K
AR 015         S   F1 I      1     976K     48K  CE0000       0K
AR 015         S   SVA           1508K    668K  DE0000    4332K
AR 015             AVAIL         1536K                    11776K
AR 015             TOTAL        16384K                    16384K
```

Figure 13. Output from MAP Command for 370 Mode With VAE

Parallel Page I/O

VSE/Advanced Functions can now handle page I/O requests in parallel. Parallel page I/O establishes a page I/O request queue for each disk volume on which a page data set extent resides. By spreading paging requests across both software and hardware queues, page I/O can be handled more quickly.

New Librarian

VSE/Advanced Functions Version 2 Release 1 introduces a new librarian. Compared with the librarian programs of previous releases, it is easier to use and offers more function.

The librarian can run in a VSE/ICCF interactive partition or from the system console.

The characteristics of the librarian are:

- A library has sublibraries which vary in size depending on the number and size of members in them.
- In a sublibrary, members are identified by member name and type.

  The type indicates whether it is a source or relocatable module, a phase, a procedure or something else.
- The libraries are SAM files. However, except for the system library IJSYSRS, you can have them in VSAM managed space. This option allows secondary space allocation and automatic extension as long as additional VSAM space is available.
- You can specify up to 16 extents per library.

- A common library block size of 1K for all library member types makes better use of CKD disks.
- The old dump file has been eliminated and replaced by a new DUMP library.
- No condense function is required because of dynamic space allocation.

Migration to the New Librarian

The migration aspects are discussed in detail in *VSE/SP Migration.* This section highlights some considerations.

The new librarian supports some commands from previous releases for migration reasons:

- The new Restore function accepts backup tapes from DOS/VS Release 34 or backup tapes which were created using LIBDEF or ASSGN statements. There are some restrictions which are described in *VSE/Advanced Functions Planning and Installation.*
- You can execute phases such as DSERV and MAINT. However, the console operator may be prompted for additional information.
- An option of the PUNCH command will 'punch' VSE/Advanced Functions library members, so that you can catalog them into pre-Version 2 VSE/Advanced Functions libraries using either MAINT or the linkage editor.
- A library migration table allows you to specify new library and sublibrary names which the system uses when it processes your LIBDEF statements from pre-Version 2 VSE/Advanced Functions.

Security and Integrity of Libraries

The libraries can be protected through the Access Control Table (DTSECTAB) which is now part of VSE/Advanced Functions. Libraries which are not represented in this table are not protected. Information about defining library access control is described in *VSE/Advanced Functions System Management Guide.*

Some new functions provide better library integrity:

- Dynamic extension of libraries.
- Delayed cancel feature.

  This allows the librarian or linkage editor to continue executing to ensure library integrity before an operator CANCEL command is honored.
- A new TEST command assesses the status of a damaged library, sublibrary, or member. This, together with its REPAIR function, can reduce recovery time.

Conditional JCL, Nested Procedures, and Return Codes

VSE/Advanced Functions job control now supports:

- Checking of return codes.
- IF/THEN/GOTO logic.
- Setting of parameters.

You can execute or bypass job steps according to the success of previous job steps. Nested procedures and the passing of parameters to them are supported.

Multiple step job streams which worked in previous releases may fail unexpectedly because the default action for return codes greater than 15 is cancellation of the remaining job steps. You can avoid this problem by coding an 'ON $RC' statement.

Procedures can now have parameters which cause the function to execute in different ways. This can be beneficial for utility and sort job streams which you use.

Additional Hardware Support, Extended Disk Sharing, and VMLE

The following information outlines several new items:

- The new IBM 4248 printer is supported in 3211 compatibility mode.
- Up to 16M of real storage is supported in 370 mode.
- Up to 31 processors can participate in disk sharing, if you do not include a pre-Version 2 VSE/Advanced Functions system. The size and location of the lock file is specified during IPL.

The following VM Linkage Enhancements of MODE = VM supervisors have been extended to MODE = 370:

- Pseudo page fault handling
- CPCLOSE support
- Support for CP AUTOPOLL ON option
- Suppress pageable supervisor option

MSHP Improvements

The Maintain System History Program (MSHP):

- Installs service changes on several sublibraries in one service run.
- Installs and services several releases of a program product concurrently.
- Creates a backup copy of a program together with the related history file entries.

VSE/ICCF

VSE/ICCF Version 2 Release 1 contains the following changes:

- The operator can DISCONNECT the DTSFILE without interrupting CICS/DOS/VS, for example, for Backup/Restore or ICCF maintenance.
- The operator can log off an individual user or terminal while CICS/DOS/VS and VSE/ICCF are still active.
- The restriction against PAGEX in VM with ICCF is removed.
- DL/I programs can run concurrently in ICCF partitions.
- New or improved commands for scrolling, shifting, and searching printed output are introduced.
- Previously entered commands can be retrieved from an internal stack.
- A new Help facility provides tutorial information about commands, job entry statements, procedures, and macros.
- The TTF (Terminal Transaction Facility) of ICCF is no longer supported.

VSE/POWER

VSE/POWER Version 2 Release 2 provides the following improvements:

- The maximum DBLK size is 12K (from 2K).

  The default value is 2K. The buffers are not allocated in fixable VSE/POWER area. They are now in the partition GETVIS general subpool. You should ensure that you have sufficient real storage.
- Operator messages are favored going from system to system. This avoids delays that are associated with heavy link traffic and the previous 'first in, first out' queueing technique.
- VSE/POWER local services initialize successfully, even though a missing phase or an invalid network definition table can prevent the successful initialization of PNET.
- Shared spooling is now part of VSE/POWER. It is no longer a separate feature.
- A new VM writer task uses a VM virtual device as a printer or punch to write the spooled output file with proper job information to a CMS user-id.

- The ICCF XPCC interface to VSE/POWER is used to get data from or pass data to VSE/POWER. The related commands such as GETP, GETL, GETR, /LISTP, and related subcommands for viewing LIST output are faster.

- The * $$ SLI has new parameters which allow VSE/POWER to read a member directly from the VSE/ICCF library. The ICCF /INCLUDE statement also has a new parameter that causes the INCLUDE statement to be transformed into the new * $$ SLI statement when read by the SUBMIT facility.

  Notes:

  1. *The ICCF library search chain used at execution is whatever was in effect for the user at submit time.*

  2. *Do not use the SLI parameter for:*

     - *Members that are edited or updated immediately after submission. This is because of the time difference between submission and execution.*

     - *Members containing ICCF job entry statements.*

     - *Members containing VSE/POWER JECL. This JECL is not compared against the installation default for submit.*

     - *The RELIST macro, if data with POWER JECL, /*, or /& is used.*

- Several ICCF users can access VSE/POWER functions concurrently. For example, several users can view spooled output.

- You can access the VSE/POWER reader queue and move entries into your library before they begin execution. If you work at a system to which jobs are sent from other locations, you can use this facility to inspect job control.

- Diskette data can be included at execution time.

- You can retrieve all segments of segmented print and punch output, not just the first segment.

CICS/DOS/VS

CICS/DOS/VS Version 1 Release 6 provides the following improvements. Refer to *CICS/DOS/VS 1.6.0 Release Guide* for more information.

- You do not have to generate most control programs. CICS/DOS/VS provides generated versions for those which have few SYSGEN options and no user exits.

By installing the VSE/SP Generation Feature, you can generate modules which need user exits or have other local requirements. Figure 14 lists the CICS/DOS/VS modules which you can generate if you install the VSE/SP Generation Feature.

DFHACEE	DFHISP	DFHTACP	DFHZCC
DFHACP	DFHKCP	DFHTBP	DFHZCP
DFHALP	DFHPCP	DFHTCP	DFHZCW
DFHCPY	DFHPRK	DFHTDP	DFHZCX
DFHCSA	DFHP3270	DFHTPR	DFHZCY
DFHDBP	DFHRKB	DFHTRP	DFHZCZ
DFHDSCTS	DFHRTY	DFHTSP	DFHZNAC
DFHEXI	DFHSCP	DFHXFP	DFHZNEP
DFHFCP	DFHSCR	DFHXSP	DFHZRLG
DFHGMM	DFHSPP	DFHZCA	DFHZRSP
DFHICP	DFHSRP	DFHZCB	

Figure 14. CICS/DOS/VS Modules You Can Generate With VSE/SP Generation Feature

- The CICS/DOS/VS function Resource Definition Online (RDO) allows Program Control Table (PCT) and Processing Program Table (PPT) information to be entered and maintained using a new CICS/DOS/VS transaction. You can do this without interrupting CICS/DOS/VS service. This can make PPT and PCT redundant.

  A CSD file is created and initialized during initial installation, but it is not used by the CICS/ICCF startup job stream.

- If a Restart Data Set is defined, CICS/DOS/VS chooses between a 'warm' and an 'emergency' restart from the contents of this file. You must define the file using AMS (Access Method Services) for VSE/VSAM.

- The new AUTOSWITCH option allows CICS/DOS/VS to switch dump files, without delay, when one dump file is full. The operator is notified of the switch and must inform CICS/DOS/VS when the inactive file is ready again for output.

- Transaction backout against disabled VSAM files is possible. If the named file is busy, CLOSE requests are ignored.

- A new transaction allows browsing of the temporary storage queues.

- Additional CICS/DOS/VS modules and your own modules can now reside in the SVA. If you have several CICS/DOS/VS partitions, SVA residency reduces virtual storage requirements and unnecessary paging.

ACF/VTAM

You should consider the following changes for ACF/VTAM:

- The MSNF (Multiple System Networking Facility) function has been incorporated into ACF/VTAM. It is no longer a separate product.
- Support for the IBM 4331 and 4361 Communications Adapter is improved.
- Added support for the X.25 VTAM feature.

Chapter 3. System Organization

VSE/SP Partition and Storage Layout

The system is activated at initial installation with 16M of virtual storage. You can tailor the VSE/SP ASI skeletons in library 59 to modify the initial VSE/SP partition and storage layout.

VSE/SP job streams bring up either a BTAM-ES or ACF/VTAM system. This depends on whether you choose BTAM or VTAM as your telecommunications access method during initial installation. Only six of the twelve supported partitions are started at initial installation. Figure 15 shows the initial partition layout.

Area	Priority	Virtual Size	GETVIS	Real Size	Name
SUP		*	*	*	SUP
BG V	12	1792K	256K	0K	---
F1 V	1	600K	156K	64K	POWER
F2 V	3	5120K	760K	144K	CICS/ICCF
F3 V	2	900K	1148K	200K	VTAM
F4 V	4	756K	268K	0K	---
F5 V	5	756K	268K	0K	---
SVA		*	*	0K	---

Figure 15. Initial Partition Layout

* The size depends on the supervisor mode and the amount of real storage available.

Storage Allocation

General Considerations

When you use 370 mode, you can extend the size of virtual storage up to 40MB. Virtual Addressability Extension (VAE) offers support for multiple address spaces. Each address space has a size of up to 16MB, within the 40MB limit. The maximum number of address spaces is 3.

Single address space capability is still available in all modes. However, the typical usage will be in E mode or VM mode.

The main differences between storage allocation definitions when using single or multiple address spaces are explained in the sections below.

Storage Layout in E Mode or VM Mode

When you set up the system to use a single address space, the allocation of the virtual partitions is basically the same as in previous releases of VSE.

The supervisors which are provided are:

- $$A$SUPV (Mode = VM)
- $$A$SUPE (Mode = E)

Sixteen (16) MB of virtual storage is available when you use these two supervisors. The virtual storage (16MB - FGs - SVA - Supervisor) is **not** automatically used to allocate the BG partition. This is different from previous VSE releases. If you want to change the default of 128K, you must explicitly allocate the BG partition. Therefore, it is possible to have undefined virtual storage between the last allocated foreground partition and the SVA.

Virtual Storage Layout in 370 Mode

VAE support is available with all supervisors generated with MODE = 370. The 370 mode supervisor which is provided is $$A$SUP3. There are no additional or changed supervisor generation parameters. The maximum number of partitions is 12. If you want to change the default of 128K, you must explicitly allocate the BG partition.

You can implement VAE using the following:

- VSIZE parameter in the first statement in the IPL procedure.

  You can specify up to 40MB virtual storage. VSIZE specifies the maximum total size of all allocated virtual areas. This includes the supervisor, SVA, and all virtual partitions. Real allocations are not counted.

AND

- ALLOC job control command in the BG startup procedure.

  Using the ALLOC command, you can sub-divide virtual storage into partitions. When activating VAE, you must specify the address space to which the allocated partition belongs. The ALLOC command has a parameter for this. It becomes the first parameter and defines the address space where the allocation is to be done (S, R, 1, 2, or 3). 'S' means that the allocation is shared. 'R' means that the allocation is real storage.

Shared and Private Storage Areas

There are two types of virtual areas in 370 mode:

- Shared areas (partitions).
- Private areas (partitions).

Shared Areas
Some areas are shared among all address spaces. They are provided for code and data which must be accessible to several or all partitions. These areas include the supervisor and SVA. Some subsystems such as VSE/POWER, ACF/VTAM, and VSE/OCCF are also in this category. Therefore, they are also executed in shared (S) partitions.

Private Areas
The space between the end of supervisor and start of the shared areas (uppermost partition with definition S) is available for private partitions.

GETVIS Area Considerations

System GETVIS Area

Some functions use the system GETVIS area. Some tables also reside in this area. The initial size of system GETVIS area varies according to CPU mode. It is sufficient to hold system functions and tables provided in the VSE/SP system.

The following use the system GETVIS area:

- Segment tables for virtual address spaces.
- Segment table for real address space.
- Subtask control blocks (allocated at ATTACH time).
- If Job Accounting (JA) support is activated at IPL time, a 1K user save area is allocated.

- JA partition tables.
- SDAIDS.
- Storage for DASD file protection.

Partition GETVIS Area

Many functions require partition GETVIS space when executing programs. Therefore, it is recommended that you provide additional GETVIS space for every partition using either the SIZE command or the SIZE parameter on the EXEC statement. The default partition GETVIS space is 48K.

GETVIS Area Subpooling

This new function enhances GETVIS storage utilization. Subpools are created using the GETVIS macro. If the requested subpool does not exist, it is implicitly allocated through the first GETVIS request. Programs which use the GETVIS/FREEVIS macros from earlier VSE releases are compatible because the new feature is implemented by additional parameters in the macros.

An entire subpool is deleted using the FREEVIS macro by specifying the subpool ID with the macro. The following information pertains to GETVIS area subpooling:

1. Each subpool consists of blocks which are equal to the page size.
2. A subpool can be created either within a partition or the SVA.
3. Empty blocks are automatically deallocated from the subpool at FREEVIS time.
4. Each task can own one subpool for exclusive use.
5. A GETVIS request without subpool specification is allocated from the general subpool.
6. All subpools, except the exclusive ones, can be accessed by each task of the corresponding partition.

VSE/ICCF Interactive Partition Layout

The Interactive Interface uses VSE/ICCF interactive partitions which are allocated within the ICCF partition.

Figure 16 on page 34 shows the characteristics of the default ICCF interactive partitions. You can increase their sizes or add class A and B partitions. However, you **should not** add a second class I partition.

Some functions of the Interactive Interface use class I. These functions **should not** be performed concurrently. In addition, you should not decrease the size of any class B or class I partition.

If you add ICCF interactive partitions or increase the size of existing ones, you should also make a corresponding increase in the size of the VSE F2 partition.

Interactive Partition	Class	Minimum Size	Used By
0	T	2048K	CICS/DOS/VS
1	A	256K	Interactive Interface
2	A	256K	Interactive Interface
3	A,B	512K	Interactive Interface
4	A,B	512K	Interactive Interface
5	A,B,I	512K	Interactive Interface

Figure 16. Default VSE/ICCF Interactive Partition Characteristics

As illustrated in Figure 16, the interactive partitions take up 4M (4096K) of storage.

SVA Considerations

The basic virtual storage requirement for the SVA is approximately 1100K. There are some new phases and functions that are now in the SVA:

- Tape file processing.
- Direct access functions.
- Logic module generated for PRT1 and the IBM 3800 printer using ASA control characters.
- End-Of-Task cleanup modules for subsystems.

Librarian, job control, and VSE/VSAM phases are automatically loaded into the SVA during IPL. At IPL, $JOBACCT and $JOBEXIT are also loaded.

SETSDL.PROC is used to load phases into the SVA and SDL. The procedure is executed during the BG start procedure. You can modify or replace it for your own requirements, such as Sort/Merge or DL/I. You should review the contents of SETSDL.PROC and modify it for your own requirements.

You can determine the SVA size that you need so that you do not have unused space in the SVA. Review the following steps:

1. Define a large SVA.

2. Load all the required phases into the SVA.

   For performance reasons, you can add additional SVA eligible phases. You should carefully select these phases depending on your workload. If you put phases that you seldom use in the SVA, you may not improve performance and might waste shared virtual space.

3. Determine the free space.

   You can do this by running the librarian (LIBR) with the LISTDIR SDL command. The first page of the output contains the details shown in Figure 17.

4. Redefine an SVA of appropriate size.

```
STATUS DISPLAY              SDL AND SVA                DATE:
                                                       TIME:
-------------------------------------------------------------
SDL       TOTAL ENTRIES :    339  (100%)
          USED ENTRIES  :    140  ( 41%)
          FREE ENTRIES  :    199  ( 59%)

SVA       TOTAL SPACE   : 1528K  (100%)
          USED SPACE    : 1068K  ( 70%)
          FREE SPACE    :  460K  ( 30%)
-------------------------------------------------------------
DIRECTORY DISPLAY             SDL                      DATE:
                                                       TIME:
-------------------------------------------------------------
```

Figure 17. Partial Sample Output from LISTDIR SDL Command

As shown in Figure 17, there is 460K unused virtual storage reserved for the SVA. In this case, you can either load more phases into the SVA or decrease the SVA size using the SVA IPL command.

Standard Label Procedures

Three procedures are used for label information for both OPTION STDLABEL and OPTION PARSTD labels.

STDLABEL.PROC

This procedure is automatically created during initial installation. It is based on the disk type you use for installation. It contains labels for all non-VSAM system files.

The BG ASI procedure and the skeleton you use to tailor your own ASI procedure execute STDLABEL.PROC. When STDLABEL executes, it executes the other two procedures, STDLABUP and STDLABUS.

You should modify this procedure **only if** you extend or move a VSE/SP system file to a different location.

STDLABUP.PROC
This procedure is used only for VSAM file labels. These files are:

1. Files which are created automatically during installation.

2. Your own VSAM files which you define using the Interactive Interface.

When files are defined or deleted, the VSE/VSAM dialog automatically updates the STDLABUP procedure.

STDLABUS.PROC
VSE/SP provides the STDLABUS skeleton in ICCF library 59. You use this skeleton to include any files which are not created by the Interactive Interface. The STDLABEL procedure executes STDLABUS.PROC.

VSE/SP initially provides a dummy STDLABUS procedure in IJSYSRS.

Additional Startup Procedures

- SETSDL
  The SETSDL procedure contains phases which reside in the SVA or SDL.

- LIBDEF
  The LIBDEF procedure provides the library access chain for the initial VSE/SP system.

Assignments for System Files

VSE/SP supplies procedures which contain the assignments for key system files. These are automatically invoked by the startup job stream and by other VSE/SP job streams. You should change them only if you move the corresponding files.

DTRICCF.PROC
This contains the assignment for SYS010 to the VSE/ICCF DTSFILE.

DTRPOWR.PROC
This contains the assignments for the following VSE/POWER files:

- SYS000 - SYS002 (systems with large disks)
- SYS000 - SYS003 (systems with small disks)

DTRSYSWK.PROC
This contains the assignments for the system work files SYS001 - SYS004 and SYSLNK.

DTRINFOA.PROC
This contains the assignments for the Info/Analysis work files SYS016 and SYS017.

DTRCICST.PROC
This contains the assignments for the CICS/ICCF sequential work files on SYS018:

- DFHDUMPA
- DFHDUMPB
- DFHAUXT
- DFHMSGUSR

It also contains labels and the assignments for the work files (SYS001 and SYS002) used by DTSANALS to recover the DTSFILE.

VSE Libraries

VSE libraries are serviced by the new librarian of VSE/Advanced Functions. The VSE system libraries contain the code for system execution and dump information.

The system libraries IJSYSRS and PRD1 contain VSE/SP component program products, along with modules and source books required for system operation. A third library, PRD2, is created during initial installation. PRD2 contains predefined sublibraries. It is defined in VSAM managed space. Therefore, it can be dynamically extended to contain more sublibraries for VSE/SP optional programs, additional VSE program products, or your own application programs. The SYSDUMP library is used for dump information.

Figure 18 on page 38 provides an overview of these libraries and the sublibraries.

Library	Sublibrary	Space Management	Created By
IJSYSRS	SYSLIB	Non-VSAM	Stand-alone restore
PRD1	BASE	Non-VSAM	Initial installation
PRD2	CONFIG	VSAM	Initial installation
PRD2	SAVE	VSAM	Initial installation
PRD2	PROD	VSAM	Initial installation
PRD2	DBASE	VSAM	Initial installation
PRD2	COMM	VSAM	Initial installation
PRD2	COMM2	VSAM	Initial installation
PRD2	GEN1	VSAM	VSE/SP Generation Feature installation
SYSDUMP	BG - FB	Non-VSAM	Initial installation

Figure 18. Overview of VSE/SP Libraries

IJSYSRS

IJSYSRS is a system library which VSE/SP allocates on DOSRES. It is intended for component program products which provide hardware and/or functional support at IPL time. You **should not**:

1. Move this library or change its size.

2. Create another sublibrary within the library.

3. Copy members into it, except for the following:

   - FCBs and UCBs
   - User reader or accounting exits
   - IPL or JCL procedures

Any of your own members which you put in IJSYSRS may be affected by Fast Service Upgrade. Therefore, you should also put them in PRD2.SAVE.

The following are in sublibrary SYSLIB:

- VSE/SP functions
- VSE/Advanced Functions
- Device Support Facilities
- VSE/POWER
- VSE/VSAM
- VSE/VSAM Space Management Feature for SAM
- VSE/VSAM Backup/Restore Feature
- VSE/ICCF

PRD1

The PRD1 library is allocated on a system disk. It contains some component program products of VSE/SP which are not required to be in IJSYSRS. It has only one sublibrary PRD1.BASE. You **should not**:

1. Move this library or change its size.

2. Create another sublibrary within the library.

The following are in the sublibrary PRD1.BASE. It also contains the remaining system functions besides hardware and IPL support.

- ACF/VTAM
- BTAM-ES
- CICS/DOS/VS
- VSE/DITTO
- VSE/Fast Copy
- VSE/OLTEP
- EREP

PRD2

VSE/SP allocates PRD2 in VSAM space during initial installation. The initial allocation depends on the disk type you are using. The library contains VSE/SP optional programs, the VSE/SP Generation Feature, and could contain your own application programs.

PRD2 has predefined sublibraries which are described below.

PRD2.CONFIG

This contains user-unique members which are not required in IJSYSRS.

1. Members created during initial installation.

2. Members created when you use the Interactive Interface (for example, CICS/DOS/VS tables and ACF/VTAM startup books).

This sublibrary is not used when you apply service.

You **should not** change the name of this sublibrary.

PRD2.SAVE

This contains duplicated members from IJSYSRS. When you install a Fast Service Upgrade, these members will be copied into IJSYSRS. By having this duplication, you can install an upgraded system without performing a complete reinstallation.

Any members which you place into IJSYSRS should also be placed into PRD2.SAVE.

You **should not** change the name of this sublibrary.

PRD2.PROD, DBASE, COMM, AND COMM2

These four sublibraries are default sublibraries for VSE/SP optional programs. Figure 4 on page 6 shows the VSE/SP optional programs and the corresponding sublibrary into which they are installed.

PRD2.GEN1

This is the sublibrary into which the VSE/SP Generation Feature is installed. You **should not** change the name of this sublibrary.

Figure 19 shows the allocations for the PRD2 library.

Device	Total Available Library Blocks	Library Blocks Per Allocation
3310	23936	11968
3330	23826	11913
3340	23856	11928
3350	112500	22500
3370	113460	22692
3370-2	113460	22692
3375	112500	22500
3380	113925	22785

Figure 19. Allocations for PRD2 Library

Additional Considerations

In VSE/SP, you can allocate multi-extent and multi-volume libraries. You must allocate a multi-volume file across the same device type. They can be located anywhere on a particular disk.

You can statically extend a non-VSAM managed library. You would:

1. Back up the library.
2. Add the extra extent.
3. Restore the library.

VSE/SP provides the SKLIBEXT skeleton in ICCF library 59 to extend a non-VSAM managed library.

You can also have libraries in VSAM managed space. These libraries have the following characteristics:

- The space for the library must be defined as a VSAM cluster using AMS (Access Method Services).
- If more than one volume is specified, they must be the same device type.

- A secondary allocation allows for dynamic extension of the library.
- Secondary extents are **not** dynamically reclaimed when they are empty.
- The library is **not** extended dynamically if it resides on a disk which is shared between CPUs.

VSE/ICCF DTSFILE

There are ninety-nine (99) ICCF libraries defined in the ICCF DTSFILE. ICCF libraries are also referred to as program development libraries. The *Program Development Library* dialog helps you access and use ICCF libraries easily. The dialog is outlined in "Program Development Library" on page 106 and described in detail in *VSE/SP System Use.*

In VSE/SP, you **must** define ICCF libraries with the DATE option.

Certain libraries are reserved for use by VSE/SP. Figure 20 shows the ICCF libraries and their contents.

Library	Type	Contents
1	Private	ICCF administrative library. Contents shipped with VSE/ICCF.
2	Common	Common library. Macros and procedures. VSE/ICCF and VSE/SP code members.
3 - 6	Public	Empty.
7	Private	Empty.
8	Private	Default primary library for operator profile.
9	Private	Default primary library for programmer profile.
10	Private	Default primary library for administrator profile.
11 - 49	Private	Empty.
50 - 58	Public	Reserved for VSE/SP.
59	Public	VSE/SP job streams, skeletons, and CICS/DOS/VS tables.
60 - 67	Public	Reserved for VSE/SP.
68	Public	VSE/SP members for Personal Computer tasks.
69	Public	Reserved for VSE/SP.
70 - 99	Private	Empty.

Figure 20. VSE/ICCF Library Contents

You can use the following libraries:

- 3 - 7
- 11 - 49
- 70 - 99

VSE/SP provides the SKICCFMT skeleton which shows how the ICCF DTSFILE is formatted. *VSE/SP System Use* describes SKICCFMT in detail.

Disk Layout Considerations

VSE/SP provides default disk layouts for each disk type for the system libraries and data files. The layouts are general ones which allow all users to use VSE/SP.

You may want to modify the default disk layout for:

- Additional disk file requirements.
- Additional disk space requirements for some of the provided files.
- Ease of recovery/restart in case of a disk path or actuator outage.
- Enhancing access performance of key files.

Library Considerations

"VSE Libraries" on page 37 describes the VSE/SP system libraries:

- IJSYSRS
- PRD1
- PRD2
- SYSDUMP

In some cases, the amount of space provided for PRD2 may not be sufficient. Because PRD2 is defined in VSAM managed space, it can be dynamically extended. Refer to Figure 19 on page 40 for the initial allocations.

You may want to extend PRD2 if you:

- Install a large number of VSE/SP optional programs.
- Install additional VSE program products in PRD2.

If you install VSE/SP optional programs using the Interactive Interface dialog, the dialog scans the tape and prints information about the required space for each optional program.

If you install additional VSE program products, you may need to calculate the number of library blocks which are required. The example below illustrates how you can manually calculate the library blocks.

```
PHASE   -  1 new LB   =    1  old LB     (factor 1.0)
OBJ     -  1 new LB   =    3  old LB     (factor 0.35)
SOURCE  -  1 new LB   =    6  old LB     (factor 0.17)
PROC    -  1 new LB   =   12  old LB     (factor 0.09)
```

You should add about 10% to 20% to your result.

After you calculate the library blocks, you should determine the total space you need for PRD2. Add the number of library blocks which you need to the number of blocks which the pre-defined sublibraries require. Convert the total to tracks or blocks. A new library block is 1K. The librarian command LD provides useful space information.

You should consider the contents and location of a library in terms of head contention and volatility. If necessary, you can split the library into multiple libraries and place it on different actuators (and paths).

VSE/POWER File Layouts

You can calculate the spool disk requirements using the information shown in Figure 21.

Device Type	DBLK	DBLK/ Track	Bytes/ Track	Approximate Cards/DBLK	Approximate Lines/DBLK
3330	2048	6	12288	25	15
	4253	3	12759	52	31
	6447	2	12894	79	48
3340	1966	4	7864	24	14
	4096	2	8192	50	30
3350	1954	9	17586	24	14
	3665	5	18325	45	27
	6233	3	18699	76	46
3375	2016	15	30240	24	15
	4096	8	32768	50	30
	6816	5	34080	84	51
	8608	4	34432	106	64
	11616	3	34848	143	87
3380	2004	19	38304	24	15
	3860	11	42592	47	29
	6356	7	44576	78	47
	11476	4	45952	141	86
FBA	2032	---	---	25	15
	4080	---	---	50	30
	6128	---	---	75	46
	8176	---	---	100	61

Figure 21. Examples of DBLK Sizes

If you use shared spooling, consider the following:

- Do not share the account file.
- Use large TRACKGP.
- Place queue file and data file(s) on separate shared disks, not on the same actuator as the lock file.
- Define multiple extent data on multiple actuators.

VSE/ICCF DTSFILE

The VSE/ICCF DTSFILE is allocated with approximately 27.8 megabytes on each of the different device types. You should estimate the ICCF library requirements for each user and ensure there is sufficient space for additional library requirements in this file.

After allocating a library for each user, determine the total requirement for the DTSFILE. Compare this to the default allocation. If there is insufficient space, you should reallocate the file.

You should also consider multiple extents on multiple volumes, regardless of whether or not the size of the DTSFILE is sufficient.

DUMP Library

If you use SYSDUMP or you process many dumps on the system, you may have to reallocate this file with a larger area.

If you use Info/Analysis to view dumps from other systems, you should reallocate this library for this requirement.

Lock File

You calculate the size of the required lock file according to the number of CPUs and shared resources.

You can use the *Tailor IPL Procedure* dialog to add the IPL DLF command to the IPL procedure. The dialog is described in *VSE/SP System Use.*

System Work Files

The following information highlights system work files:

- A standard SORT work file has been allocated in VSAM space. You should ensure that the allocation is sufficient for your sort requirements.
- All work file labels are in the system standard labels.
- All work files are allocated in VSAM managed space and have secondary allocations (with the exception of the SORT work file).
- The ICCF work files IKSYS11 - IKSYS54 are allocated in VSAM managed space.

Other System Files

The following shows the remaining system files. You **should not** move these files.

- BAM Managed Files in Standard Labels
  - DOS.LABEL.FILE.xxxxxxxxxxxx.AREA1
  - INFO.ANALYSIS.DUMP.MGNT.FILE
  - INFO.ANALYSIS.EXT.RTNS.FILE
  - VSE.JOB.MANAGER.FILE
  - VSE.HARDCOPY.FILE
  - VSE.RECORDER.FILE
  - VSE.SYSTEM.HISTORY.FILE
  - CU370X.LOAD.FILE (If required)
  - CU370X.DIAG.FILE (If required)
  - CICS.DUMPA
  - CICS.DUMPB
  - CICS.AUXTRACE
  - CICS.MSGUSR
  - VTAM.TRACE.FILE
- VSAM Managed Files in Standard Labels
  - VSAM.MASTER.CATALOG
  - VSE.USER.CATALOG
  - VSE.CONTROL.FILE
  - VSE.TEXT.REPSTORY.FILE
  - VSE.MESSAGES.ONLINE
  - VSE.ONLINE.PROB.DET.FILE
  - CICS.AUTO.STATS.A
  - CICS.AUTO.STATS.B
  - CICS.CSD

- CICS.TD.INTRA
- DFHTEMP

VSE/SP Control File

The VSE/SP control file is the central repository file for system access information for the Interactive Interface. It contains:

- User profile records
- Selection panel records
- Application profile records
- News records
  These are messages which are displayed to users after they sign on. You use the *Enter News* dialog to maintain news items.

Using this file for user profile information provides coordination between CICS/DOS/VS, VSE/ICCF, and the Interactive Interface.

VSE/SP Messages Online File

This file contains the console messages for the VSE/SP component program products. By using the *System Console* dialog, you can request an explanation of a console message online. The messages online file contains the messages and corresponding explanations for this function.

VSE/SP Text Repository File

The text repository file contains Interactive Interface information such as HELP text and messages which the Interactive Interface dialogs display.

VSE/SP Online Problem Determination File

The Online Problem Determination file contains information about CICS/DOS/VS transaction abends. Abend information is collected and stored in this file. You use the *Online Problem Determination* dialog to view the abend information.

The entries in the file are automatically deleted after seven days.

Part II. Planning for Installation Tasks

This part of *VSE/SP Planning* describes the different installation tasks. In VSE/SP, installation tasks are varied. Some you perform once, like installing the initial VSE/SP system. You may complete other tasks at different times. For example, you can install VSE program products or apply IBM service at a later time. *VSE/SP Installation* describes the installation tasks for VSE/SP in detail. This part of the book helps you plan for these tasks.

The first installation task you perform is the initial installation of the VSE/SP system. This is required for all users. Once CICS/DOS/VS and VSE/ICCF have been started, the Interactive Interface is available. You use the Interactive Interface to complete initial installation activities.

After you complete VSE/SP initial installation, you can select a number of optional installation tasks. These include installing:

- VSE/SP Generation Feature.
- VSE/SP optional programs.
- Additional VSE program products that you order.

An overview of these tasks and things you should consider are described in several chapters.

Of course, your system is not completely installed until your users can sign on and do productive work. Before your system is fully operational, there are many tasks you might perform such as defining users to the system and tailoring system startup jobs. In VSE/SP, many of these tasks are considered *resource definition* tasks because they define or modify system resources. In the VSE/SP library, these tasks are described in *VSE/SP System Use* and *VSE/SP Networking*. Chapter 9, "Resource Definition Tasks" on page 67 provides an overview of these tasks.

Chapter 4. Initial Installation of VSE/SP

Hardware Requirements

Processor Types and Storage

Figure 22 shows the processor types you can use for initial installation.

	370 Mode	E Mode	Under VM
Processor Types	138 145[1] 148 155-II[2] 158 3031 3033[3] 43xx	4321 4331 4341 4361	ANY

1 Requires floating point feature, CPU timer, and clock comparator.

2 Requires floating point feature.

3 No multiprocessor mode.

Figure 22. Processor Types and Sizes for Initial Installation

VSE/SP runs in a minimum of 1M of real processor storage. However, 2M are more adequate for most systems, particularly for ACF/VTAM systems.

Disk Storage for Initial Installation

Figure 23 on page 49 shows the:

- Disk types which VSE/SP supports.
- Number of volumes you need for installation.
- Volume IDs.

All disk volumes that you use for VSE/SP installation and service must be of the same general type.

Disk Type	DOSRES	SYSWK1	SYSWK2	SYSWK3	SYSWK4	SYSWK5[1]
3310	X	X	X	X	X	X
3330[2]	X	X	X	X	X	X
3340[3]	X	X	X	X	X	X
3350	X	X	---	---	---	---
3370	X	X	---	---	---	---
3375	X	X	---	---	---	---
3380	X	X	---	---	---	---

1 In most cases, this will be needed if the VSE/SP Generation Feature is installed.

2 Models 1 and 11.

Model 11 is treated as Model 1. However, the two VSE/POWER data file extents allocated by VSE/SP must be on the same device type. That is, SYSWK1 and SYSWK4 have to be on the same model of 3330.

3 Models 70, 70F, or 3344 where one 3344 equals four 3340s.

Figure 23. Disk Volume Requirements for VSE/SP Initial Installation

The minimum volumes may not include space for all VSE/SP optional programs which you order.

Additional Hardware Requirements

In addition to the processor and disk requirements, VSE/SP requires the following minimum hardware for initial installation:

- VSE/SP operator console.
- Tape drive.
- Printer.
- Local terminal that supports a 24 x 80 character screen format.

  The terminal must also have at least 10 Program Function (PF) keys. Terminals which are wider than 24 x 80 (for example, the IBM 3278-5) are supported by VSE/SP component program products and by your own applications which use the wider screen.

  The Interactive Interface supports wider screens with two exceptions:

  1. The Interactive Interface uses only the first 24 x 80 screen positions.
  2. Some dialogs will cancel and display a message if they are accessed from the IBM 3278-5.

Initial Installation Overview

The following information outlines the steps which take place during the initial installation of VSE/SP:

1. IPL from tape and load Device Support Facilities.

2. Initialize the disk volumes.

3. IPL again and restore SYSRES.

4. IPL from SYSRES.

   VSE/SP uses device sensing to automatically define the devices on your system.

5. Installation job stream gathers information about your configuration. Several jobs also catalog hardware information and the ASI IPL procedure. You are asked:

   - To specify the address of the tape drive used for installation.

   - If you want to automatically install VSE/SP optional programs during initial installation.

   - Whether you are using ACF/VTAM or BTAM-ES for the telecommunications access method.

     Note: The decision to use either ACF/VTAM or BTAM-ES should be carefully reviewed. The telecommunications access method you choose **cannot** *easily be changed after your system is installed because VSE/SP uses this information in different tables and members.*

     BTAM-ES users define at least one, but not more than three, 3270 display terminals.

     ACF/VTAM users are asked for information about the control unit and one to three 3270 display terminals.

6. The VSE/SP Job Manager now controls processing. It releases the appropriate jobs for the remaining initial installation.

7. You have the option to create a forms control buffer (FCB) or universal character set buffer (UCB).

8. You are asked to start the VSE/POWER printer.

9. Various jobs run which perform the following:

   - Restore system history file.
   - Define VSAM catalogs, space, and clusters.
   - Define libraries and sublibraries.

At this point, you are asked to dismount the first VSE/SP tape and mount the second one.

- Restore VSE/SP supplied ICCF DTSFILE.
- Punch information to the DTSFILE.
- Install VSE/SP sublibrary PRD1.BASE.
- Initialize and load VSAM files.
- Initialize Info/Analysis work files.
- Catalog members into sublibraries.

10. VSE/SP optional programs are installed, if you specified that you want them installed during initial installation.

11. Startup of CICS/ICCF.
    For ACF/VTAM users, an ACF/VTAM partition is also started.

12. Installation processing under the Job Manager is completed.

When control is given to CICS/DOS/VS, the system is available for use. You complete the initial installation using the Interactive Interface.

Complete Initial Installation

After control has been given to CICS/DOS/VS, the system is available. The one, two, or three terminals which you specified during initial installation will display the Interactive Interface sign-on panel if they were powered on during system startup. You sign on to the Interactive Interface using the special user-id 'POST'. The system first performs special processing. It internally loads VSE/SP files and defines system tables.

Specify MSHP Information

The dialog asks you for information about your installation. You enter your name, address, telephone number, and the programmer's name. The system updates the system history file and produces a listing of the current history file contents. You should save this listing. It provides information about the installation activities.

Complete Hardware Configuration Table

You are asked to complete the hardware configuration table. The dialog asks you to define any devices which could not be sensed during IPL. It also displays all the devices in your system. You should verify that the list is correct and complete.

Prior to installation, you should prepare a list of all the devices in your configuration. The information you need corresponds to the parameters of the VSE/Advanced Functions IPL ADD statement. *VSE/Advanced Functions System Control Statements* describes the parameters. For each device, record the following:

1. Device address (cuu)

2. Device type code (for example, 3277)

3. Mode
   Some devices require a 'mode' specification of two, four, or six digits.

4. Switch (tape and disk only)
   You can specify whether a device can be physically attached (switched) to two adjacent channels.

5. Share (disk only)
   You can share certain disk types between several processors. This includes the IBM 3330, 3340, 3350, 3370, 3370-2, 3375, and 3380.

If you define, delete, or change any entries in the hardware configuration table, there are additional tasks which you must perform. You sign on to the system using the SYSA user-id.

If you defined terminal addresses, you should access one of the terminal configuration dialogs to complete terminal definition.

You must use the *Create Startup Books* dialog to incorporate the hardware information into the system. If you do not, any changes which you made in the hardware table are **not available** to the system.

Complete VSE/SP Optional Program Installation

If you automatically installed VSE/SP optional programs during initial installation, you must complete the installation of them at this point. You use an Interactive Interface dialog for this task. The dialog updates system information which is required for the system to operate correctly.

You sign on to the system with user-id SYSA and access the *Install Programs - (V2 Format)* dialog. You select option 3 *Complete Installation.* No input is required. The dialog updates system files internally.

Change Passwords

You now change the passwords of the four user profiles that VSE/SP ships:

- SYSA
- PROG
- OPER
- POST

This helps ensure that unauthorized users do not sign on to your system.

After you change the passwords, VSE/SP initial installation is complete. You can continue with any additional installation tasks. This includes installing:

- VSE/SP Generation Feature.
- VSE/SP optional programs.
- Additional VSE program products.

Chapter 5. Generation Feature Installation

Review the default supervisor and CICS/DOS/VS options in the pregenerated system to decide whether or not you want to install the VSE/SP Generation Feature. In most cases, the default options should be adequate for your needs. Appendix C, "VSE/Advanced Functions Supervisor Generation" on page 165 shows the default supervisor generation parameters.

The CICS/DOS/VS control programs which you can generate by installing the Generation Feature are listed in Figure 14 on page 28. Refer to *CICS/DOS/VS 1.6.0 Release Guide* for more information on all available CICS/DOS/VS generation modules.

"System Initialization Table" on page 190 describes the SIT table and programs which VSE/SP uses.

If you need different supervisor options or additional CICS/DOS/VS functions, you should install the VSE/SP Generation Feature.

When to Install the Generation Feature

If you decide to install the VSE/SP Generation Feature, **it is recommended that you install it when you install the initial VSE/SP system**.

The *Install Generation Feature* dialog creates a job which installs the Generation Feature into sublibrary PRD2.GEN1. You only specify the tape address where the distribution tape is mounted. The system history file is updated. This ensures that the Generation Feature is available when you perform tasks which require it, such as service application.

You can also install the Generation Feature at a later time; that is, after initial installation. If you have applied service to either VSE/Advanced Functions or CICS/DOS/VS, you must first bring your system to the same service level as the Generation Feature **before** you use the *Install Generation Feature* dialog. You can:

1. Install VSE/SP tapes that are at a higher service level than the initial system you installed. You can use the *Fast Service Upgrade* dialog. After Fast Service Upgrade (FSU), you can install the Generation Feature. You would install the Generation Feature tape which is shipped with the higher service level tapes.

2. Install the original VSE/SP tapes using the *Fast Service Upgrade* dialog. After FSU, install the Generation Feature and reinstall any service which you had applied to the system.

VSE/SP Installation describes the installation of the Generation Feature in detail.

Chapter 6. Installing Additional VSE Program Products

Types of VSE Program Products

VSE/SP supports the installation of VSE program products that are shipped in two formats:

- Version 1 (V1)
  - Distributed in the librarian format of pre-Version 2 VSE/Advanced Functions.
  - One program product resides on a single tape.
- Version 2 (V2)
  - Distributed in new librarian format (VSE/Advanced Functions Version 2).
  - Tape can be scanned to determine the space needed by each program product on the tape.

  There are two types of Version 2 format program products:

  - VSE/SP optional programs

    These are a defined list of VSE program products which VSE/SP supports. The program products are stacked on a tape. A preliminary list of VSE/SP optional programs is shown in Figure 4 on page 6. Refer to the *Program Directory* for the most current information.

  - Additional VSE program products

    These are program products other than the VSE/SP optional programs which are also distributed in Version 2 format.

How to Install VSE Program Products

You can install all additional VSE program products in MSHP format using one of two dialogs:

- *Install Programs - (V1 Format)*
  This dialog installs VSE program products in Version 1 format.

- *Install Programs - (V2 Format)*
  This dialog installs VSE/SP optional programs and other VSE program products in Version 2 format.

You can also install VSE/SP optional programs automatically during VSE/SP initial installation. Review the information in the following sections to decide how you will install VSE/SP optional programs.

Installing VSE/SP Optional Programs Automatically

You can install VSE/SP optional programs automatically during initial installation. This is provided **only** for VSE/SP optional programs.

During initial installation, you are asked if you want to automatically install the optional programs. The characteristics of this installation method are:

- Program products are automatically installed.

- All VSE/SP optional programs on a tape are installed.

- Program products are installed in library PRD2 and specific default sublibraries. The default sublibraries are shown in Figure 4 on page 6.

- Installation terminates if problems occur.
  It is assumed that there is sufficient space in the default sublibraries for the optional programs. If there is not enough space, the optional programs are not installed. You must then use the dialog to install the tape.

Installing VSE/SP Optional Programs Using the Dialog

You can install VSE/SP optional programs using the *Install Programs - (V2 Format)* dialog, if:

- You want to choose at which point in time the optional programs are installed.

  By using the dialog, you can install the optional programs at any time. For example, you can order VSE/SP optional programs after you have installed your system. You can then use this dialog to install them.

- You want to install only one or some (not all) of the programs on the tape.

- You want to install the programs into different libraries/sublibraries than the default ones.
- You want to extend the default library before installation.
- You want to define new libraries for the installation.

The following information outlines the steps which are required to install VSE/SP optional programs using the dialog.

1. You first use the *Prepare for Installation* dialog. The dialog prints a tape scan report on SYSLST. The report provides information about the optional programs on the tape(s) and the amount of library space that is needed. In addition, the dialog creates internal tables for the installation.

   The information from the scan report is useful in planning for your library structure before installing the optional programs.

2. You then use the *Install Product(s) from Tape* dialog. You select the VSE/SP optional programs that you want to install and specify the library/sublibrary for the installation. The dialog creates a job stream which installs the optional programs.

3. After the job stream from step 2 completes successfully, you use the *Complete Installation* dialog. The dialog updates internal tables to reflect that the installation is complete.

   This step **should not** be done before the job stream from step 2 has successfully completed.

Chapter 7. IBM Service

The Interactive Interface provides several dialogs which help you with service activity:

- Print Service Documents
  This prints different types of service documentation from the service tape.

- Apply PTF
  This applies PTFs from one or more service tapes.

- Alter Phase, Module, or Source
  This applies an APAR or local fix.

- Undo Phase or Module
  This removes either an APAR or local fix.

- Install Fast Service Upgrade
  This installs a new upgraded VSE/SP system on top of the existing VSE/SP system.

- Retrace History File
  This prints information from the system history file.

- Remove History Record
  This removes information about service that you have applied.

- Personalize History File
  This allows you to update personalized information in the system history file.

The majority of the service dialogs create jobs which are submitted to the system. You can also use the dialogs to apply your own 'fixes' to application programs that you have installed using VSE/Advanced Functions MSHP.

For more information about using MSHP functions, refer to *VSE/Advanced Functions, Maintain System History Program, Reference.*

Preventive Service

System Refresh

VSE/SP includes an improved service process. The VSE/SP system libraries are periodically upgraded with the latest level of maintenance. This *refreshed* system is available to new and existing users of VSE/SP. You can contact your IBM representative for information about a refresh of the VSE/SP system.

Fast Service Upgrade

If you have initially installed VSE/SP, you can install a refresh using the Fast Service Upgrade (FSU) process. The *Fast Service Upgrade* dialog creates a job stream which simply replaces the VSE/SP information. It **does not** change or delete your own user libraries or installation unique information.

Note: If you put your own information into IJSYSRS, they may be affected by FSU. Therefore, whenever you put members into IJSYSRS, you should also put them in PRD2.SAVE.

The FSU can be completed in a small amount of time compared with the time required to upgrade the system with PTFs.

If you are upgrading your existing system with additional hardware devices or IBM program products, the refresh is the recommended method. You can use FSU to upgrade individual IBM program products (such as VSE/SP optional programs) or to upgrade your complete system.

With the Fast Service Upgrade application of a refresh, there is no longer a Program Update Tape (PUT) for VSE.

For more information about problems in IBM program products, refer to "Corrective Service."

Corrective Service

Corrective service refers to an APAR fix, PTF, bypass, or circumvention which you apply to the system to correct a problem in an IBM program product.

A PTF (Program Temporary Fix) is an IBM fix in response to an APAR (Authorized Program Analysis Report). An APAR is written and submitted when a problem is reported in an IBM program product.

An APAR fix is also a correction in response to an APAR. However, the fix has not yet been made available as a PTF. Usually, it is not in machine

readable form. If you require an APAR fix, you can request it from your IBM representative.

A circumvention or bypass is generally supplied when an APAR is submitted to the IBM Support Center. It corrects the immediate problem and is eventually made available as a PTF.

You can use the appropriate IBM Service dialogs to apply all types of corrective service. The dialogs invoke MSHP to ensure that all prerequisite and corequisite PTFs or APAR fixes are applied. The dialogs update the system history file to reflect the current service on your system.

Indirect Service Application for PTFs

Indirect service application means that the PTF is applied to a copy of SYSRES, rather than to the SYSRES in use at the time of service application. Some PTFs require this form of application and the MSHP statements force this technique **without your intervention**.

You can force indirect application for all SYSRES service which you apply. You simply specify this in the *Apply PTF* dialog. You should do this only in exceptional situations. MSHP control statements force indirect application automatically, when necessary.

When indirect service is applied, whether by your choice or by MSHP, the following occurs:

1. A new SYSRES is created on a different volume than where the current SYSRES resides. Members from the service tape and unserviced members from the current SYSRES are moved to the new SYSRES.
2. The operator is requested to perform an IPL from the new SYSRES.
3. The contents of the new SYSRES are moved to the old SYSRES.
4. The operator is requested to perform an IPL from the old SYSRES.

Service for ICCF Members

If service affects ICCF members provided by VSE/SP, the member is simply replaced. If you modify any members such as the SUBMIT procedure, you should rename them or copy them to another ICCF library.

If you use a VSE/SP skeleton, you should copy it to another library before you make your changes. If you do not do this, the member will be replaced if it is affected by service.

Service Affecting VSE/SP Generation Feature

Any service which affects either VSE/Advanced Functions or CICS/DOS/VS contains two parts. One part corresponds to the pregenerated system. The second part is for the VSE/SP Generation Feature.

If you **do not** have the VSE/SP Generation Feature installed, only service for the pregenerated system is installed.

If you have the Generation Feature installed, both parts for the pregenerated system and the Generation Feature are automatically applied.

If you installed the Generation Feature, but you keep it offline, you must restore it before you apply service which affects either VSE/Advanced Functions or CICS/DOS/VS.

Fast Service Upgrade

During FSU, the dialog asks you if you want to reinstall the VSE/SP Generation Feature. You can choose not to reinstall it. In this case, the entry for the Generation Feature is removed from the system history file and the sublibrary where the Generation Feature resides is reinitialized.

For more information about the VSE/SP Generation Feature, refer to Chapter 5, "Generation Feature Installation" on page 53.

Part III. Using the VSE/SP System

This part of the book provides information about how you can use VSE/SP.

VSE/SP supports the IBM 3270 Personal Computer and the IBM Personal Computer with 3278/3279 Emulation Adapter. You can use the Personal Computer as a display station or as an intelligent workstation (IWS). Chapter 8, "IBM Personal Computer Support" on page 64 describes the support VSE/SP offers for these IBM Personal Computers.

VSE/SP provides the Interactive Interface and skeletons which make it easier for you to complete system tasks. In VSE/SP, tasks are divided into several major categories.

- Resource Definition
  These are tasks which define or modify the characteristics of your system.

- Operations
  You usually associate the term *operations* with either the system operator or the console operator. In VSE/SP, these are tasks which monitor and control the operations on your system. For example, an application programmer can monitor and control test jobs.

- Program Development
  Application programmers perform many system tasks which include resource definition and operations. In VSE/SP, program development tasks include processing of VSE/ICCF libraries and library members and creating application job streams.

- Diagnosis
  VSE/SP provides four 'problem handling' dialogs to help you analyze and solve problems.

Information about the tasks in each of these four categories is discussed in the following chapters.

Chapter 8. IBM Personal Computer Support

VSE/SP supports the IBM 3270 Personal Computer and the IBM Personal Computer with the 3278/3279 Emulation Adapter as:

- Display stations.

  You simply define the Personal Computer to VSE/SP as an IBM 3278/3279 terminal.

- Intelligent workstations (IWS).

  You can use the Personal Computer and exchange data with the VSE/SP (host) system. You can store data at the host system and other VSE/SP users can access the data. You can also store data on the Personal Computer disk or diskettes and work with it independent of the VSE/SP system.

  When you exchange data between your Personal Computer and the VSE/SP system, the data is temporarily stored in the *Host Transfer File.* This is a VSE/VSAM file which is a 'holding area' for the data.

Both IBM Personal Computers can be attached by a 3274 control unit which is either remotely or locally connected to the processor. The IBM 4321, 4331, and 4361 processors have a display/printer adapter (DPA) and the IBM 4361 can have a workstation adapter. These can replace a locally connected 3274 control unit. However, you can then only use CUT (Control Unit Terminal) attachment.

- CUT (Control Unit Terminal)

  With CUT attachment, Personal Computers are defined as 3278-2 or 3279-2A display stations.

  The IBM Personal Computer with 3278/3279 Emulation Adapter and a Personal Computer which is attached by a workstation adapter must be defined as CUT devices.

  The IBM 3270 Personal Computer can either be CUT or DFT attached.

- DFT (Distributed Function Terminal)

  Only IBM 3270 Personal Computers can be DFT attached. This attachment allows you to define them as 3278/79 display stations and to use optional features such as Extended Data Stream (EDS),

Programmed Symbols, Extended Color Feature, and alternate screen size.

VSE/SP also supports these Personal Computers as 3770 RJE workstations or 3270 display stations if they have an SDLC Communication Adapter, SNA 3270 Emulation, and the RJE product installed. The Personal Computer with an SDLC Communication Adapter is attached via a remote line like a 3274-51C control unit.

VSE/SP Networking describes the definition and use of the Personal Computer as an RJE workstation in more detail.

Intelligent Workstation (IWS) Definition

If you want to use the IBM 3270 Personal Computer or the IBM Personal Computer with the 3278/3279 Emulation Adapter as an intelligent workstation, you must:

1. Define it to VSE/SP in the hardware configuration table.

2. Create the Host Transfer File.

   VSE/SP provides the skeleton SKIWSTF in ICCF library 59. You use this skeleton to create the Host Transfer File.

3. Generate an FCT entry for IWS support.

   VSE/SP provides the samples DFHFCTSP and DFHFCTSO which contain the statement:

   ```
   *    COPY IESWFCT
   ```

   You have to remove the asterisk in front of the COPY statement. You then compile and catalog the FCT like an Assembler batch program. DFHFCTSP and DFHFCTSO are shipped in ICCF library 59.

Personal Computer Move Utilities

The *Personal Computer Move Utilities* dialog helps you use your IBM Personal Computer as an intelligent workstation. Using the dialog, you can transfer VSE/VSAM ESDS and KSDS files and VSE/ICCF members between the Personal Computer and the VSE/SP system (host). Files and members are always moved between the Personal Computer and the Host Transfer File. VSE/SP supplies a unique CICS/DOS/VS transaction which the Personal Computer invokes. The transaction handles the movement of data between the Host Transfer File and the Personal Computer. This support also allows you to move data from one Personal Computer to another using the Host Transfer File.

When you move a file or member, you can also specify the name of an exit routine. The exit routine can modify or edit records or fields of the file or member as it is moved.

SEND and RECEIVE Commands

You exchange data between a Personal Computer and the Host Transfer File from the Personal Computer by using the SEND and RECEIVE commands.

Send a File

From the Personal Computer, you would do the following to send a PC file to the Host Transfer File:

1. Sign on to the Interactive Interface.
2. Press the appropriate PF key to escape to CICS/DOS/VS.
3. Switch to native PC operating mode.
4. Enter the SEND command for the PC file.

The command transfers the data from the PC diskette or disk to the Host Transfer File.

Receive a File

From the Personal Computer, you would do the following to receive a VSAM file or ICCF member:

1. Sign on to the Interactive Interface.
2. Access the *Personal Computer Move Utilities* dialog and move the file or member to the Host Transfer File.
3. Press **PF6** to interrupt the dialog.
4. Switch to native PC operating mode.
5. Enter the RECEIVE command to transfer the data from the Host Transfer File to diskette.

Chapter 9. Resource Definition Tasks

User Interface Tailoring

VSE/SP offers a feature called *user interface tailoring*. This allows you to tailor the appearance of the Interactive Interface for your own needs.

All system environments are not the same. Individual users on a particular system do not do identical work. Therefore, a fixed panel hierarchy may not benefit every user. User interface tailoring allows you to change the Interactive Interface so that it reflects your environment and your users. You can:

- Define users to the system by defining a user profile record.

  In the profile, you specify what the system displays or invokes when the user signs on. You also define the authorization the user has to access certain parts of the system.

- Create your own selection panels.

  You can create your own panels using the VSE/SP panels as models. You can also create your own HELP panels. The selections on your panels can invoke:

  - Interactive Interface selection panels.
  - Selection panels that you create.
  - Interactive Interface dialogs.
  - Other applications which VSE/SP provides.
  - Your own CICS/DOS/VS applications.
    You must first define the application to the system using the *Maintain Application Profiles* dialog.

- Define your CICS/DOS/VS applications to the system and access them from the Interactive Interface.

There are three dialogs which you use to tailor the Interactive Interface:

1. Maintain User Profiles
2. Maintain Selection Panels
3. Maintain Application Profiles

User profiles, selection panels, and Interactive Interface applications are maintained by records in the VSE/SP control file.

1. User profile record

   Each Interactive Interface user is defined to the system by a user profile record. The record specifies:

   - User-id and password
   - VSE/SP profile information
   - CICS/DOS/VS profile information
   - VSE/ICCF profile information

2. Selection panel record

   The system uses selection panel records to build and maintain selection panels. VSE/SP ships records for each selection panel in the Interactive Interface. The record specifies the:

   - Name of the selection panel.
   - Choices (selections) on the panel.
   - Panel or application corresponding to each selection.

3. Application profile record

   This record defines the CICS/DOS/VS application to the Interactive Interface. VSE/SP ships records for each dialog. It also provides additional profile records which you can incorporate into the Interactive Interface.

   The profile record contains execution information about the application. It specifies:

   - The name of the application.
   - How the application is initiated.
   - The name you use to activate the application.
   - Specifications for terminal input and input data.

Maintain User Profiles

The *Maintain User Profiles* dialog creates, changes, or deletes the definition of a user to the Interactive Interface. The user profile record contains profile information for:

- VSE/SP
- CICS/DOS/VS
- VSE/ICCF

Note: VSE/SP also provides the User Profile Migration Utility which helps you define user profiles. Whether you are migrating from a previous VSE system or you are a new user, this new utility can benefit you. "User Profile Migration Utility" on page 99 describes the utility in detail.

VSE/SP Information

You need the following VSE/SP profile information:

- User-id of four characters.
- User type.
  You can specify one of three user types:
  - 1 (Administrator)
    This provides ICCF administrative authority.
  - 2 (Programmer)
    This provides ICCF access, but not ICCF administrative authority.
  - 3 (General)
    This **does not** provide ICCF access.
- Password.
  The user-id and corresponding password is used to sign on to the Interactive Interface.
- Password expiration.
- Name of the selection panel or application that the system invokes when the user signs on.
- Name type.
  This specifies whether the function which is invoked at sign-on is a selection panel or an application.
- Name of the user's default VSAM catalog.
- Authorization the user has (YES or NO) for the following:
  - Display *news items*.
    News items are messages that the system displays to the user. You can add, change, and delete news items using the *Enter News* dialog.
  - Escape to CICS/DOS/VS.
    This allows the user to *escape* to CICS/DOS/VS. The user leaves the Interactive Interface and goes into native CICS/DOS/VS. If a user has this authorization, the selection panels display **PF6** and **PF9**. These PF keys are used for the escape function. This allows you to use the Interactive Interface with applications that you have not incorporated into the Interactive Interface.
  - Define VSAM files.
  - Process VSAM catalogs.
  - Delete Online Problem Determination (OLPD) incidents.

- Enter console commands using the *System Console* dialog.
  All type 1 and 2 users can access the dialog. However, they must have this authorization to enter console commands directly from the dialog.

- Maintain application profiles.

- Maintain selection panels.

- Maintain user profiles.

CICS/DOS/VS Information

You need the following CICS/DOS/VS profile information. Refer to the appropriate CICS/DOS/VS books for more information.

- Three character operator ID.

- Operator priority.
  This value is added to the terminal and transaction priority to determine overall task priority.

- External security.
  You must specify whether you use an external security facility or CICS/DOS/VS security facilities.

- Security keys.
  You can specify from 1 to 64 keys.

- Operator classes.

- Resource security classes.

VSE/SP maintains this CICS/DOS/VS information as part of the Interactive Interface user profile.

VSE/ICCF Information

Generally, the default VSE/ICCF values are satisfactory. You should carefully consider any changes you make to the VSE/ICCF profile characteristics. In some cases, you **should not** change a value because the Interactive Interface may not operate correctly.

The information you need is described below. Access to public libraries 50 - 69 is read only for programmer (type 2) profiles. Chapter 11, "Program Development Tasks" on page 106 describes additional ICCF library considerations. Refer to *VSE/ICCF Installation and Operations Reference* for details on the VSE/ICCF profile options.

- Primary ICCF library
  This is the default ICCF library for the user.

- Alternate ICCF libraries

You can specify up to eight additional private ICCF libraries to which the user can switch or connect. These are in addition to the primary and public libraries.

- Option byte settings
  The default option byte settings are based on the VSE/SP user type: 1, 2, or 3. Usually, the defaults are satisfactory. *VSE/SP System Use* describes the changes you can make.

- Additional ICCF options
  You **should not** change the default values of the following options:

  - LOGONRTN
  - TIMEOUT
  - DEL
  - TAB
  - BS
  - ESC
  - END
  - HEX

  Review the following information for the remaining ICCF options:

  - CLASS: Default interactive partition.
  - LINESIZE: Value from 1 - 80.
  - MAXPRINT: Cannot be greater than 9999.
  - MAXPUNCH: Cannot be greater than 9999.
  - TIMELIM: Cannot be greater than 32,767.
  - TIMEMAXEX: Cannot be greater than 65,535.

TCT OPERSEC Option

If you currently use the TCT OPERSEC option which allows you to use a terminal without signing on, you can create a user profile using the CICS/DOS/VS terminal ID as the user-id. The password is ignored. Instead of displaying the sign-on panel, the system either displays the selection panel or invokes the application which you define in the user profile. If you do this, be aware that only the physical security of the terminal protects the functions for that user profile.

Maintain Selection Panels

The *Maintain Selection Panels* dialog allows you to create, change, and delete selection panels. You **cannot** change the selection panels which VSE/SP ships. However, you can use them as models when you create your own versions. You can also create your own HELP panels for the selection panels that you create.

Contents of the Panel Record

Each selection panel is represented by a selection panel record. The record is maintained in the VSE/SP control file. You specify a unique name for the selection panel. The name cannot begin with the characters IES, INW, or INF.

A selection panel can have up to nine selections. You have to specify the following four items of information for each selection.

SEQ
This is the sequence numbers of the selections on the panel. You can specify 1 - 9.

NAME
This is the name (1 - 8 characters) of either another selection panel or an application profile record. This is what the system invokes when the user chooses this selection.

A selection can invoke any number of items. You can specify the name of:

1. A selection panel that you have created. Enter the unique name which you defined for your panel.

2. An Interactive Interface selection panel.

3. An Interactive Interface dialog.
   The dialogs and the names you specify are shown in Figure 24 on page 74. The name is shown in the column 'Application Name'.

4. An application profile which VSE/SP provides in addition to the dialogs. Figure 25 on page 77 lists these additional application profiles.

5. Your own CICS/DOS/VS application. The application must be defined to VSE/SP by an application profile record. Specify the unique application name you entered in the *Maintain Application Profiles* dialog.

TYPE
Specifies what you entered for NAME.

1 - Application profile
2 - Selection panel

SELECTION TEXT
You can specify up to 60 characters of explanatory text that is displayed next to the sequence number on the panel.

Dialogs and Additional Application Profiles

When you create your own selection panel, you can invoke the dialogs of the Interactive Interface.

VSE/SP also provides additional application profiles which are **not** included in the default panel hierarchies. You can invoke these applications from your selection panel.

Figure 24 on page 74 lists the VSE/SP dialogs. Figure 25 on page 77 shows the additional applications which you can also include in the Interactive Interface.

Both figures show the 'Application Name'. This is the name you would specify when you create your panel.

The figures also show ICCF interactive partition class and size requirements if they are needed for the particular application. The 'Concurrent Execution' column indicates whether all users, a specific number of users, or only one user can execute the dialog at any one time. In the 'Concurrent Execution' column, this is indicated by the following:

- Any number of users
  This indicates that any number of users can execute the dialog.

- Only 1 user
  This indicates that **only one** user at a time can execute the dialog.

- Numeric (for example, 3 users)
  This is the number of users which can concurrently use the dialog based on the initial ICCF partition layout. You can increase the number of class B partitions to allow more users to access the dialog at any one time.

  For example, three users can execute the *Backup From Disk to Tape* dialog. In the 'Concurrent Execution' column for the dialog, this is indicated by:

  ```
  3 Users
  ```

Unless otherwise indicated, all user profile types (1, 2, or 3) can access the applications shown in the two figures.

Figure 16 on page 34 shows the characteristics of the default ICCF interactive partitions. ICCF interactive partition requirements and eligibility for concurrent execution are important considerations when you create your own panel hierarchy.

Performance Considerations

You might have to either increase the number of ICCF interactive partitions or enlarge the interactive partitions to improve Interactive Interface performance.

You should also consider generating your own VSE/ICCF options, for example, to increase the number of DTSFILE buffers.

List of VSE/SP Dialogs

Dialog Name	Application Name	ICCF Partition	Concurrent Execution
Alter Phase, Module, or Source	IESS$FIX	I, 512K	Only 1 user
Apply PTF	IESS$VSE	I, 512K	Only 1 user
Backup from Disk to Tape	IESU$DMP	B, 512K	3 users
Backup History File	IESS$BAC	B, 512K	3 users
Backup ICCF Library on Tape	IESS$SAV	B, 512K	3 users
Backup VSAM File	IESD$BAC	B, 512K	3 users
Backup VSE Library on Tape	IESS$LSV	B, 512K	3 users
Catalog Printer UCB	IEST$UCB	B, 512K	3 users
Change VTAM Application Name and/or Subarea Number	IESC$ACT	I, 512K	Only 1 user
Command Mode	IESNICCF		Any number of users
Complete Installation	IESI$PST	I, 512K	Only 1 user
Configure EP Connected Terminals	IEST$ASM	I, 512K	Only 1 user
Configure Hardware Addresses	IESA$HDW	I, 512K	Only 1 user
Configure ICA Connected Terminals	IESC$ICA	I, 512K	Only 1 user
Configure Local Non-SNA 3270s	IESA$TRM	I, 512K	Only 1 user
Configure Local SNA 3270s	IESC$LCL	I, 512K	Only 1 user
Configure NCP Connected Terminals	IESC$NCP	I, 512K	Only 1 user
Copy from One Disk to Another	IESU$FCY	B, 512K	3 users
Copy In Catalog	IESC$RES	B, 512K	3 users
Copy Out Catalog	IESC$BAC	B, 512K	3 users
Create Application Job Stream	IESP$EXE	B, 512K	3 users

Figure 24 (Part 1 of 3). List of Interactive Interface Dialogs

Dialog Name	Application Name	ICCF Partition	Concurrent Execution
Create Network Tape	IESC$CNT	B, 512K	3 users
Create Startup Books	IESA$CRE	I, 512K	Only 1 user
Display Active Users/Send Message	IESUSER		Any number of users
Display Channel and Device Activity	IESDS		Any number of users
Display System Activity	IESDA		Any number of users
Display VTOC (Type 1, 2)	IESLVTOC	A, 256K	5 users
Enter News	IESNEWS		Only 1 user
Export VSAM File	IESD$EXP	B, 512K	3 users
File and Catalog Management (Type 1,2)	IESVSAM	B, 512K	3 users
Import VSAM File	IESD$IMP	B, 512K	3 users
Inspect Message Log	IESMLOG		Any number of users
Inspect Dump Management Output	IESDUMPV		Any number of users
Install Fast Service Upgrade	IESS$REF	I, 512K	Only 1 user
Install Generation Feature	IESI$GLI	I, 512K	Only 1 user
Install Network Tape	IESC$NET	B, 512K	3 users
Install Product(s) from Tape	IESI$OPI	I, 512K	Only 1 user
Install Product(s) from Tape(s)	IESI$ODI	I, 512K	Only 1 user
Invoke CEMT	IESCEMT		Any number of users
Maintain Application Profiles (Type 1)	IESAPM		Only 1 user
Maintain Printer FCB	IESU$FCB	I, 512K	Only 1 user
Maintain Selection Panels (Type 1)	IESSPM		Only 1 user
Maintain User Profiles (Type 1)	IESUPM	I, 512K	Only 1 user
Manage Batch Queues (Type 1, 2) (See Notes following figure)	IESBQU	A, 256K	5 users
Online Problem Determination	IESOLPD		Any number of users
Personal Computer Move Utilities	IESIWS		Any number of users
Personalize History File	IESA$LB	I, 512K	Only 1 user
Prepare for Installation	IESI$PRI	I, 512K	Only 1 user

Figure 24 (Part 2 of 3). List of Interactive Interface Dialogs

Dialog Name	Application Name	ICCF Partition	Concurrent Execution
Print Service Documents	IESS$LST	I, 512K	Only 1 user
Program Development Library (Type 1, 2) (See Notes following figure)	IESLIBXX	A, 256K	5 users
Remove History Record	IESS$REM	B, 512K	3 users
Restore from Tape to Disk	IESU$RST	B, 512K	3 users
Restore History File	IESS$RHS	B, 512K	3 users
Restore ICCF Library from Tape	IESS$RES	B, 512K	3 users
Restore VSAM File	IESD$RES	B, 512K	3 users
Restore VSE Library from Tape	IESS$LRS	B, 512K	3 users
Retrace History File	IESS$RET	B, 512K	3 users
Retrieve Files from Another System	IESFR	B, 512K	3 users
Retrieve Message	IESIMSG		Any number of users
Scan VSE Library Backup Tape	IESS$SRS	B, 512K	3 users
Storage Dump Management	IESP$IDH	I, 512K	Only 1 user
Submit a Job to Another System	IESSS	B, 512K	3 users
System Console (See Notes following figure)	IESDC	B, 512K	3 users
Tailor IPL Procedure	IEST$MAS	I, 512K	Only 1 user
Transfer Files to Another System	IESFT	B, 512K	3 users
Transport Catalog	IESC$TPT	B, 512K	3 users
Undo Phase or Module	IESS$UND	I, 512K	Only 1 user

Figure 24 (Part 3 of 3). List of Interactive Interface Dialogs

Notes:

1. *In the following dialogs, the particular functions within the dialog use an interactive partition:*

   - *Manage Batch Queues dialog*

     - *Copy from reader queue to ICCF library function*
     - *Copy from punch queue to ICCF library function*

   - *Program Development Library dialog*

     - *Submit*
     - *Print*
     - *Compile*

2. *For the* SYSTEM CONSOLE *dialog, a confusing operating environment can result if many users enter console commands.*

List of Additional Application Profiles

Function	Application Name	ICCF Partition	Concurrent Execution
Screen Definition Facility (SDF)	IESSDF		Any number of users
Query Management Facility (QMF)	IESQMF		Any number of users
I/A Structured Query Language (ISQL)	IESISQL		Any number of users
Start ISQL Resource Manager	IESSQLS		Any number of users
Shut Down ISQL Resource Manager	IESSQLT		Any number of users
Query Management Facility (QMF) / Trace	IESQMFT		Any number of users
Invoke DITTO in I/A Partition	IESDITTO	B, 512K	3 users
Invoke FTP in I/A Partition	IESFTP	A, 256K	5 users
Invoke LIBR Utility in I/A Partition	IESLIBR	B, 512K	3 users
Display LST Queue	IESLST		Any number of users
Display RDR Queue	IESRDR		Any number of users
Display PUN Queue	IESPUN		Any number of users
Display XMT Queue	IESXMT		Any number of users
Resource Definition Online (RDO)	IESCEDA		Any number of users
General Master Terminal Functions (Invoke CEMT)	IESCEMT		Any number of users
CEMT Perform Shutdown	IESCMT01		Any number of users
CEMT Perform Shutdown Immediate	IESCMT02		Any number of users
CEMT Perform Shutdown Immediate Dump	IESCMT03		Any number of users

Figure 25. List of Additional Application Profiles

Note: If you use an application which requires a program product, consider the following:

- *The program product must be installed.*
- *If the program product has a user-id and password for sign-on, you should define the Interactive Interface user-id and password to the program product.*

For example, if USER1 is the Interactive Interface user-id which uses the SDF application, USER1 and its password must be known to SDF.

Writing Your Own HELP Text

You can create HELP text for the selection panels that you create. VSE/SP manages the panel display when you press **PF1** and also handles forward and backward paging. By writing your own HELP text, you can use expressions suited to your environment, or even a language other than English.

The *Maintain Selection Panels* dialog helps you incorporate your HELP text into the system.

Maintain Application Profiles

The *Maintain Application Profiles* dialog defines, modifies, or deletes application profile records. You can include your CICS/DOS/VS application in the Interactive Interface by defining an application profile record. You can then automatically invoke the application when a user signs on or include it as a selection on a selection panel.

Application Profile Record Contents

The application profile record defines the initiation and execution characteristics of the application. Each record contains the following information:

NAME
You specify a unique name (1 - 8 characters) for the application. This is the name which you would specify either in the user profile or selection panel record.

CODE
The 'code' defines how the application is initiated.

1 - Initiate transaction via EXEC CICS START.

2 - LINK to a program.
A CICS LINK is performed to a CICS program using the current TCA.

3 - ATTACH a non-conversational transaction.
The transaction begins as if a transaction code had been entered from the terminal.

4 - ATTACH a conversational transaction.
The transaction begins as if a transaction code had been entered from the terminal.

It is recommended that you use the CICS START technique (CODE = 1).

VSE/SP uses additional 'codes' for its dialogs. However, you can only use the four codes shown above.

ACTIVATE
This is the name which activates the application. It is either a CICS/DOS/VS transaction code or a CICS/DOS/VS program name, depending on the CODE value.

CASE
This specifies how terminal input is passed to the application:

1 - Upper case
2 - Upper and lower case

DATA
You can specify up to 136 characters of data which is passed to the transaction or program.

If CODE = 1, data is passed as interval control data. For the other three codes, data is passed in the TIOA. Refer to "Examples of Application Coding for the Interactive Interface" on page 82 which provides coding examples about how you retrieve data.

SHOW
This is used only if you specify input data (DATA). Specify whether the data which is passed should be displayed on the user's terminal.

1 - data is displayed on user's terminal.

2 - data is not displayed on user's terminal.

For conversational transactions, VSE/SP assumes that END-OF-TASK means the end of the application and the user is automatically returned to the selection panel.

For non-conversational transactions, END-OF-TASK does not necessarily mean 'end of application'. You have two choices:

1. Add a line of code to your last transaction program so that it transfers control back to the Interactive Interface.

2. The user presses PF1 to return to the Interactive Interface.

Examples of Profile Driven System Entry

When you define a user profile, you define what the user 'sees' of the system.

In Figure 26 on page 80, sign-on panels are shown for five different users; two application users and three data processing users.

In Figure 27 on page 81, only the two application users are shown. The payroll clerk's profile includes the name of an application. The system finds the corresponding application profile and invokes the application.

The department manager needs access to several applications. The user profile contains the name of a selection panel which offers other selections besides the payroll application. The figure illustrates what happens if the manager selects 'Payroll' from the selection panel.

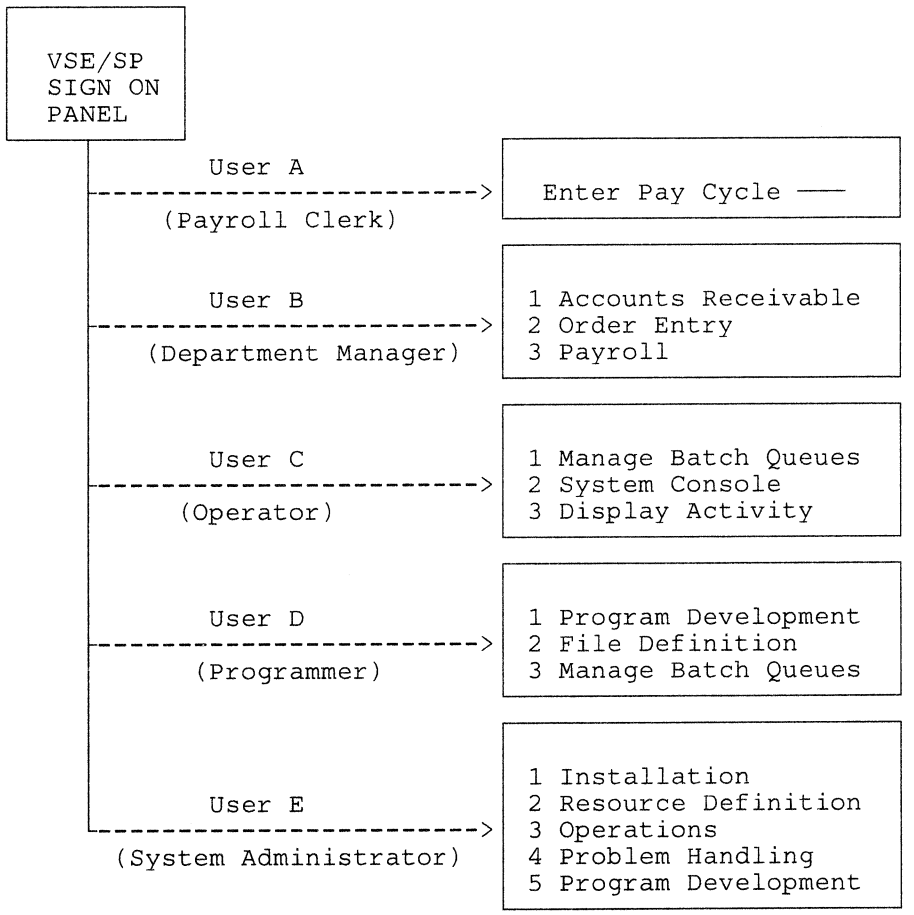

Figure 26. External View of Profile Driven System Entry

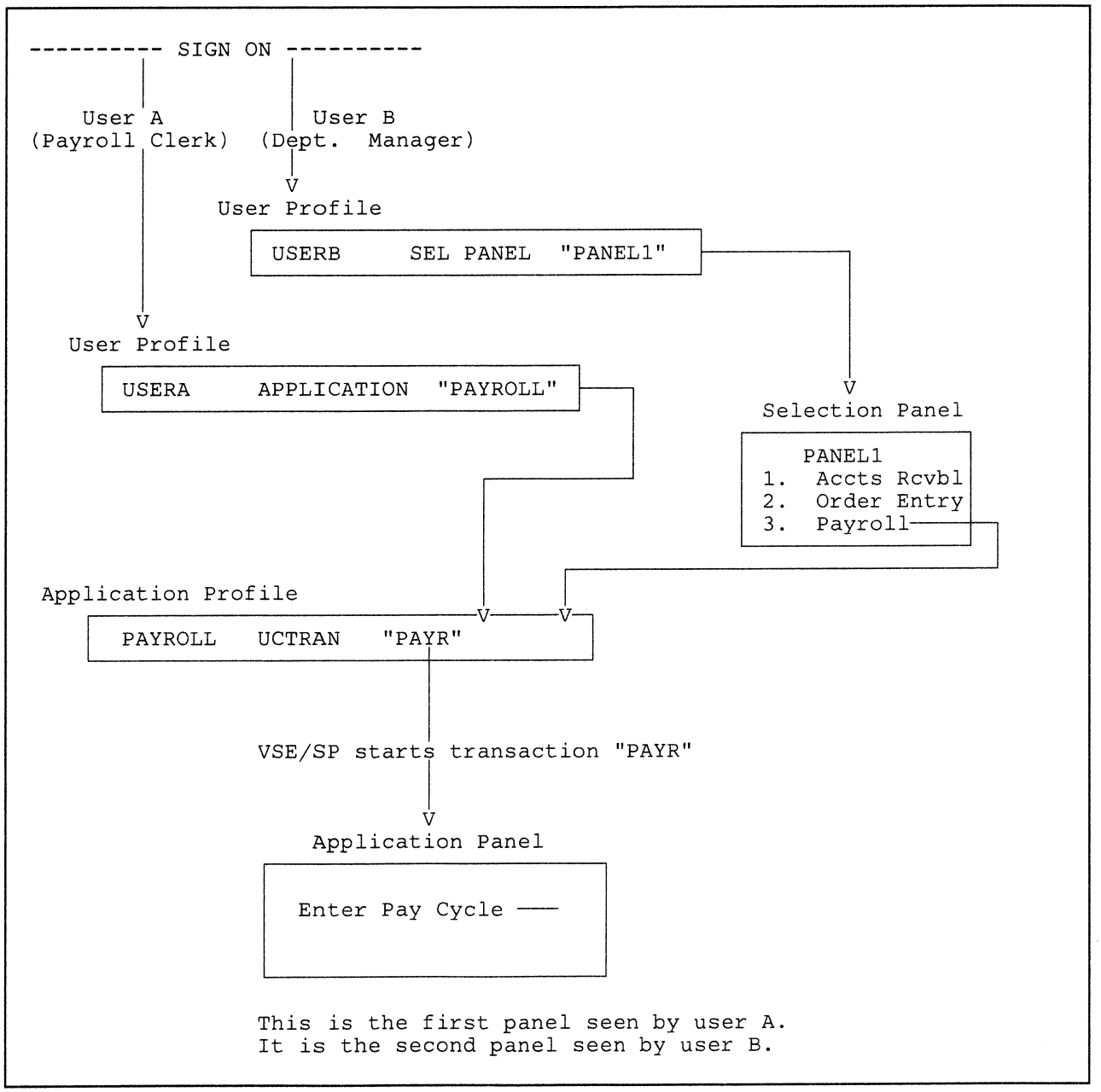

Figure 27. Internal View of Profile Driven System Entry

Function Selection Within the Application

Many applications present their own 'menus' (selection panels). Some require a keyword along with the initial transaction code to access a subfunction. You can simplify your end user procedures by creating a selection panel which replaces the application menu. The selection panel can list the subfunctions for the application. In this way, you have:

- Uniform types of selection panels.
- Your own HELP texts.
  See "Writing Your Own HELP Text" on page 78.

- Ability to add functions to the application.
  You simply add a new selection to the selection panel for a new subfunction.

For applications in which a single transaction code is entered with a key word for the desired subfunction, you can point to different application profile records in a selection panel record. Each application profile names the same transaction code, but passes the former key word as data so that the correct application subfunction is presented to the user.

Examples of Application Coding for the Interactive Interface

The entry and exit of an application in the Interactive Interface must be prepared differently depending on the CODE value in the application profile record.

Code 1

An example is shown in Figure 28 for command level coding and in Figure 29 on page 83 for macro level coding.

```
When you enter the application, check how it was started:
         .
       EXEC CICS HANDLE CONDITION,     Set up in case it was not
            ENDDATA(NOTVSE),           started by the Interactive
            NOTFND(NOTVSE)             Interface.

       EXEC CICS RETRIEVE,             Retrieve data passed by the
            SET(SOMEREG),              Interactive Interface.  Give
            LENGTH(HALFWORD)           register for data address and
                                       how long it is.

*
* If START with data is possible by other means, check for character
* string that could only have come from the Interactive Interface.
*
       CLC     =C'MY CHAR STRING',0(SOMEREG)
       BNE     NOTVSE
*
* Next instruction assumes program started by the Interactive Interface.
*

NOTVSE DS      0H     Come here if not started by Interactive Interface.
         .
         .
END    DS      0H     Return to Interactive Interface only if we
         .             came from there.
         .
       EXEC CICS XCTL PROGRAM('IESFPEP')
```

Figure 28. CICS/DOS/VS Command Level Coding Example for Code 1 (Start)

```
Upon application entry, check how it was started:
          .
       DFHIC TYPE=GET,                Retrieve data passed by Interactive
             ENDDATA=NOTVSE,          Interface.  Go somewhere else if
             NOTFND=NOTVSE            not started by the Interactive
                                      Interface.

       L     SOMEREG,TCAICDA           Point to the data
*
* If START with data is possible by other means, check for character
* string that could only have come from the Interactive Interface.
*
       CLC     =C'MY CHAR STRING',4(SOMEREG)
       BNE     NOTVSE
*
* Next instruction assumes program started by the Interactive Interface.
*
         .
         .
         .

NOTVSE DS      0H     Come here if not started by Interactive Interface.
         .
         .
         .
END    DS      0H     Return to Interactive Interface only if we
         .             came from there.
         .
       DFHPC   TYPE=XCTL,PROGRAM=IESFPEP
```

Figure 29. CICS/DOS/VS Macro Level Coding Example for Code 1 (Start)

Codes 2 or 4

- Entry - Do a normal RECEIVE of TIOA data.
- Exit - Do a normal RETURN to CICS/DOS/VS.

Code 3

- Entry - Do a normal RECEIVE of TIOA data.
- Exit - Do an XCTL to program IESFPEP.

Overview of Planning Considerations

After you install your system, you must define profiles for each user of the Interactive Interface.

Compare the default hierarchies with the distribution of tasks and responsibilities in your company. You can:

- Modify selection panels and thus the structure of the hierarchy.
- Change access rights in the programmer and operator profiles.
- Add applications to the structure.

You should carefully consider who can access the three dialogs for user interface tailoring. Only one person should maintain user profiles and have access to the *Maintain User Profiles* dialog. You may want some application programmers to be able to maintain application profiles.

Adjust and create the three types of profile records that control the Interactive Interface.

You should probably use the Interactive Interface for some time before you tailor it. As you and other users work, you can get ideas about how you can change it.

Creating a Panel Hierarchy

When you create your own selection panels and create a panel hierarchy, there are several things you should consider.

You **should not** build a panel hierarchy of more than nine levels. Beyond the ninth level, the END key always returns you to the selection panel at level eight.

You can have selection panels and applications in different places within the panel hierarchy.

You do not necessarily have to recreate an entire set of panels. You can create an initial selection panel and display this panel when the user signs on. From this selection panel, you can invoke different Interactive Interface panels which the user needs.

File and Catalog Management

The *File and Catalog Management* dialog which is offered with the system administrator hierarchy handles VSAM files and catalogs. For the programmer hierarchy, the *File Management* dialog is offered which handles only VSAM files. A user with a general user profile (type 3) is not authorized to use the dialogs.

VSE/VSAM file and catalog handling is made much easier. However, you still need some VSE/VSAM skill. You must be able to understand the choices which the dialog panels offer. If you want to modify any jobs which the dialog creates, you need knowledge about VSE/POWER JECL and VSE/Advanced Functions job control.

The dialog uses a FULIST which displays either the contents of a specific VSAM catalog or all catalogs within the system. You can perform the following processing for VSAM files and alternate indexes:

- define
- delete
- display
- copy

- sort
- print
- load

You can define and delete VSAM catalogs and space or define alternate names for VSAM files and catalogs.

Dialog Execution

The dialog creates jobs which perform the tasks described above. You control whether the job is executed immediately or delayed.

- Immediate Execution
  The job is either executed immediately in an ICCF interactive partition (for example, define or delete a file) or submitted to a VSE batch partition (for example, copy or sort files).

- Delayed Execution
  The job is created and stored as an ICCF member in your ICCF primary library. You can then edit the member and modify it before you submit it to the system.

  Therefore, you can review and change any defaults which the dialog uses in the job.

System Labels

When a VSAM object is defined or deleted, the system label area and label procedure are automatically updated by the label procedure STDLABUP.PROC in IJSYSRS.SYSLIB. This procedure functions as a backup of all VSAM labels in the system label area. It is executed with each cold start.

Dialog Access Rights

When you access the dialog, a panel displays up to six tasks you can select:

1. Display or process a file
2. Define a new file
3. Define a library
4. Define an alternate index or name
5. Process a catalog, space
6. Define a new user catalog

However, you may not be able to access all tasks which are displayed. The tasks which are displayed and which you can access depend on whether or not you have 'VSAM file authorization' and 'VSAM catalog authorization'. These authorizations are defined as part of your user profile.

Figure 30 shows the selections which are displayed and which you can access based on these authorizations.

VSAM Files Authorization	VSAM Catalogs Authorization	Selections Displayed and Accessed
YES	YES	All selections displayed. All selections can be accessed.
YES	NO	Selections 1 - 4 displayed. Selections 1 - 4 can be accessed.
NO	YES	Selections 1 - 6 displayed. Only selections 1, 5, and 6 can be accessed.
NO	NO	Selections 1 - 4 displayed. Only selection 1 can be accessed.

Figure 30. Relationship Between Authorization and Dialog Selections

Display VTOC

The *Display VTOC* dialog interactively displays a list of the volumes on the system and shows:

- Device type
- Volume ID
- Physical address

It also shows whether the disk is shared or is currently unavailable.

For a selected volume, you can display:

- Resident files and their extents.
- Extents of the free areas.

Configuring Your Hardware

VSE/SP helps you connect systems and terminals with:

- Display printer adapter.
- Data channel.
- Integrated Communication Adapter using SDLC or BSC protocol.
- Communication control unit using ACF/NCP.
- Communication control unit using EP/VS.

You can specify:

- ACF/VTAM major node definitions for local and remote terminals.

- CICS/DOS/VS TCT entries for display stations and printers accessed by ACF/VTAM.
- IBM 37X5 control programs (ACF/NCP and EP/VS).
- BTAM-ES assignments for local terminals.

During VSE/SP initial installation, you complete your hardware configuration table by signing on with the user-id 'POST'. You can add, change, or delete devices on your system at any time. The Interactive Interface provides many dialogs and skeletons to help you with local configuration and network definition.

Configure Hardware Addresses

The *Configure Hardware Addresses* dialog maintains your system hardware configuration table. You use this dialog to add or delete devices or change their characteristics. If you want to define a terminal, you must first use this dialog to specify the terminal address. You then use the appropriate terminal configuration dialog to specify the terminal features. The terminal configuration dialogs are:

1. Configure Local Non-SNA 3270s
2. Configure Local SNA 3270s
3. Configure ICA Connected Terminals
4. Configure NCP Connected Terminals
5. Configure EP Connected Terminals

The first two dialogs are for local configurations. They are described in "Configure Local 3270s." The dialogs for 3, 4, and 5 are for your ICA, NCP, and EP connected terminals. "Configuring ICA, NCP, or EP Connected Terminals" on page 88 outlines the use of these dialogs.

Configure Local 3270s

The Interactive Interface has two dialogs which define or update your local SNA and non-SNA terminal configuration:

- Configure Local SNA 3270s
- Configure Local Non-SNA 3270s

After you define your local 3270 terminals using these two dialogs, you **must** use the *Create Startup Books* dialog. The information you specify is not available to the system in a useable form until you complete the *Create Startup Books* dialog. (Refer to "Create Startup Books" on page 93).

Local SNA 3270s

You must first define the hardware channel address of the IBM 3274 local SNA control unit in the hardware configuration table. You use the *Configure Hardware Addresses* dialog to define the address.

You then use the *Configure Local SNA 3270s* dialog to define the physical unit for the channel address and the logical units.

Local Non-SNA 3270s

You first use the *Configure Hardware Addresses* dialog and add your device address to the hardware configuration table. You then access the *Configure Local Non-SNA 3270s* dialog and specify the terminal characteristics.

For each terminal type, you either choose or create a terminal feature definition table. VSE/SP uses these tables to store the terminal features for specific terminal types. VSE/SP provides twenty default feature tables. Each one corresponds to a specific device. VSE/SP automatically selects the table which matches the device type. You can specify a different table name. You can also modify the default tables or create your own feature table.

Appendix H, "Terminal Feature Definition Table Values" on page 208 contains Figure 83 which shows the default table names and the features associated with them. You should review these and decide whether the defaults are acceptable. You can modify the default table for a specific terminal type so that it matches your configuration more closely. You can also create your own feature table if none of the default ones reflect your configuration.

Part 5 of Figure 83 is a blank form for terminal feature table values. You can use this to fill in your own values for any feature tables which you plan to create. You can then keep this as a reference.

Configuring ICA, NCP, or EP Connected Terminals

The Interactive Interface provides three dialogs to help you define remote terminals:

1. Configure ICA Connected Terminals

   You first specify the link address in the hardware configuration table (*Configure Hardware Addresses* dialog). You then use this dialog to:

   - Define the links.
   - Define the physical units.
   - Display the physical units that were previously configured.
   - Delete a link.

2. Configure NCP Connected Terminals

   This dialog helps you:

   - Define a new NCP.
   - Alter an NCP.
   - Display an NCP.
   - Delete an NCP.
   - Perform an NCP generation.

3. Configure EP Connected Terminals

   This dialog helps you specify information about terminals which are connected to an IBM 37X5 communications controller and which are managed by the ACF/NCP Emulator Program. The dialog displays sample default values which you can change.

VSE/SP Networking contains additional planning information about configuring your network.

Adding A Terminal

If you want to add a terminal to your configuration, there are several tasks which you must perform. You use either one or both of the following books:

1. *VSE/SP System Use*
2. *VSE/SP Networking*

You must first define the hardware address in the hardware configuration table. You use the *Configure Hardware Addresses* dialog. The dialog is described in *VSE/SP System Use.*

After you define the address, you use one of five configuration dialogs. The dialog you use depends on the type of terminal you are defining and how it is connected. The dialogs are:

1. Configure Local Non-SNA 3270s
2. Configure Local SNA 3270s
3. Configure ICA Connected Terminals
4. Configure NCP Connected Terminals
5. Configure EP Connected Terminals

The first two dialogs (1 and 2) are for locally attached 3270 terminals. They are described in *VSE/SP System Use.*

The other three dialogs (3, 4, and 5) are for remote terminals. *VSE/SP Networking* describes these dialogs for ICA, NCP, or EP connected terminals.

After you define the hardware address and complete the appropriate configuration dialog, you **must** access the *Create Startup Books* dialog. The information you specify **is not available** to the system until you complete the *Create Startup Books* dialog. The dialog creates the correct startup books, startup assignments, and CICS/DOS/VS TCT entries depending on what you have defined. *VSE/SP System Use* describes the *Create Startup Books* dialog.

Figure 31 on page 90 outlines the tasks you must perform to add a terminal to your configuration.

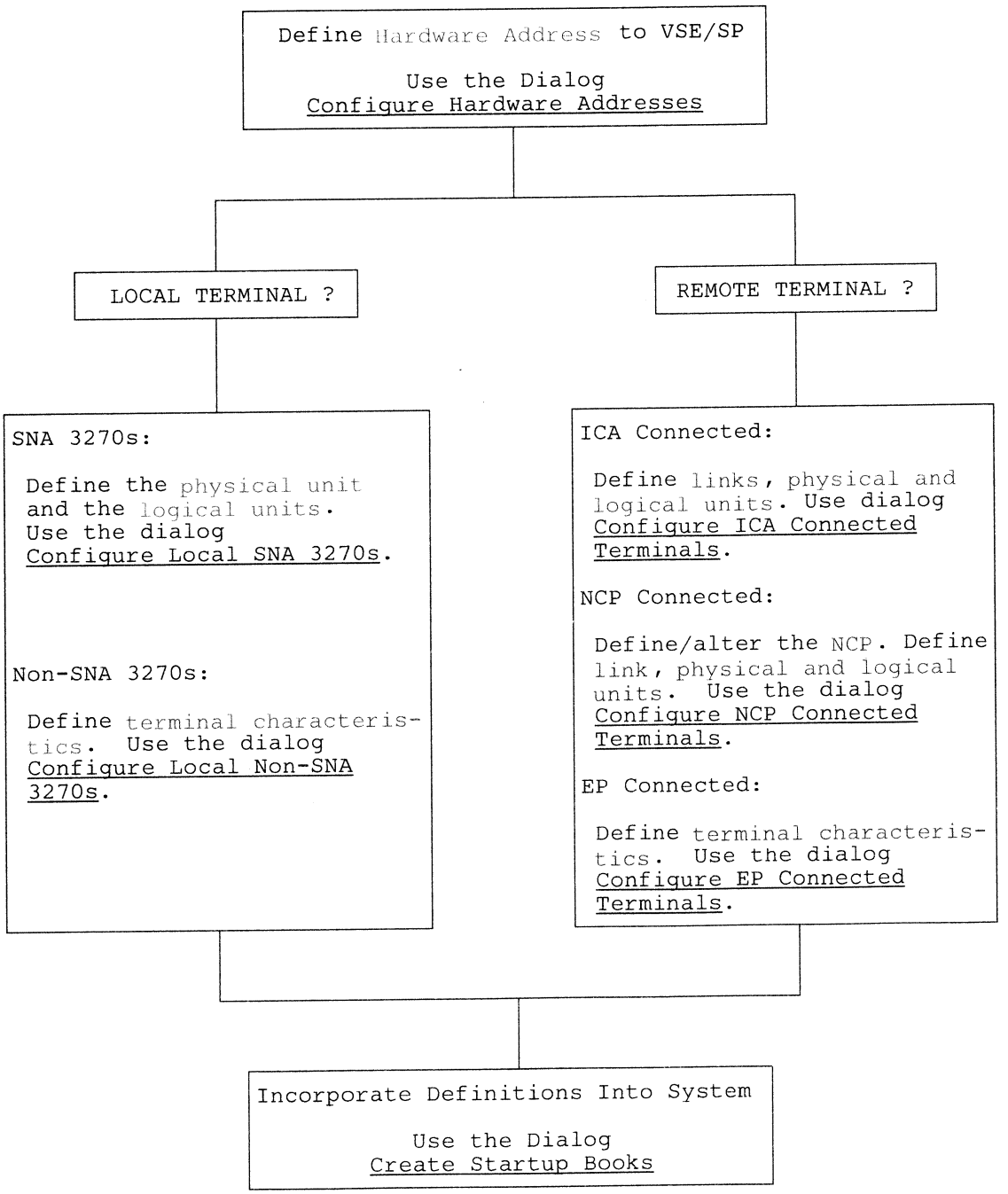

Figure 31. Tasks Needed to Add a Terminal to Your Configuration

Network Definition of Your System

Using ACF/VTAM, VSE/SP communicates with other IBM systems as shown in Figure 32.

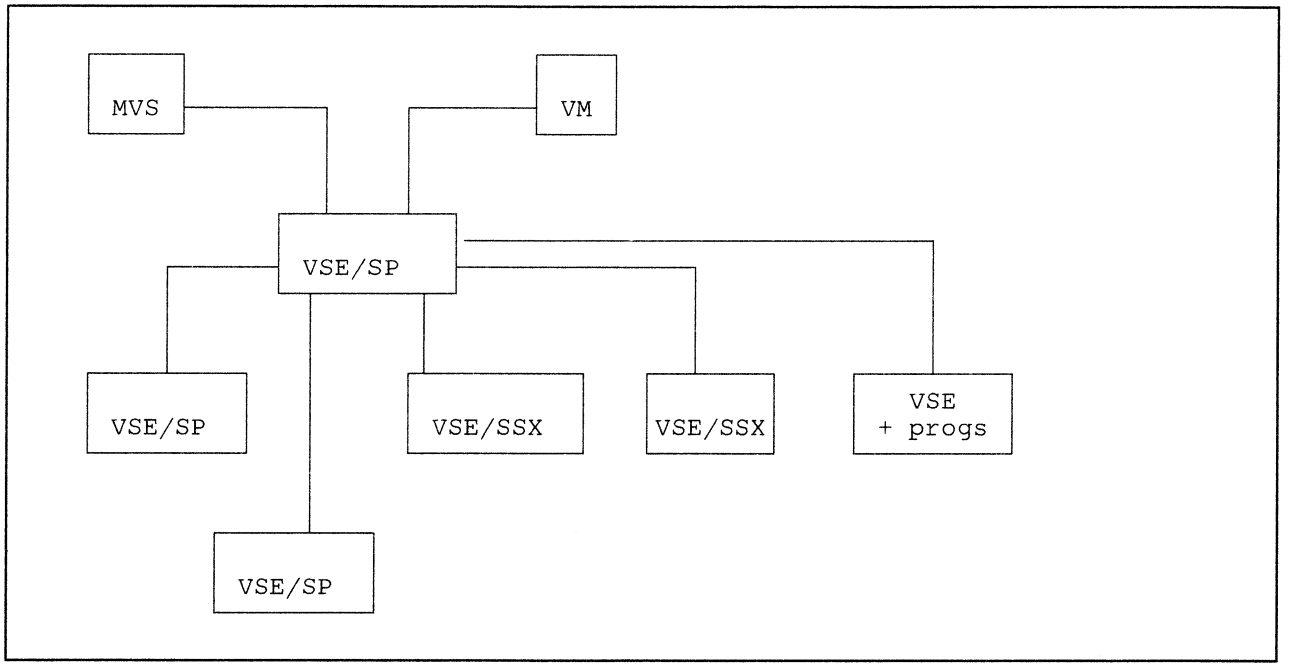

Figure 32. VSE/SP in a Network

If you select ACF/VTAM as your telecommunications access method during initial installation, a VTAM communications environment exists from the first IPL.

VSE/SP can be connected system-to-system and system-to-terminal.

VSE/POWER PNET communicates with PNET operating in other VSE systems, such as:

- Another VSE/SP
- SSX/VSE
- DOS/VSE

It also communicates with VM/RSCS systems or MVS systems with JES2 or JES3.

CICS/DOS/VS communicates with other CICS/DOS/VS systems and with IMS, DPPX/8100, and industry systems such as the IBM 4700, 3650, 3660, and 3680.

VSE/SP supports the IBM 3790, 3770, 8100, and 6670, via VSE/POWER RJE, and many interactive terminals via CICS/DOS/VS.

SNA Network Installation

A central location uses the network skeleton to create network resource definitions for each location in the network. You can transfer these definitions to tape using the *Create Network Tape* dialog and send them to other locations.

The administrator at each location uses the *Install Network Tape* dialog. The job stream on the tape contains the job control statements which are needed to store information from the tape into the library members of the system. By using the dialogs, there is no additional interaction required.

After the network tape is installed, the network administrator may have to perform additional work. For example, you may have to generate ACF/NCP and/or load it into an IBM 37X5 communications controller.

VSE/SP allows logon from other systems which have ACF/VTAM, ACF/VTAME, or ACF/TCAM. Therefore, a terminal at an MVS or VSE host system can access administration and operation functions that the Interactive Interface supports. With this capability, a skilled individual at a central location can perform work at the node to help the local administrator.

Tailor IPL Procedure

VSE/SP automatically creates an IPL procedure during initial installation and catalogs it for your use.

You can use the *Tailor IPL Procedure* dialog to review the procedure that was created. You can also use the dialog to create your own IPL procedures. You need to do this if you want to implement VAE or disk sharing on your system.

The information you specify for the IPL procedure is not immediately available to the system. You **must** use the *Create Startup Books* dialog afterwards. "Create Startup Books" on page 93 describes this dialog.

Maintain Printer FCB

You use the *Maintain Printer FCB* dialog to define or change a printer forms control buffer (FCB). The dialog creates a job which assembles and catalogs the FCB.

The dialog offers the following options:

- Add a new FCB.
- Alter an existing FCB.
- Display an existing FCB.
- Delete an FCB.
- Catalog an FCB.

Catalog Printer UCB

The *Catalog Printer UCB* dialog creates a job which catalogs a standard UCB or assembles and catalogs a non-standard UCB. A UCB (universal character set buffer) converts bit patterns sent to the printer into specific locations on a print train. This allows you to use different options, such as different print trains and upper and lower case printing. You can:

- Catalog a standard UCB that is automatically loaded at IPL.
- Catalog a standard UCB that is loaded by the operator after IPL.
- Assemble and catalog a non-standard UCB that is loaded by the operator after IPL.

Change ACF/VTAM Application Name or Subarea Number

You can change your ACF/VTAM parameters using the *Change VTAM Application Name and/or Subarea Number* dialog. You can specify:

- CICS APPLID
- PNET APPLID
- RJE APPLID
- MAXSUBA
- HOSTSA

After you use this dialog, you **must** use the *Create Startup Books* dialog to include the information into the system.

VSE/SP Networking has more information about changing your ACF/VTAM parameters.

Create Startup Books

The *Create Startup Books* dialog incorporates the output from the following dialogs into the system:

1. Configure Hardware Addresses
2. Tailor IPL Procedure
3. Configure Local SNA 3270s
4. Configure Local Non-SNA 3270s
5. Change VTAM Application Name and/or Subarea Number

The information from these tasks is not available to the system until you complete this dialog.

Figure 33 on page 94 shows the objects which are created and cataloged by the *Create Startup Books* dialog. This depends on the information you

specify for the five tasks above and your telecommunications access method.

ACF/VTAM Users	BTAM-ES Users
IPL procedure ACF/VTAM startup books ACF/VTAM application startup books ACF/VTAM local non-SNA startup book CICS/DOS/VS Terminal Control Table (TCT)	IPL procedure BTAM-ES startup assignments CICS/DOS/VS Terminal Control Table (TCT)

Figure 33. Objects Created and Cataloged by Create Startup Books Dialog

Installing CICS/DOS/VS in Several Partitions

It can be useful to have several CICS/DOS/VS partitions active in the system. The following example outlines one possible implementation of a second CICS/DOS/VS.

The main CICS/DOS/VS system uses the full functions of the Interactive Interface. This is the CICS/DOS/VS which is running with ICCF. The second CICS/DOS/VS system can use the:

- Selection front-end.
- Online Problem Determination (OLPD).
- *Display Active Users/Send Message* dialog.

  The function of the dialog only works for the partition in which it is running.

In the second CICS/DOS/VS partition, the Interactive Interface is used only as a selection mechanism to control the execution of CICS/DOS/VS applications. The various profile records of the Interactive Interface are 'read only' in this partition.

Since the second CICS/DOS/VS partition uses OLPD, it must have a separate OLPD file with read/write access (called IESPRB) and its own set of CICS/DOS/VS files, such as:

- DFHTEMP (temporary storage)
- DFHNTRA (intrapartition transient data)
- Dump files
- Auxiliary trace files
- Journals

- Restart files
- CSD file

The CICS/DOS/VS table entries for the PPT and the PCT would be the same for both CICS/DOS/VS partitions. The table entries are provided in ICCF library members in library 59.

Two CICS/DOS/VS Partitions in Same or Different Address Spaces

You can define different CICS/DOS/VS partitions in the same address space or in different address spaces. Figure 34 outlines the differences.

	Same Address Space	Different Address Spaces
Shared terminals?	Yes (if VTAM)	Yes (if VTAM)
How do they communicate?	CICS/DOS/VS MRO	CICS/DOS/VS ISC
Can VSAM files be shared?	Yes	No
Transaction routing?	Yes	No
XPCC communication?	No	No

Figure 34. Differences Between Two CICS/DOS/VS In Same or Different Address Spaces

If you install the IBM program product DL/I and want to use DL/I MPS, the batch partition where DL/I jobs run **must** be in the same address space as the CICS/DOS/VS for DL/I.

Using ACF/VTAM or BTAM-ES With Two CICS/DOS/VS Partitions

The system handles the two CICS/DOS/VS partitions differently, depending on the telecommunications access method that you use. This is outlined in Figure 35.

	With ACF/VTAM	With BTAM-ES
How to log on?	VTAM application ID	CICS/DOS/VS User-id
How to switch to the other?	Logoff and PF4	Dedicated terminals or hardware switch

Figure 35. Two CICS/DOS/VS Partitions With ACF/VTAM or BTAM-ES

You should have a separate TCT for each CICS/DOS/VS partition. The VTAM APPLID (application name) for each CICS/DOS/VS partition should be unique.

In the VTMAPPL.B book, you must add the name which corresponds to the APPLID in the CICS/DOS/VS; for example, CICS1 and CICS2.

In the USS table (Unformatted System Service Table) for ACF/VTAM, you must enter each CICS/DOS/VS as a separate VTAM application. This is then reflected in the VTAM application selection panel. For these entries, you use the SKVTMUSS skeleton in ICCF library 59.

Figure 36 shows a system with ACF/VTAM and two CICS/DOS/VS partitions.

Figure 37 on page 97 shows a system with BTAM-ES and two CICS/DOS/VS partitions.

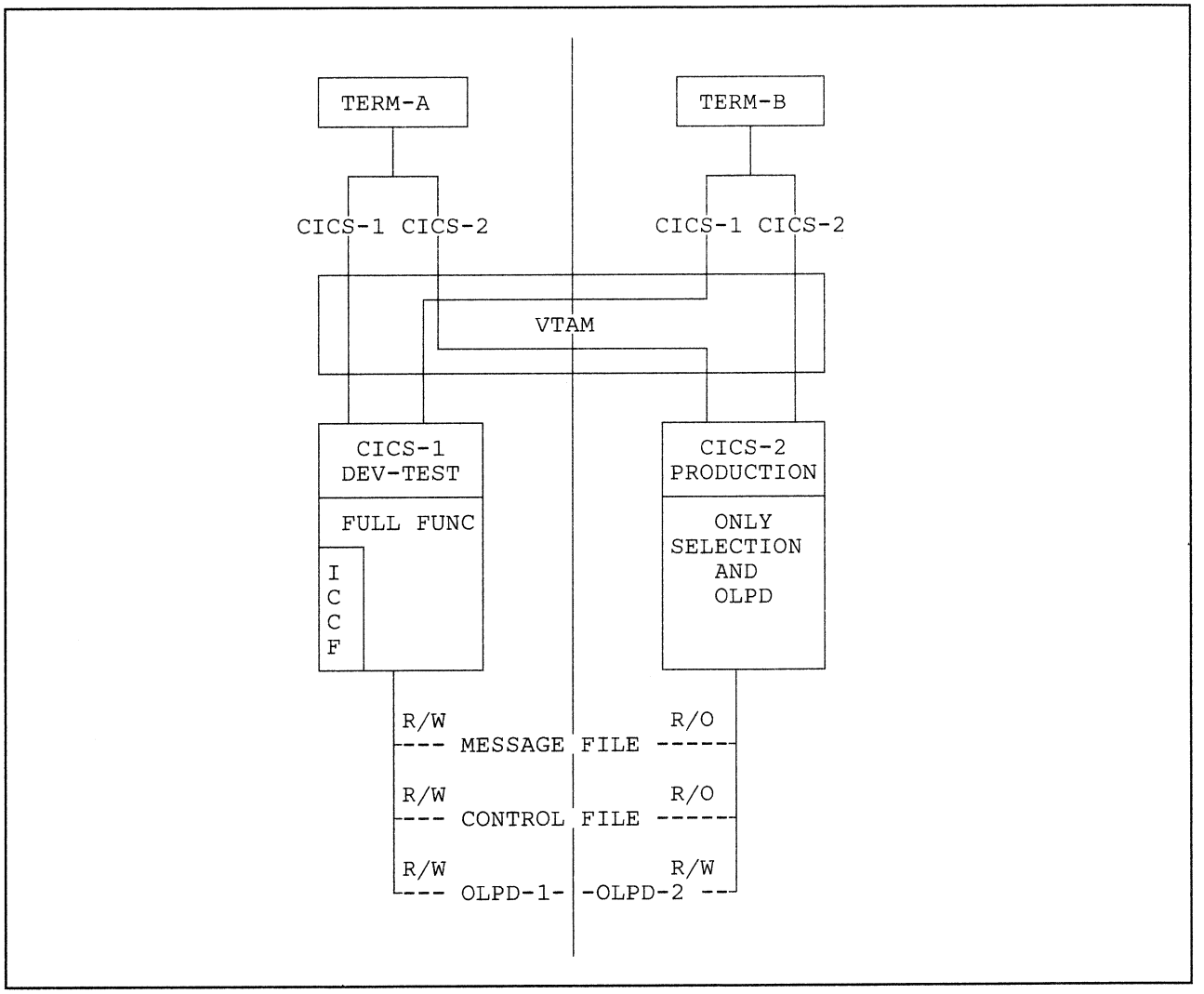

Figure 36. Two CICS/DOS/VS Partitions With ACF/VTAM

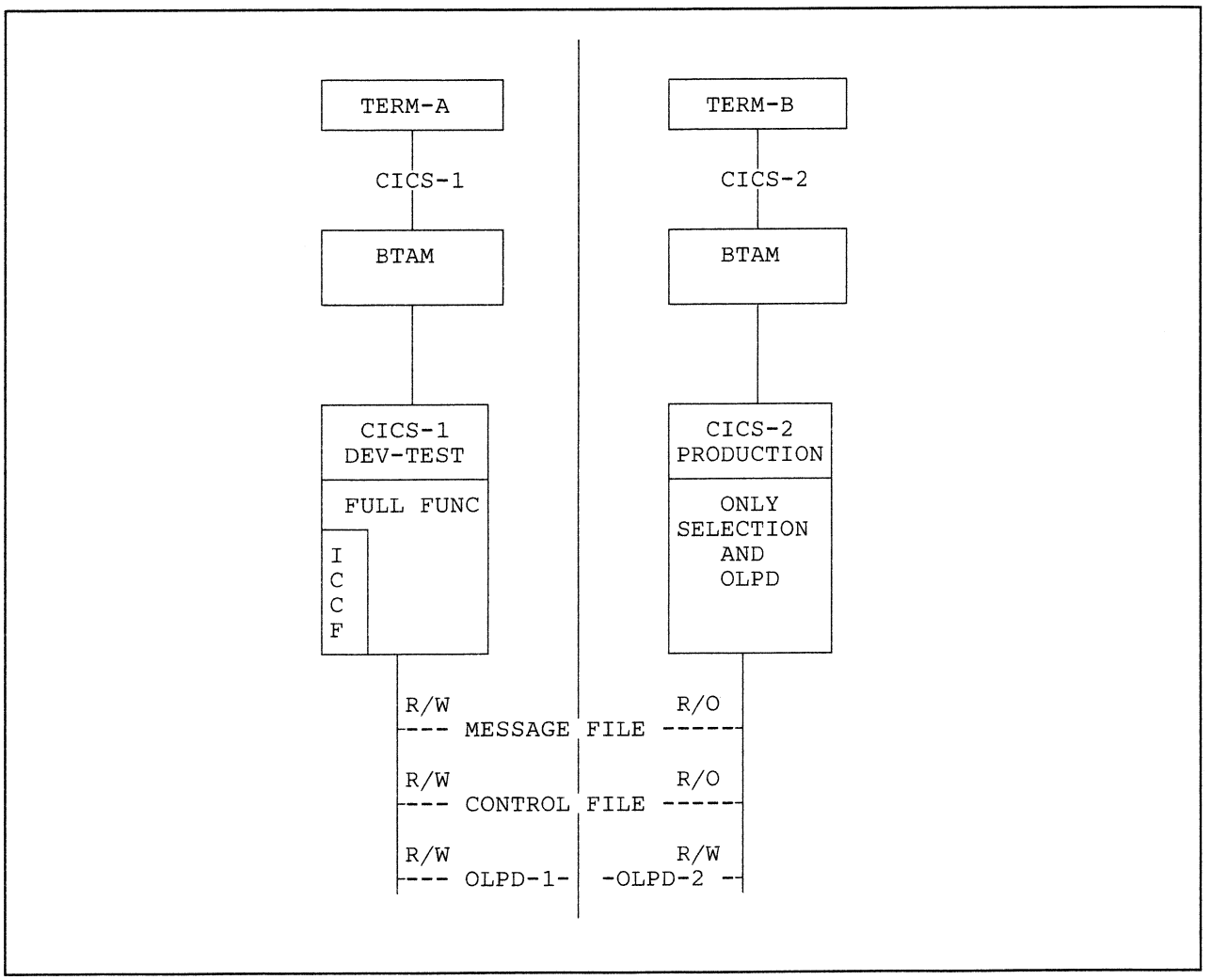

Figure 37. Two CICS/DOS/VS Partitions With BTAM-ES

Extending the System

Moving or Extending the DTSFILE

You can extend the ICCF DTSFILE to a multi-volume, multi-extent file. You should decide whether you need a multi-extent file or only a change to the SYS010 extent.

Figure 38 on page 98 shows an example for extending the DTSFILE. The example:

1. Unloads the DTSFILE
2. Formats new extents for the DTSFILE
3. Restores it to the new extents

```
* $$ JOB JNM=ICCFEXT,CLASS=0,DISP=D
* $$ LST CLASS=A,DISP=D
// JOB ICCFBACK
*  DLBL DTSFILE,'ICCF.LIBRARY',1999/365,DA
*  EXTENT SYS010,SYSXXX,1,0,NNNNN,MMMMM
*  ASSGN SYS010,DISK,VOL=SYSXXX,SHR
// EXEC PROC=DTRICCF
// PAUSE                                          BACKUP TAPE MOUNTED?
// ASSGN SYS005,TAPE
// MTC REW,SYS005
// UPSI 00000010                                  NO REWIND AT OPEN OR CLOSE
// TLBL DTSRSTR,'VSE.ICCF.LIBRARY'
* REPLY "0 GO" TO MESSAGE K238D
// EXEC DTSUTIL
BACKUP
/*
/&
// JOB ICCFFORM  FORMAT YOUR VSE/SP ICCF DTSFILE ON NEW EXTENTS
// DLBL DTSFILE,'ICCF.LIBRARY',1999/365,DA
// EXTENT SYS010,SYSXXX,1,0,NNNNN,MMMMM
// EXTENT SYS011,SYSYYY,1,1,NNNNN,MMMMM
// ASSGN SYS010,DISK,VOL=SYSXXX,SHR
// ASSGN SYS011,DISK,VOL=SYSYYY,SHR
// EXEC DTSUTIL
FORMAT LIB(100) USERS(40)
/*
/&
// JOB ICCFREST RESTORE THE VSE/SP ICCF DTSFILE TO THE NEW EXTENTS
// DLBL DTSFILE,'ICCF.LIBRARY',1999/365,DA
// EXTENT SYS010,SYSXXX,1,0,NNNNN,MMMMM
// EXTENT SYS011,SYSYYY,1,1,NNNNN,MMMMM
// ASSGN SYS010,DISK,VOL=SYSXXX,SHR
// ASSGN SYS011,DISK,VOL=SYSYYY,SHR
// MTC REW,SYS004
// UPSI 00000010                                  NO REWIND AT OPEN OR CLOSE
// TLBL DTSRSTR,'VSE.ICCF.LIBRARY'
* PLEASE REPLY "0 GO" TO MESSAGE K238D
// EXEC DTSUTIL
RESTORE SORTED
DISPLAY USERS PASSWRD
END
/*
/&
* NOW UPDATE THE STANDARD LABEL PROCEDURE TO REFLECT
* THE ACTUAL LOCATION OF THE DTSFILE
* $$ EOJ
```

Figure 38. Example for Extending the DTSFILE

If you move or extend the DTSFILE, you must make the appropriate updates to the procedures STDLABEL and DTRICCF.

Increasing the Number of Libraries and VSE/ICCF User-Ids

As generated, the DTSFILE contains ninety-nine (99) ICCF libraries. You can create up to 9999 libraries.

The system contains forty (40) ICCF user-id records. You can increase the number of ICCF user-ids. For information about these tasks, refer to *VSE/ICCF Installation and Operation Reference.*

For VSE/SP, you **must** define ICCF libraries with the DATE option.

Defining or Extending VSE Libraries

You can define or extend libraries in non-VSAM managed space using the VSE/SP skeletons SKLIBDEF or SKLIBEXT. They are in ICCF library 59. You can define or extend VSAM libraries using the *File and Catalog Management* dialog.

User Profile Migration Utility

The User Profile Migration Utility (IESBLDUP) is a batch program that creates VSE/SP user profiles. By using the utility, you do not have to enter individual profile data using the *Maintain User Profiles* dialog. The utility benefits existing VSE users by helping them migrate user profiles from their current system to VSE/SP. However, new users can also use the utility to define a large number of profiles to VSE/SP. The utility is described in detail in *VSE/SP Migration.*

User-ids which are defined in existing VSE/ICCF and CICS/DOS/VS systems are processed and, along with a model VSE/SP user profile, provide the data to define new users to VSE/SP. Profiles can also be created from user provided Add statements read from SYSIPT.

You can create user profiles from the following sources:

- VSE/SP ICCF DTSFILE
- Tape backup of ICCF DTSFILE (DTSRSTR)
- CICS/DOS/VS Sign On Table (DFHSNT)
- Add statements

IESBLDUP processes the input, and for each unique ID found, creates and adds a user profile to VSE/SP. It produces a status report on SYSLST. The report shows the disposition of each user-id found on the input.

Figure 39 on page 100 shows an example of a job which creates user profiles from a backup copy of the DTSFILE. The example uses the VSE/SP user profiles 'SYSA' and 'PROG' as models.

```
* $$ JOB JNM=IESBLDUP,CLASS=A,DISP=D
// JOB IESBLDUP  MIGRATE USER PROFILES
// ASSGN SYS010,DISK,TEMP,VOL=SYSWK1,SHR
// TLBL DTSRSTR,,,ICCF01
// ASSGN SYS004,X'300'
// PAUSE  UPDATE=YES IS SPECIFIED, CLOSE IESCNTL BEFORE PROCEEDING
// EXEC IESBLDUP,SIZE=32K
DTSFILE=NO,DTSRSTR=YES,SNT=NO,UPDATE=YES,ADMN=SYSA,PROG=PROG
* $$ SLI ICCF=(ADM$USRT),LIB=50
/*
/&
* $$ EOJ
```

Figure 39. Example of Creating User Profiles From DTSFILE Backup

Program Description

IESBLDUP runs as a batch job under the control of VSE/POWER. Program execution logic is controlled by an optional control statement. Defaults are assumed for all parameters if they are not explicitly specified.

The VSE/SP user profiles are added to the VSE/SP control file (IESCNTL) by IESBLDUP and a batch job DTRMIGR is putspooled to the VSE/POWER reader queue. When IESBLDUP completes, DTRMIGR runs immediately and invokes the ICCF utility DTSUTIL to:

1. Add the new users to the ICCF DTSFILE.
2. Alter DTSFILE options which are incompatible with VSE/SP options.
3. Catalog the updated table ADM$USRT to ICCF library 50 after first deleting the old one.

VSE/SP System Use describes the ICCF options which VSE/SP requires.

If UPDATE = NO is specified on the control statement, then the control file is not updated and DTRMIGR is not putspooled to the VSE/POWER queue. Other processing and error checking takes place the same as for UPDATE = YES.

Chapter 10. Operations Tasks

Most users have traditionally thought that *operations* were tasks which the system operator or the console operator performs. In VSE/SP, operations tasks are tasks which control or monitor the operation of the system. They can be performed by any data processing users and include:

- Entering console commands and replying to console messages.
- Accessing the CICS/DOS/VS master terminal transaction.
- Retrieving messages from VSE/ICCF or VSE/POWER.
- Reviewing system status information.
- Managing the VSE/POWER batch queues.
- Communicating with other users.
- Backing up and restoring files and libraries.
- Transferring files and jobs.

System Console

The *System Console* dialog allows you to perform console operations from display stations. An individual at a remote site or at the central site in a networking environment can assist an operator using this dialog.

Using the dialog, you can:

1. Review current and previous console messages.
2. Enter certain commands.
   Some commands are restricted to the real console. These are described in more detail in *VSE/SP System Use.*
3. Display message explanations from the online message file.
   The online message file is a compressed, machine readable copy of *VSE/SP Messages and Codes.*
4. Reply to console messages.

All administrator (type 1) and programmer (type 2) users can access the *System Console* dialog. However, you need specific authorization to enter console commands from the dialog panel. This authorization is defined as part of the user profile record.

You should carefully consider who can use this dialog. If too many users have the authority to enter commands, this could result in a confusing operating environment. In addition, a user performing tasks in the dialog ties up an interactive partition. Refer to Figure 24 on page 74 to review the partition class and size requirements for the dialog.

Manage Batch Queues

The *Manage Batch Queues* dialog interactively displays the entries in the VSE/POWER list, reader, punch, or transmit queues. The dialog displays a FULIST of the queue you select. You can choose several options to process the entries in the particular queue. For example, in the VSE/POWER reader queue, you can:

- Change the priority, disposition, or class of a job.
- Copy a job to your default primary ICCF library.
- Delete a job from the queue.

A user with an administrator (type 1) profile can display all four queues and process any job in a queue.

A user with a programmer (type 2) profile cannot:

1. Change the characteristics of any queue entries, such as class or disposition.

2. Hold or release a job, list output, or punch output in the transmit queue.

3. Review list output which belongs to another user.

Sending a Message to Other Users

You can use the *Display Active Users/Send Message* dialog to display the CICS/DOS/VS users who are signed on to the system. You can also send a message to one, several, or all users who are currently signed on.

When someone sends you a message, a panel displays the message on your terminal screen. You can send a reply from the same panel. When you are done, press **PF3** and the system returns you to the task you were doing. Your work is not disrupted.

Enter News

You can use the *Enter News* dialog to enter a *news item.* This is a message which the system displays to users who sign on. News items are maintained in a news record in the VSE/SP control file.

The display of news items is defined as part of the user profile. You should plan which users should have the authority to receive these messages.

Retrieve Message from VSE/ICCF or VSE/POWER

The *Retrieve Message* dialog displays messages which either VSE/ICCF or VSE/POWER have sent to your user-id. The messages are held in a queue. You can delete individual messages or delete all messages in your queue.

Display System Activity

The *Display System Activity* dialog interactively displays summary information about the activity on your system. The information is automatically updated on your terminal screen at specific intervals.

The dialog displays values for:

- Percentage of CPU use.
- Start I/O rate.
- Paging.
- CICS/DOS/VS system activity.
- Individual partition activity.

The dialog can highlight areas where you might like to use performance measurement tools, such as VSE/PT and CICS/PARS.

Display Channel and Device Activity

You can use the *Display Channel and Device Activity* dialog to monitor the use of your I/O devices. You can monitor activity about a specific:

- Channel
- Control unit
- Selected device

You can also monitor the most active devices or a group of devices beginning with a specific device address.

The dialog interactively displays the information and automatically updates it on the terminal screen at specific intervals. The information helps you determine where you could use performance measurement tools, such as VSE/PT and CICS/PARS.

Using CICS/DOS/VS Master Terminal Commands

The *Invoke CEMT* dialog allows you to access the CICS/DOS/VS master terminal transaction. You can enter master terminal commands from your terminal to handle the online resources running under CICS/DOS/VS. When you are done, you return to the selection panel from which you accessed the dialog.

Enter VSE/ICCF Command Mode

Using the *Command Mode* dialog, you enter VSE/ICCF command mode. On the screen, you can then enter any ICCF commands. When you are done, you return to the selection panel in the Interactive Interface.

Backup and Restore

The Interactive Interface provides many dialogs for backup and restore tasks. They help you:

- Export and import VSAM files.
- Back up and restore VSAM files.
- Transport, copy in, and copy out catalogs.
- Back up and restore VSE libraries.
- Back up and restore ICCF libraries.
- Back up and restore the system history file.
- Scan a backup tape containing a VSE library.
- Back up volumes or a file from disk to tape.
- Restore volumes or a file from tape to disk.
- Copy volumes or a file to another disk.

You must plan how much backup activity you want to introduce into your daily routine. Recovery from system, data, or program damage depends on the regularity and frequency of backup. However, frequent backups also put a heavy load on the system.

You should probably back up your entire system after you initially install VSE/SP. You can also back up different parts of your system. You may need to back up the system libraries. At regular intervals, you should consider backing up:

- VSE/VSAM files
- VSE/ICCF libraries
- Private libraries

This helps minimize the impact of lost or damaged data.

You must determine how often you back up your libraries and files depending on how often they are updated. If there are problems, you can

restore the backup data and then re-enter the changes that you made after the backup.

Transfer Files and Jobs to Another System

The Interactive Interface provides three dialogs to help you transfer, retrieve, or submit files or jobs between systems in your network.

1. *Transfer Files to Another System*

   You can transfer either VSE/VSAM files or VSE/ICCF members to another system.

2. *Retrieve Files from Another System*

   You can receive a copy of either VSE/VSAM files or VSE/ICCF members from another system.

3. *Submit a Job to Another System*

   You can submit a locally created job for remote processing.

VSE/SP Networking describes these three dialogs and their functions in detail.

Chapter 11. Program Development Tasks

Many different users can use the program development dialogs, not just application programmers. The dialogs help you:

- Handle ICCF libraries and library members.
- Create application job streams.

Program Development Library

You use the *Program Development Library* dialog to access libraries which VSE/ICCF manages.

In VSE/SP, your user profile defines your default primary library. However, you can access any library to which you have write access as your primary library. You can access any library to which you have at least read access as your secondary library. The common library is always accessed implicitly as the last one in the search chain.

From a FULIST display, you can process individual library members. You can:

- Add a new member.
- Edit a member.
- Display a member.
- Change a member's characteristics such as the owner, password protection, or private attribute.
- Print a member on the system printer.
- Copy a member within the same library or to another library.
- Delete a member.
- Rename a member.
- Submit a member to VSE/POWER.
- Compile a member. This submits a job to assemble or compile a member.

Access Rights to Libraries and Members

The authorization you have to use VSE/ICCF members under VSE/SP are slightly different than under VSE/ICCF. The Interactive Interface restricts the use of libraries and members for certain user types. Your user type is defined as part of your user profile.

Administrator

An administrator (type 1) user can access and modify a member in any library, except for some system members in library 1. If a member is password protected, you **do not** have to specify the password.

Programmer

A programmer (type 2) user can access:

- Default primary library.
- Up to eight alternate private libraries as defined in the user profile.
- All public libraries. Access to libraries 50 - 69 are read only.
- Common library.

Refer to "VSE/ICCF DTSFILE" on page 41 for a list of private and public libraries.

If you have a programmer profile, you have the following access rights for ICCF **library members**:

- Read access

  You have read access to members in libraries which you can access. You must specify the password for password protected members. You can use the following options:

  - Print
  - Display
  - Copy
  - Submit
  - Compile

- Write access

  You have write access to members that you own and to all public members. You must specify the password for password protected members. Besides the options shown above for read access you can also use the edit option.

- Change access

  You have change access to the members that you own. You must specify the password for password protected members.

You can use the following options:

- Change
- Rename
- Delete

Tailoring the Compile Skeletons

The *Program Development Library* dialog offers the *compile* option. This submits a member for assembly or compilation. Before you can use this option, the system administrator must tailor the compile skeletons for your installation standards. VSE/SP provides eighteen compile skeletons in library 2. Appendix F, "List of VSE/SP Skeletons" on page 196 shows the name and function of the compile skeletons.

You should plan who will use the skeletons (compile function) and how they will use them. You can do one of two things:

1. You can give some or all application programmers the skeletons and have them tailor them for their own needs. Copy them from library 2 into a library which the programmer can access.

2. You can leave the skeletons in library 2 and tailor them for the entire system. You can then have standards for the compile jobs and have every programmer use them.

When you use the compile option, the system searches for the correct compile skeleton in the following order:

1. User's primary library.
2. User's secondary library.
3. ICCF library 2.

VSE/SP System Use provides some examples of compile skeletons and describes the changes which you should make.

Create an Application Job Stream

The *Create Application Job Stream* dialog helps you create the necessary job control for an application program. You can save the input parameters which you specify in the dialog. The dialog saves the information in an ICCF library member. When you use the dialog again, you can use the saved parameters for your new job stream. In this way, you can create similar job streams easily without having to specify the information each time.

Using the dialog, you can define specifications for the:

- Printer
- Reader or punch
- Tape
- Diskette
- Data
- Job options

Chapter 12. Diagnosis Tasks

You should plan how your organization is going to identify and manage problems which may occur. The following points provide ideas about problem reporting and solving.

- Establish standard procedures for problem reporting, logging, and management.
- Set up a 'help' desk with a known telephone number. Your end users can call this number whenever they encounter an error situation.

  Application users should find help easily when they encounter problems. If they have no one to report the problem to, small problems can quickly develop into larger ones.
- One person in the organization should be responsible for managing problems from the time they are reported until they are resolved. This person will need support from programmers or the IBM Support Center.

VSE/SP introduces several dialogs which help you analyze CICS/DOS/VS transaction abends and support interactive viewing and analysis of batch program and stand-alone storage dumps. The dialogs are:

1. Online Problem Determination (OLPD)
2. Inspect Message Log
3. Storage Dump Management
4. Inspect Dump Management Output

Online Problem Determination (OLPD)

The *Online Problem Determination* (OLPD) dialog makes CICS/DOS/VS transaction abend information available at your terminal. When a CICS/DOS/VS transaction abends, the OLPD program stores an incident record. CICS/DOS/VS also writes a transaction dump to the CICS/DOS/VS dump file. The OLPD program does the following:

- Creates an incident record.
- Saves the screen in use at the time of the abend.
- Displays an abend notification panel.

- Redisplays the original user screen.

In some cases, the system cannot collect error data. However, it displays a message to the user and writes a message to the VSE/SP message log describing the error, if possible.

You use the *Online Problem Determination* dialog to access incident data. Using the dialog, you can:

- Display the user's last incident.
- Delete the user's last incident.
- List the user's incidents.
- List all incidents for all users.

Using DFHPEP

VSE/SP provides a DFHPEP program for CICS/DOS/VS error information as the phase DFHPEP in library IJSYSRS.SYSLIB and as a skeleton in ICCF library 59.

The DFHPEP phase provided by CICS/DOS/VS is renamed to DFHPEPDY in library PRD1.BASE.

You can choose to use DFHPEP for your own error collection and problem handling. If you do, you must decide whether you want your error handling to execute before or after VSE/SP collects its error data.

VSE/SP does not alter the TWA of the failing transaction. However, because VSE/SP uses CICS/DOS/VS facilities, it leaves tracks in the trace table and in the storage chain. If you execute first and call on CICS/DOS/VS facilities, your tracks in the storage chain and trace table may affect the accuracy of the incident record.

- If you want your code to execute first, insert it into DFHPEP before the XCTL.

- If you want your code to execute after VSE/SP data collection, change the XCTL to a LINK and place your code after the LINK.

The VSE/SP version of DFHPEP is in ICCF library 59. It is shown in "Program Error Program (DFHPEP)" on page 192.

Dump Management and Viewing

You can use the *Storage Dump Management* dialog to create a job stream which:

1. Prints selected dump information.
2. Onloads and offloads dumps from and to tape.

You can then display information about the dumps using the *Inspect Dump Management Output* dialog.

Inspect Message Log

You use the *Inspect Message Log* dialog to display the VSE/SP message log.

When the system encounters an error and is not able to complete a task, it may write diagnostic information in the VSE/SP message log. VSE/SP intercepts messages to the following destinations and writes information in the message log:

- CPLI
- CPLD
- CSCS
- CSDL
- CSML
- CSMT
- CSTL

The messages are written to an extra partition destination IESN (SYSLST). This architecture has several implications:

1. Messages written by your applications to these destinations will also be intercepted and written to this log.

2. If you delete a message from the message log, it is not deleted from the system. It remains on IESN (SYSLST) and prints when CICS/DOS/VS is shut down.

3. If you must retain the separate identities of the destinations listed above, you must modify member IESZDCT. However, IESZDCT is provided by VSE/SP and may be replaced by service application.

Part IV. VM Considerations

You can install and run VSE/SP with any supported version of VM/SP. In this combined environment, you can:

- Log on to CMS and interact with VSE/SP.
- DIAL to VSE/SP and use the Interactive Interface and CICS/DOS/VS.
- DIAL to the virtual machine and use your terminal as operator console.

If you have the VM/PASSTHROUGH program product installed, your terminal screen can alternate between CMS and VSE/SP.

The VM/VSE Feature of VSE System IPO/E is no longer available. The VM Interactive Productivity Facility dialog manager and the dialogs to install, maintain, and operate VSE from VM Interactive Productivity Facility are no longer provided for VSE/SP.

VSE/SP provides the VM/VSE Interface which allows CMS users to operate VSE/SP systems concurrently. This is described in detail in Chapter 15, "VM/VSE Interface" on page 127.

Chapter 13. Installation of VSE/SP Under VM

VM provides a default user-id and corresponding user profile for installing VSE/SP. The user-id and password are VSEIPO. The user profile (called directory entry) specifies certain options and defines the virtual hardware configuration. This configuration is used to reflect from VM/CP the 'device sense' codes during the installation of VSE/SP under VM.

VM Directory Entry

A sample VM directory entry is shown in Figure 40.

```
USER VSESP21 VSESP21 512K 16M BG
ACCOUNT 100 DOSSYS
IPL CMS
OPTION ECMODE BMX REALTIMER 370E CPUID 020006
CONSOLE 01F 3215
SPECIAL 080 3270
SPECIAL 081 3270
SPECIAL 082 3270
SPECIAL 083 3270
SPECIAL 084 3270
SPECIAL 085 3270
SPECIAL 086 3270
SPECIAL 087 3270
SPECIAL 088 3270
SPECIAL 089 3270
SPECIAL 08A 3270
SPECIAL 08B 3270
SPOOL 00C 2540 R A
SPOOL 00D 2540 P A
SPOOL 00E 3211 A
SPOOL 02C 2540 R A
SPOOL 02D 2540 P A
SPOOL 02E 3211 A
LINK MAINT 190 190 RR
LINK MAINT 19D 19D RR
LINK MAINT 19E 19E RR
MDISK 191 FB-512 395490 000570 VMPK02 MR ALL READ WRITE
DEDICATE 240 244
DEDICATE 241 245
DEDICATE 242 246
```

Figure 40. Sample VM Directory Entry

VSEIPO has the following authorities:

- B - to attach/detach devices to itself
- G - general user classification

DOSSYS is the default name which appears on the printouts.

The following information describes the sample VM directory entry in Figure 40 on page 114.

USER

- Use a meaningful name for VSE/SP (for example, VSESP21).
- Define minimum storage as 512K to IPL CMS.
- Define maximum storage as 16MB. This is the limit.

IPL CMS

This is not required. However, if you want to use the PROFILE EXEC facility, it is needed. Refer to "Additional Options" on page 118 for information on the PROFILE EXEC.

OPTION

- ECMODE for Extended Control Mode for VM.
- REALTIMER for Timer Interrupts.
- BMX for all I/O of the VSE virtual machine to occur as block multiplexor channel operation (not valid for channel 0).
- 370E specifies that hardware performance routines (370 Extended Code Feature) are available on the CPU for use by the VSE/SP virtual machine.

  VSE/SP will use 370E, if available, to enhance the performance of the virtual machine. If 370E code is present, the VM directory entry for this virtual machine (VSE/SP) should contain OPTION 370E or you should issue SET 370E from the virtual machine before you IPL VSE/SP.

  When VSE/SP is IPLed, it issues an Invalidate Page Table Entry (IPTE) instruction to check whether or not these routines are present. If they are, VSE/SP enables them. If the routines are present, but VSE **is not** informed (with either SET 370E ON or the OPTION 370E statement), then VM returns an OPERATION EXCEPTION on the IPTE issued by VSE/SP and the routines are not enabled.
- If you use VAE in a V=R machine, specify the option VIRT=REAL.
- CPUID is optional. It provides a unique processor identification (CPUID) for disk sharing if required.

CONSOLE

- This statement defines the VSE/SP console.
- You should define the VSE/SP console as a 'dedicated' VSE console or as TERM CONMODE 3270.
- If the console is specified as 3215, this defines a simulated printer-keyboard environment in VM. If you want to use display console mode on the same screen, enter the following CP commands, **before** the first IPL of VSE/SP from disk:

```
CP TERM CONMODE 3270
CP TERM BREAKIN GUEST
CP TERM SCRNSAVE ON
IPL cuu
```

- If the console is a dedicated VSE console, the definition in the VM directory is:

```
CONS 009 3215 T OPERATOR
```

  OPERATOR is the secondary user which means that the operator ID receives all CP messages if the primary user (VSE/SP) is disconnected.

  In addition, you must have the following entry in the VM directory entry for VSE/SP:

```
DEDICATE 01F cuu
```

  The 'cuu' is the address of the terminal that is used as the VSE/SP console.

  The CPU console 01F must be disabled before VSE/SP is logged on. If DEDICATE is not used, SPECIAL can be used and the terminal which is used as the console DIALed in after VSE IPL.

  Refer to "Automatic IPL of VSE/SP Under VM" on page 121 for information about automating the VSE IPL procedure.

- If the VSE/SP console is defined and used with TERM CONMODE 3270, the VM directory entry for the VSE/SP ID will contain:

```
CONS 01F 3215
```

  Before you IPL VSE/SP, you must define the type of console operation with:

```
TERM CONMODE 3270
```

  You can add this definition in the PROFILE EXEC for VSE/SP. Refer to "Additional Options" on page 118 for more information about using the PROFILE EXEC.

- SPECIAL GRAF definitions in the VM directory and the VSE/SP console **should not** be defined on the same control unit (for example, the console at 01F and GRAF at 010 - 01E). When you use Device Support Facilities, it will not continue if you press ENTER on 01F. This is because the interrupt is not picked up as coming from 01F. Device Support Facilities can run in either:

  - TERM CONMODE 3270

    OR

  - TERM CONMODE 3215

SPECIAL

This defines terminal devices to the VSE/SP system. The terminals **do not** have to be real devices on the system.

When you define a terminal as SPECIAL, you can use the address to DIAL into the VSE/SP system. You should ensure that you have a sufficient number of addresses defined as SPECIAL for users who require the DIAL function.

Devices defined in this manner are added to the IPL procedure through device sensing.

SPOOL

- This defines virtual unit record devices to VSE/SP.
- One entry is required for each unit record device.
- You should define reader devices as 2540 R for VSE/POWER's 'hot reader' to function properly.

For information about defining virtual printers to VSE/SP, refer to "IBM 3203-5 Considerations" on page 122.

LINK

You use this to link to another user's disk.

MDISK

This defines a full pack or minidisk to the virtual machine.

If you share disks (multiple VSE/SP guest systems), you must define the disks using the MDISK statement. In this case, the MWV parameter indicates the primary access mode for the disk. MWV indicates that a write link is given to the disk and that the CP virtual RESERVE/RELEASE function is used in the I/O operation of that disk.

DEDICATE

This is used to attach disks devices to VSE/SP. It is recommended that you add your VSE/SP disks as DEDICATE, unless you are sharing VSE disks. If you share VSE disks, you should define them as minidisks using the MDISK statement.

Additional Options

You can specify additional options which you want executed before VSE/SP is IPLed. You specify the options in the CMS PROFILE EXEC on the VSE/SP user-id. You must define a CMS minidisk workspace for the VSE/SP system.

When the IPL CMS command is issued, the PROFILE EXEC executes. You can add IPL CMS to the VM directory entry for VSE/SP or execute it under CMS.

If you do not want to use a PROFILE EXEC, you can execute any commands from CP without having a CMS system.

The following information outlines the entries you can have in the PROFILE EXEC:

TERM CONMODE 3270
This specifies the full screen operation mode of the VSE/SP console.

TERM BREAKIN GUESTCTL
This prevents CP messages being displayed on the VSE/SP console.

TERM SCRNSAVE ON
This saves a copy of the VSE/SP console before going into CP mode. You must use this command if operation of the VSE/SP console is TERM CONMODE 3270.

When you return from CP, the VSE/SP console is automatically displayed.

DEF STOR 16MB
You use this before VSE/SP is IPLed.

Usually, if you use CMS, storage is defined as 512K which ensures that CMS can be IPLed quickly.

IPL 240
This is the IPL statement to IPL VSE/SP. You should replace 240 (address) with your DOSRES address. **This must be the last statement in the PROFILE EXEC.**

When you use the TERM CONMODE 3270 command, CMS terminates. If TERM CONMODE 3270 is the first command in the PROFILE EXEC and CMS terminates, the PROFILE EXEC does not finish executing. Other commands, such as DEF STOR 16MB, are not issued. Therefore, to be able to read from the CP console stack when CMS terminates, add the character '|' between the CP commands. Replace '|' with a X'15'. When you look at the PROFILE EXEC in normal character format again, the X'15' is replaced with a ".

The XEDIT command to change the characters is, for example, VERIFY H1 70. This displays columns 1 - 70 in hexadecimal and '|' can be

replaced with X'15'. The last command in the PROFILE EXEC will look like:

```
CP TERM CON 3270 SCRNSAVE ON BREAKIN GUESTCTL|DEF STOR 16MB|I 240
```

Figure 41 shows a sample PROFILE EXEC which is set up for two user-ids:

1. VSESP21 represents a normal VSE/SP system with 16M of address space and a supervisor with MODE=VM.

2. VSESP22 is a VSE/SP VAE system with a V=R specification of 2M. The supervisor is generated with MODE=370.

```
&CONTROL OFF
&STACK Q USERID
EXECIO * CP
&READ VARS &USERID &AT &NODE
&IF &USERID EQ VSESP22 &SKIP 1
CP DEF STOR 16M|CP TERM CON 3270 SCRN ON BRE GUEST|CP IPL 240
CP DEF STOR 2M|CP TERM CON 3270 SCRN ON BRE GUEST|CP IPL 240
```

Figure 41. Sample PROFILE EXEC

IPL/JCL Procedures

During VSE/SP initial installation, there are three IPLs which are done under VM. You enter:

IPL cuu (cuu - device address)

You IPL the first time, load Device Support Facilities, and initialize the disks. Device Support Facilities can use a large amount of channel time when you initialize the disks. This can impact other users on the system.

The second IPL restores SYSRES from tape. This IPL is the same as for native VSE/SP.

The next IPL is from disk and is known as the 'sense' IPL. VSE/SP uses *device sensing* to automatically define:

- Each device attached to VSE/SP (for example, a tape attached as 181).
- Each device defined in the VM directory entry for VSE/SP.

When VSE/SP runs under VM, the sensing is done with a CP DIAGNOSE X'24'.

Before you IPL the restored VSE/SP system, you should set off the Missing Interrupt Handler (MIH). You can use the following command:

CP SET MITIME DASD OFF

The devices which are sensed are used to build an IPL procedure called $IPL370. This is the IPL procedure which is used when VSE/SP runs under VM (after the initial IPL).

Figure 42 shows the $IPL370 procedure that would be built during initial IPL, if:

- you use the VM directory entry shown in Figure 40 on page 114

  AND

- a tape is attached to VSE/SP at address 181.

```
01F,$$A$SUPV              * SUPERVISOR MODE=E,VM=YES
ADD  00C,3505             * VM SPOOLED DEVICE
ADD  00D,3525P            * VM SPOOLED DEVICE
ADD  00E,3211             * VM SPOOLED DEVICE
ADD  01F,3277             * CONSOLE
ADD  02C,3505             * VM SPOOLED DEVICE
ADD  02D,3525P            * VM SPOOLED DEVICE
ADD  02E,3211             * VM SPOOLED DEVICE
ADD  080:08B,3277         * TERMINALS DEFINED AS SPECIAL
ADD  181,3420T9           * ATTACHED TAPE
ADD  190:191,FBA          * CMS SYSTEM DISK AND WORK DISK
ADD  19D:19E,FBA          * CMS HELP AND CMS EXTENSION DISK
ADD  240:242,FBA          * DEDICATED DISKS
ADD  FEC,3505             * ADDED FOR POWER
ADD  FED,3525P            * ADDED FOR POWER
ADD  FEE,PRT1             * ADDED FOR POWER
ADD  FEF,PRT1             * ADDED FOR POWER
ADD  FFA,3505             * ADDED FOR ICCF
ADD  FFC,3505             * ADDED FOR ICCF
ADD  FFD,3525P            * ADDED FOR ICCF
ADD  FFE,PRT1             * ADDED FOR ICCF
DEF SYSCAT=DOSRES,SYSREC=SYSWK1
SYS JA=YES
DLA VOLID=DOSRES,BLK=55118,NBLK=744,DSF=N,NAME=AREA1
SVA PSIZE=534K,SDL=250,GETVIS=64K
```

Figure 42. Sample $IPL370 Procedure

Because of device sensing, you should do the following before the sense IPL. If you do not, you must later use the Interactive Interface to modify the IPL procedure which is created.

1. Attach necessary devices to VSE/SP (for example, tapes).

2. Detach devices you **do not** want in the IPL procedure (for example, MAINT's 190 minidisk).

3. If you have a real 3203, you **should not** define a virtual printer as a 3203. Refer to "IBM 3203-5 Considerations" on page 122 for information.

After you install VSE/SP, you can use the Interactive Interface to change your hardware configuration (for example, to add tape drives).

If you use VM in a disk sharing environment, consider the following IPL parameters on the DLF command:

- NBLK=
- NCYL=
- NCPU=

NCPU supports a maximum of 31 CPUs (VM guest operating machines) in a disk sharing environment. You must explicitly define the size of the lock file.

Note: The maximum number of POWER sharing users is nine.

Automatic IPL of VSE/SP Under VM

If you set up the following, you can automatically IPL VSE/SP under VM without console intervention (for example, no LOGON to VM user-id).

- VM directory entry for VSE/SP.

  Define the VM and VSE consoles as follows:

  ```
  CONSOLE 009 3215 T OPERATOR
  DEDICATE 01F 01F
  ```

- In the AUTOLOG1's PROFILE EXEC:

  ```
  DISABLE 01F
  AUTOLOG VSESP21 VSESP21    (user-id and password)
  ```

- In VSE/SP:

  The correct IPL and JCL procedures are automatically selected based on CPU running mode and the disk types. CICS/DOS/VS and ACF/VTAM can be autostarted in the JCL procedure by using the new PWR statement in the BG IPL procedure.

If you use a VSE/SP console as TERM CONMODE 3270, you **cannot** IPL VSE/SP using this method.

Supervisors

Two pregenerated supervisors are supplied with VSE/SP which can run under VM:

1. $$A$SUPV for MODE=VM
2. $$A$SUP3 for MODE=370

With VM mode, you can have one address space (up to 16MB) and complete VM Linkage Enhancements. This provides full 'handshaking' support.

With 370 mode, you can implement VAE with a subset of VM Linkage Enhancements. It does not provide full 'handshaking' support.

The differences in VMLE support between VM mode and 370 mode are shown in Figure 43.

VM Linkage Enhancements	VM Mode	370 Mode	Comments
VM paging and CCW translation only	YES	NO	---
CPCOM (replaces CPCLOSE)	YES	YES	Issue CP commands without feedback.
SET PAGEX ON with ICCF	YES	YES	New VMLE feature.
BTAM Autopoll Assist	YES	YES	---
Use of PAGE Release	YES	YES	Diagnose code 10 in VM.
Disconnected console	YES	NO	New VMLE feature.
VM/VSE Interface communication CMS/VSE	YES	NO	With 370 mode, you can submit a job from VM to VSE/SP, but without the echo facility.
VCNA usage for SNA	YES	NO	---

Figure 43. Differences in VMLE Support

IBM 3203-5 Considerations

When you run VSE/SP with VM and you have a real IBM 3203-5 printer, the printer is sensed as a 3203-1. The 3203-5 is stored in the PUB as a 3203-1. Because of this, an incorrect FCB is loaded. A VSE/SP user cannot use the enhanced performance functions of the PRT1/3800 LIOCS because IPL overrides the user specified statement, for example:

```
ADD 02E,PRT1
```

The same thing occurs if you have a virtual IBM 1403 defined.

You can circumvent this problem by defining the virtual printer as a 3211. You can then catalog an FCB for a 3203-5, but use the 3211 naming conventions.

Virtual I/O Under VM

Virtual I/O (VIO) is a VSE system access method. It uses an extension of the Page Data Set as its work space, instead of using normal work files. The benefit of Virtual I/O is that it reduces disk I/O activity caused by the temporary storing of phases in environments with sufficient real storage. Currently, only the LINK and GO functions of LNKEDT use Virtual I/O.

An area called VPOOL within the virtual address space is reserved to provide access to this work space. VPOOL resides at the end of the SVA. The default value of VPOOL is 64K.

The total Virtual I/O workspace is defined by the parameter VIO. The default value is also 64K.

The VIO and VPOOL are defined during IPL together with the supervisor name. For example:

```
$$A$SUPX,....,VIO=n{K|M},VPOOL=m{K|M}
```

When you use VM mode, VM does the paging. Therefore, no Page Data Set exists on VSE/SP. VIO uses an extension of the Page Data Set, so in MODE=VM, the VIO parameter is not used. When you run VSE under VM, VIO must be equal to VPOOL which reduces the size of the virtual storage for partitions.

The value which you specify as the VPOOL area is used by LNKEDT for LINK and GO. You should specify 128K for a test system and 0K for a production system. If you specify 0K, you cannot use OPTION LINK.

Using Invalidate Page Table Entry (IPTE)

You can improve system performance by using performance routines built into the hardware of the processor (referred to as 370E hardware). When VSE is IPLed, it issues an Invalidate Page Table Entry (IPTE) instruction to check whether or not these routines are present. If the 370E hardware is present, you should make VSE/SP aware of this using the:

- OPTION 370E statement in the VM directory entry for VSE/SP.

  OR

- CP command SET 370E ON before you IPL VSE/SP.

If the routines are present, but not known to VSE/SP, VM returns an OPERATION EXCEPTION when VSE/SP issues the IPTE during IPL. In this case, VSE/SP **does not** enable the routines.

It is recommended that you define the routines to VSE/SP even if they are **not** present. You can do this by adding 370E to the OPTION statement in the VM directory for VSE/SP.

You can use the CP command Q SET (from the VSE/SP virtual machine) to verify whether or not the routines are enabled, if they are present, for VSE/SP.

If you issue the SET 370E ON command and the routines are not available on the hardware, the following message is displayed:

```
DMKLOG250E 370E FEATURE NOT AVAILABLE
```

Chapter 14. Using the VM - VSE/SP Setup

Use of VM/PASSTHRU

VM/PASSTHRU is a VM/SP optional program product. It enables a virtual machine on one system to pass through to an operating system or application on:

- The same CPU.
- Another remote CPU.

VM/PASSTHRU runs in a disconnected virtual machine under the control of VM. You can activate or deactivate it at any time. You usually activate it using AUTOLOG1. The user-id of the PASSTHRU virtual machine can be any name, but usually it is called PVM.

In order to use the VM/PASSTHRU facility, you can:

- Execute the PASSTHRU EXEC from the active CMS environment.

- DIAL into the PASSTHRU virtual machine.

The PASSTHRU EXEC is supplied with the VM/PASSTHRU program product (5748-RC1).

Because of the different library structure of VSE/SP, a CMS user cannot use some librarian functions (for example, DSERV AND PSERV) of pre-Version 2 VSE/Advanced Functions from the CMS/DOS environment. You can use VM/PASSTHRU to pass through to the Interactive Interface and pass back to CMS again. In the Interactive Interface, you can execute librarian functions in an interactive environment. You can use either a PF key or a four character string (for example, %%%%) to switch back and forth between the Interactive Interface and CMS.

By using the Interactive Interface, a CMS user can perform functions such as:

- Transferring the VSE system console to a CMS console.
- Displaying VSE/SP system activity.
- Interactively displaying VTOC information.

By default, the pass through facility has a 20 minute timeout. You can change this by redefining the TDISC parameter in the file PVM CONFIG. The maximum is 9999 seconds which gives you a timeout limit of 2.7 hours. PVM CONFIG is a file on the PVM machine, not on the CMS user machine.

The PASSTHRU EXEC

The following is an example of the PASSTHRU EXEC:

EXEC PASSTHRU NODEA * PVM 11 24 80 %%%% ####

The PASSTHRU EXEC has 8 parameters which are described below.

1. Name of node (NODEA)
   This is the VM system to where you want to passthrough.

2. Port address (* for local use)

3. Name of PASSTHRU disconnected virtual machine (PVM)
   This is the CMS user-id on which PASSTHRU is installed.

4. PF key for capture facility (11)

   When you press this key (after passing through to the destination machine), a hardcopy of the screen is saved in a CMS file called PASSTHRU DATA A. This file is stored on the system from where you initiated the PASSTHRU EXEC.

5. Number of lines to be captured (24)

6. Width of lines to be captured (80)

7. Temporary disconnect (%%%%)

   You can specify either a PF key or a character string for the temporary disconnect. This allows you to switch back to the system from where you entered the PASSTHRU EXEC without signing off from the other system. With this, you can switch between the Interactive Interface and CMS. When you enter the PASSTHRU EXEC again, you return to the Interactive Interface.

   If you disconnect from a selection panel, you return to that panel. If you disconnect from within a dialog, you return to the initial panel VSE/SP FUNCTION SELECTION.

8. Permanent disconnect (####)

   You can specify either a PF key or a character string for the permanent disconnect. This allows you to switch back to the system from where you entered the PASSTHRU EXEC. You are signed off from the other system. With this, you can permanently disconnect from the Interactive Interface and return to CMS. If you use the PASSTHRU EXEC again, you must again sign on to the Interactive Interface.

It is recommended that you sign off from the Interactive Interface **before** you use the permanent disconnect.

Note: If you use a PF key for the capture facility or for the temporary or permanent disconnect, this setting of the PF key overrides the setting in the Interactive Interface. For example, if you use PF10 for the capture facility, you cannot use the function which PF10 represents in the Interactive Interface. However, you can enter the characters **PF10** *on the command line in the Interactive Interface instead of pressing the PF key itself.*

Sample Session Using PASSTHRU EXEC

1. Logon CMS with password.
2. Enter:
   EXEC PASSTHRU NODEA * PVM 11 24 80 %%%% ####
3. DIAL VSEIPO for the Interactive Interface.
4. Sign on to the Interactive Interface
5. You can enter %%%% to temporarily disconnect from the Interactive Interface (return to CMS).
6. You can enter #### to permanently disconnect from the Interactive Interface.

Chapter 15. VM/VSE Interface

VSE/SP provides the VM/VSE Interface which is a set of VSE phases and CMS modules. The VM/VSE Interface routines enable CMS users to operate VSE/SP systems concurrently. Operating a VSE/SP system means the ability to:

- Submit jobs from a CMS terminal to a virtual VSE machine and have none, some, or all messages from the job be echoed to a specified job owner (CMS user-id).
- Execute CP commands within JCL statements and have the resulting CP messages routed to the CMS job owner.
- Retrieve up to twenty of the most recent messages from a virtual VSE machine.
- Reply to messages resulting from the execution of a job. The job must have a unique job owner-id (CMS user-id).
- Issue VSE/SP commands to a virtual VSE machine and have the resulting AR (Attention Routine) messages echoed to the CMS user.
- Issue CP commands for execution in the virtual machine and have the resulting CP messages routed to the CMS job owner.

The VM/VSE Interface routines are distributed in IJSYSRS.SYSLIB. You must obtain the routines from the library and install them onto a CMS minidisk.

Installing the VM/VSE Interface

Before you can use the VM/VSE Interface, you must distribute the following CMS modules and the related EXPLAIN files to all CMS users who are authorized to use the appropriate function.

- VSEREP (reply to outstanding messages)
- VSEMSG (retrieve messages)
- VSECMD (issue VSE/SP commands)

- VSECP (issue CP commands)
- SUBVSE (submit a job to VSE (CMS EXEC2 file))

The use of VSECMD and VSECP should be carefully controlled. VSEREP, VSEMSG, and the CMS EXEC2 file SUBVSE can be loaded onto a disk to which all CMS users have access. However, VSECMD and VSECP are mainly intended for the system administrator.

VSE/SP provides the SKVMVSE skeleton in ICCF library 59. You use this skeleton to punch the MODULES, EXPLAINS, and EXECs from the VSE machine to the VM machine MAINT. *VSE/SP System Use* describes SKVMVSE in more detail.

After you submit the job, the members are placed in MAINT's reader queue. You should access the CMS minidisk where the routines will be loaded. (The default is the first accessed R/W minidisk). The minidisk can be:

1. MAINT 319 for general access.
2. A specific minidisk (for example, 301).

Figure 44 on page 129 shows the interrelationship between the CMS modules and the phases as cataloged within the VSE/SP system library and the function.

CMS File Name (fn)	CMS File Type (ft)	VSE Library Book Name	Function
		$VMCF.PHASE	VM/VSE Interface processing routines.
		$VMCFOPN.PHASE	VM/VSE Interface initialization routines.
VSEREP	MODULE	VSEREP.Z	Reply to outstanding messages.
VSEMSG	MODULE	VSEMSG.Z	Retrieve messages from VSE system.
VSECMD	MODULE	VSECMD.Z	Execute VSE commands on virtual VSE system.
VSECP	MODULE	VSECP.Z	Execute CP commands on virtual VSE system.
VSEREP	EXPLAIN	EXPREP.Z	VSEREP command HELP panel.
VSEMSG	EXPLAIN	EXPMSG.Z	VSEMSG command HELP panel.
VSECMD	EXPLAIN	EXPCMD.Z	VSECMD command HELP panel.
VSECP	EXPLAIN	EXPCP.Z	VSECP command HELP panel.
SUBVSE	EXEC	SUBVSE.Z	Submit a job for execution on a virtual VSE system.

Figure 44. Module Interrelationship for VM/VSE Interface

Note: SUBVSE requires the IOS3270 module.

Part V. System Tuning

This part of *VSE/SP Planning* provides a performance oriented overview for VSE/SP. It is divided into several chapters:

- Chapter 16, "Performance Options" lists supervisor parameters, IPL options, and information about AR commands and JCL which may affect performance.
- Chapter 17, "General Recommendations" describes general recommendations about specific files and other system aspects.
- Chapter 18, "VM Considerations" contains performance information about using VSE/SP with VM/SP. If you are using VM, you should review this chapter along with the other VSE performance considerations.

You should also review the documentation for the component program products and additional VSE program products for specific performance information.

Additional performance considerations about particular topics have been included in other sections of this book.

Chapter 16. Performance Options

Supervisor

Most supervisor generation options which impacted performance in previous VSE releases no longer exist. The corresponding functions can be activated during IPL or JCL.

The only supervisor parameters that might still impact performance are the following:

- DASDSHR - Multi CPU support
- FASTTR - Fast CCW translate
- MODE - 370, E, or VM mode
- RPS - Rotational Position Sensing
- TRKHLD - Track hold
- NPARTS - Number of partitions

Other parameters you should consider are listed under the separate headings below.

IPL Commands

You should consider the following in terms of performance:

- ADD
  - (S) - Disk alternate path support
  - SHR - Shared disk by multiple CPUs
- DPD - Location/split of the Page Data Set

- SYS
  - JA - Job Accounting
  - DASDFP - Disk File Protection
  - CHANQ
  - SDSIZE
  - SUBLIB - Size of the system GETVIS used for LCT table
- DLA - Define location of label area

AR Commands / JCL Statements

You should consider the following in terms of performance:

- ALLOC
- SIZE
- PRTY (activate partition balancing)
- MSEC (partition balancing time)
- SIZE (parameter on EXEC card)
- Use of conditional JCL
- LIBDEF

Chapter 17. General Recommendations

File Placement

Review the recommendations below regarding the placement of files.

1. Consider splitting the Page Data Set and placing the extents on different volumes.

2. In case of high SPOOL utilization, you should move the VSE/POWER queue file and data file away from the system disks. You should place them on different actuators.

   You should also define the data file with more than one extent. Locate each one on a different actuator.

   If you use the *Manage Batch Queues* dialog to handle the VSE/POWER queues, you should consider moving the queue file to another disk device.

3. Lock file placement
   The lock file should be located on a disk device which has low utilization and which contains no other system files. The lock file is needed **only** for disk sharing.

4. Concurrently active data sets should be placed adjacent to one another.

Additional Considerations

This section outlines some additional considerations which may affect system performance.

- Reduce size of VTOC on CKD DASD.
  VSE sequentially searches the VTOC when it processes a non-VSAM data set entry. The Common VTOC Handler does not use RPS. The number of entries which the Common VTOC Handler scans can be reduced by limiting the size of the VTOC.

  The default size of the VTOC is one cylinder for CKD devices.

- Do not define disk devices as shared unless they are shared.
- IPLing with TYPE = NORMAL avoids the overhead of device sensing.
- Review your ACF/VTAM buffer sizes. You can use the command D NET,BFRUSE to display the status of the VTAM buffers after a typical online period. For details on performance considerations, refer to the ACF/VTAM documentation.
- If possible, consider putting partitions which are concurrently active or which communicate frequently with each other in the same address space. This can reduce the number of switches between address spaces.

PRT1 Support

Support for PRT1 printers and the non-buffered IBM 3800 printer is faster. This support uses a new logic module IJDPRT which resides in the SVA. The use of IJDPRT reduces the number of SVC0s if ASA control characters are used. It avoids the need for more than one SVC0 per print line. Therefore, it reduces the spooling overhead for a batch partition with spooled LST output. You may also benefit from these improvements for non-spooled batch partitions and execution in an ICCF interactive partition.

For these improvements, you must:

1. ADD the printer (real or dummy) as PRT1.
2. Use ASA control characters in the I/O macros CPMOD (compilers), PRMOD, and DIMOD.
3. Have the print file opened.

You should not remove or change dummy PRT1 printers from the IPL procedure.

Parallel Page I/O

Within the page manager, there exists a device queue for every page data set device. This allows the overlapping of page I/O operations if the extents are on different disks.

In general, for 370 mode, the virtual storage of a partition is split across all available page data set extents. If you modify the page data set layout (for example, if you implement VAE with more than 16MB), you should try to split your page data set across several extents on separate disk devices.

Librarian Commands

You should consider the following for performance reasons:

1. The Restore and Copy/Move functions of the librarian are faster if the target library is uniquely assigned.

2. You **should not** define a disk device as shared (SHR) unless you are using disk sharing.

3. In a partition, avoid using a LIBDEF with an active ACCESS command to a sublibrary of a library which you use for restore or install.

VSE/POWER DBLK Size

In VSE/SP, the maximum DBLK size for VSE/POWER is 12 KB. This can significantly reduce the number of SIOs to the VSE/POWER data file. The affected buffers are not allocated in fixable VSE/POWER area, but are in the partition GETVIS general subpool. If there is insufficient real storage, paging is used.
The default value of DBLK is 2008 bytes.

Chapter 18. VM Considerations

This chapter highlights some VM considerations. You should review the specific VSE performance information in addition to the VM information.

'V=R' Mode

When more than one address space is necessary, you should consider setting up a VSE system in 'V=R' mode (part of the machine real storage is dedicated to VSE).

In this mode, VSE handles paging. You should review the performance considerations for a VSE native system, especially the splitting of the Page Data Set.

'V=V' Mode

You can use 'V=V' mode for an additional system. You should specify the following supervisor parameters:

- MODE=VM
  This is for complete 'handshaking' support. You can use this if you do not need more than 16MB in the additional system.

  If the additional VSE system (V=V) uses 370 mode, its guest performance is reduced.

- RPS=YES (unless you use FBA devices only)

  This is needed because only VSE can perform the sector number calculations.

Minimize Privileged Instructions

The following information applies to both modes of operation (V=R or V=V). A privileged instruction simulation significantly increases the time which the VM Control Program (CP) uses to service the VSE guest virtual machine. Consequently, the use of partition balancing is not recommended because it implies extra timer related activity in the dispatcher.

You can minimize the use of the CPU timer by not using VSE job accounting (SYS JA=NO in ASI procedure). However, you should consider the following:

- Accounting information may be a requirement.
- Two Interactive Interface dialogs rely on VSE job accounting.

  1. Display System Activity
  2. Display Channel and Device Activity

  The dialogs are valuable to better understand and follow what is happening in a VSE guest virtual machine.

- An efficient microcode assist speeds up the CPU timer instruction simulation on most current CPUs.
- You may prefer to use a larger POWER DBLK size under VM to reduce the number of SIOs.

Appendix A. Supported Hardware

This appendix shows the IBM hardware devices which VSE/SP supports. For more detailed information, contact your IBM representative.

Note: This list may not be current after the availability of this book. Your IBM representative can provide you with the most current information.

The devices are listed by type and number. Model information is shown only if it is significant.

IBM devices which link to a channel-attached communication control unit are supported by VSE/SP through this control unit. Some devices can be accessible for data transfer only if you write your own channel program.

Processors

	370 Mode	E Mode	Under VM
Processor Types	138 145[1] 148 155-II[2] 158 3031 3033[3] 43xx	4321 4331 4341 4361	ANY

1 Requires floating point feature, CPU timer, and clock comparator

2 Requires floating point feature

3 No multiprocessor mode

System Consoles

VSE/SP requires a system (operator) console.

You can have either a console printer-keyboard or a display console.

IBM 3210
IBM 3215
IBM 3277 (Model 2)
IBM 3278 (Model 2)
IBM 3278 (Model 2A)
IBM 3279 (Models S2A, S2B, 2X)
IBM 3279 (Model 2C)

System software supports base colors for the IBM 3279.

- White
- Green
- Blue

Local Display Stations

VSE/SP requires at least one local display station with the following characteristics:

1. 24 line screen (80 characters per line) and at least 10 Program Function (PF) keys.

2. Supported by ACF/VTAM or BTAM-ES, whichever you choose during VSE/SP initial installation.

The Interactive Interface supports the local installation of the following display stations:

- IBM 3178 (Models C10 and C20)
- IBM 3179
- IBM 3180
- IBM 3277 (All models with 24 line screens)
- IBM 3278 (Models 2 - 5)
- IBM 3279 (Models S2A, S2B, S3A, S3B, S3G, 2X, and 3X)
- IBM 8775 (Models 1 and 2)
- IBM 3270 Personal Computer
- IBM Personal Computer with 3278/3279 Emulation Adapter

The Interactive Interface does not fully support the IBM 3278-5 which has a screen size of 27 lines, 132 characters per line.

Disk Devices

CKD Devices		FBA Devices	
IBM 2311	(Notes 1 and 2)	IBM 3310	(Notes 2 and 4)
IBM 2314/19	(Notes 1 and 2)	IBM 3370	(Note 4)
IBM 3330		IBM 3370-2	(Note 4)
IBM 3330-11			
IBM 3333			
IBM 3340			
IBM 3344	(Note 3)		
IBM 3350	(Note 4)		
IBM 3375	(Note 5)		
IBM 3380	(Note 5)		

Notes:

1. *Supported only as input/output device for user data.*
2. *Not supported for sharing of data across computing systems.*
3. *Supported as a 3340 with one head/disk assembly of the 3344 simulating four 3348 Model 70 data modules on 3340 disk drives.*
4. *ISAM is not available for the device, unless the device is used in simulation or emulation mode (simulating or emulating a device which ISAM supports).*
5. *ISAM is not supported for this device.*

Magnetic Tape Units

IBM 2401
IBM 2415
IBM 2420
IBM 3410/11
IBM 3420
IBM 3430
IBM 8809

Punched Card Devices

IBM 1442 Read/Punch, Model N1
IBM 1442 Punch, Model N2
IBM 2501 Reader
IBM 2520 Read/Punch, Model B1
IBM 2520 Punch, Models B2 and B3
IBM 2540 Read/Punch
IBM 2560 Multifunction Card Machine
IBM 2596 Read/Punch (See Note on next page.)
IBM 3505 Reader
IBM 3525 Punch
IBM 5424 Multifunction Card Unit
IBM 5425 Multifunction Card Unit

Note: You cannot use these devices as a system input or system output device.

System Printers

IBM 1403
IBM 1443
IBM 3200 (Supported like an IBM 3800. See Note)
IBM 3203 (Models 4 and 5)
IBM 3211
IBM 3262 (Models 1, 5, and 11)
IBM 3289 (Model 4)
IBM 3800 (Model 1. Printing Subsystem. See Note)
IBM 4245
IBM 5203

Note: You must order the logical input/output support separately. For ordering details, contact your IBM representative.

Terminal Printers

IBM 3213 (For use with the console of a 3158 processor.)
IBM 3268
IBM 3284
IBM 3286
IBM 3287
IBM 3288
IBM 3289 (All models except Model 4.)
IBM 5210

Optical and Magnetic Character Reader Equipment

IBM 1255 (See Note 1 on next page)
IBM 1259 (See Note 1 on next page)
IBM 1270 (See Note 1 on next page)
IBM 1275 (See Note 1 on next page)
IBM 1287
IBM 1288
IBM 1419 (See Note 2 on next page)
IBM 3881
IBM 3886
IBM 3890 (See Note 3 on next page)

Notes:

1. *Supported like a 1419. The IBM 1270 and 1275 are not available in the United States.*

2. *To use an IBM 1419 with a dual address adapter, you must install the VSE/SP Generation Feature.*

3. *You must order the logical input/output support separately. For ordering, contact your IBM representative.*

Miscellaneous Input/Output Devices

IBM 3540 Diskette I/O Unit (See Note 1)

Feature 3401 Diskette Drive for IBM 4331 (See Note 2)

IBM 7443 Service Record File (See Note 3)

IBM 7770 Audio Response Unit

Notes:

1. *Supported as a card input/output device.*

2. *Supported like an IBM 3540.*

3. *Used on the IBM 3031 service support console.*

Communication Control Units

Support is available for the devices that you can attach to an Integrated Communication Adapter of an IBM 4300 processor or to the following communication control units:

IBM 2701
IBM 2702
IBM 2703
IBM 3272
IBM 3274 Models 1A, 1B, 1D, 41A, 41D
IBM 3704
IBM 3705
IBM 3725
IBM 3791L (A local communication controller.)

Remote Devices and Subsystems

You can install the devices shown in the following figure over SDLC link connections. For information about attaching other devices via SDLC links or devices that use BSC line protocol, ask your IBM representative.

DEVICE OR SUBSYSTEM	CONTROL UNIT
3270 Information Display System (See Note on following page)	3274-21C 3274-31C, 51C 3274-41C, 61C 3274-52C 3276-12, 13, 14
3770 Data Communication System	3771-1, 2, 3 3773-1, 2, 3 3774-1, 2 3775-1 3776-1, 2 3777-1
3600 / 4700 Finance Communication System	3601 3602 4701
3630/3640 Plant Communication System	3631 3632 8100
3650 Retail Store System	3651-A50, B50
3660 Supermarket System	3651-A60, B60 3661
3680 Programmable Store System	3684
IBM 3270 Personal Computer IBM Personal Computer with 3278/3279 Emulation Adapter	3274-51C or 377X compatibility mode
Scanmaster	8815
3790 Communication System	3791
5520 Administrative System	5520
5280 Distributed Data System	5280
6670 Information Distributor	6670
8100 Information System	8130 8140
8775 Display Terminal	8775-11, 12
Series/1	Series/1
System/34	System/34
System/38	System/38

Figure 45. Remote Devices/Subsystems

Note: The following devices can be attached to control units supported for the IBM 3270 Information Display System:

- *IBM 3262, Models 3 and 13*
- *IBM 3268, Model 2*
- *IBM 3178, Models C10 and C20*
- *IBM 3278, Models 2 - 5*
- *IBM 3279, Models S2A, S2B, S3A, S3B, S3G, 2X, and 3X*
- *IBM 3287, Models 1, 2, 1C, and 2C*
- *IBM 3289, Models 1 and 2*
- *IBM 3290*
- *IBM 5210, Models G01 and G02*

Appendix B. VSE/SP Disk Layouts

The figures in this appendix are approximations. Refer to the *Program Directory* for the most current information.

3310 Disks

DOSRES -------- 3310

Start Block	No of Blocks	File ID
2	55070	VSE.SYSRES.LIBRARY
55072	704	DOS.LABEL.FILE.CPUID.AREA1
55776	2112	VSAM.MASTER.CATALOG
57888	23776	VSAM.DATA.SPACE.DOSRES
		%DOS.WORKFILE.SYSLNK
		CICS.AUTO.STATS.A
		CICS.AUTO.STATS.B
		CICS.TD.INTRA
		DFHTEMP
		CICS.CSD
81664	16896	PAGING.DATA.SET.ONE
98560	1472	VSE.POWER.QUEUE.FILE
100032	1056	VSE.POWER.ACCOUNT.FILE
101088	4458	VSE.HARDCOPY.FILE
105546	752	VSE.RECORDER.FILE
106298	3460	VSE.SYSTEM.HISTORY.FILE
109758	100	VSESP.JOB.MANAGER.FILE
109858	2518	CICS.DUMPA
112376	580	CICS.DUMPB
112956	1000	CICS.AUXTRACE
113956	340	CICS.MSGUSR
114296	11688	UNUSED.SPACE
125984	32	VTOC

SYSWK1 -------- 3310

Start Block	No of Blocks	File ID
32	67232	VSAM.DATA.SPACE.SYSWK1
		%DOS.WORKFILE.SYS001
		%DOS.WORKFILE.SYS002
		%DOS.WORKFILE.SYS003
		%DOS.WORKFILE.SYS004
		%DOS.WORKFILE.SYS002.RECOVER
		%DOS.WORKFILE.SYS001.SORT
		%WORK.FILE.N11
		TO
		%WORK.FILE.N54
67264	42688	VSE.POWER.DATA.FILE
109952	165	INFO.ANALYSIS.DUMP.MGNT.FILE
110117	80	INFO.ANALYSIS.EXT.RTNS.FILE
110197	500	VTAM.TRACE.FILE
110697	1600	CU370X.LOAD.FILE
112297	1000	CU370X.DIAG.FILE
113297	12687	UNUSED.SPACE
125984	32	VTOC

SYSWK2 -------- 3310

Start Block	No of Blocks	File ID
32	3168	VSESP.USER.CATALOG
3200	17824	VSAM.DATA.SPACE.SYSWK2
		VSE.CONTROL.FILE
		VSE.MESSAGES.ONLINE
		VSE.TEXT.REPSTORY.FILE
		VSE.ONLINE.PROB.DET.FILE
		%DOS.WORKFILE.SYS001.RECOVER
21024	16896	PAGING.DATA.SET.TWO
37920	63008	VSE.PRD1.LIBRARY
100928	25056	UNUSED.SPACE
125984	32	VTOC

SYSWK3 -------- 3310

Start Block	No of Blocks	File ID
32	47872	LIBR.DATA.SPACE.SYSWK3 VSE.PRD2.LIBRARY
47904	75008	ICCF.LIBRARY
122912	3072	UNUSED.SPACE
125984	32	VTOC

SYSWK4 -------- 3310

Start Block	No of Blocks	File ID
2	55070	SYS.NEW.RES
55072	3460	WORK.HIST.FILE
58560	30272	VSE.POWER.DATA.FILE
88832	36864	VSE.DUMP.LIBRARY
125696	288	UNUSED.SPACE
125984	32	VTOC

SYSWK5 -------- 3310

Start Block	No of Blocks	File ID
32	125952	UNUSED.SPACE[1]
125984	32	VTOC

[1] This should be used for additional LIBR space if you install the VSE/SP Generation Feature.

3330 Disks

DOSRES -------- 3330

Start Track	No of Tracks	File ID
1	2507	VSE.SYSRES.LIBRARY
2508	57	DOS.LABEL.FILEUID.AREA1
2565	95	VSAM.MASTER.CATALOG
2660	1064	VSAM.DATA.SPACE.DOSRES
		%DOS.WORKFILE.SYSLNK
		CICS.AUTO.STATS.A
		CICS.AUTO.STATS.B
		CICS.TD.INTRA
		DFHTEMP
		CICS.CSD
3724	722	PAGING.DATA.SET.ONE
4446	38	VSE.POWER.QUEUE.FILE
4484	57	VSE.POWER.ACCOUNT.FILE
4541	121	VSE.HARDCOPY.FILE
4662	76	VSE.RECORDER.FILE
4738	145	VSE.SYSTEM.HISTORY.FILE
4883	19	VSESP.JOB.MANAGER.FILE
4902	114	CICS.DUMPA
5016	38	CICS.DUMPB
5054	38	CICS.AUXTRACE
5092	19	CICS.MSGUSR
5111	2546	UNUSED.SPACE
7657	19	VTOC

SYSWK1 -------- 3330

```
Start Track  No of Tracks  File ID
=========================================================
      19      2033         VSAM.DATA.SPACE.SYSWK1
                             %DOS.WORKFILE.SYS001
                             %DOS.WORKFILE.SYS002
                             %DOS.WORKFILE.SYS003
                             %DOS.WORKFILE.SYS004
                             %DOS.WORKFILE.SYS002.RECOVER
                             %DOS.WORKFILE.SYS001.SORT
                             %WORK.FILE.N11
                                   TO
                             %WORK.FILE.N54
    2052      2090         VSE.POWER.DATA.FILE
    4142        13         INFO.ANALYSIS.DUMP.MGNT.FILE
    4155         6         INFO.ANALYSIS.EXT.RTNS.FILE
    4161        19         VTAM.TRACE.FILE
    4180        76         CU370X.LOAD.FILE
    4256        38         CU370X.DIAG.FILE
    4294      3363         UNUSED.SPACE
    7657        19         VTOC
```

SYSWK2 -------- 3330

```
Start Track  No of Tracks  File ID
=========================================================
      19       133         VSESP.USER.CATALOG
     152       627         VSAM.DATA.SPACE.SYSWK2
                             VSE.CONTROL.FILE
                             VSE.MESSAGES.ONLINE
                             VSE.TEXT.REPSTORY.FILE
                             VSE.ONLINE.PROB.DET.FILE
                             %DOS.WORKFILE.SYS001.RECOVER
     779       722         PAGING.DATA.SET.TWO
    1501      2850         VSE.PRD1.LIBRARY
    4351      3306         UNUSED.SPACE
    7657        19         VTOC
```

SYSWK3 -------- 3330

Start Track	No of Tracks	File ID
19	2166	LIBR.DATA.SPACE.SYSWK3 VSE.PRD2.LIBRARY
2185	3268	ICCF.LIBRARY
5453	2204	UNUSED.SPACE
7657	19	VTOC

SYSWK4 -------- 3330

Start Track	No of Tracks	File ID
1	2507	SYS.NEW.RES
2508	135	WORK.HIST.FILE
2660	2109	VSE.POWER.DATA.FILE
4769	1691	VSE.DUMP.LIBRARY
6460	1197	UNUSED.SPACE
7657	19	VTOC

SYSWK5 -------- 3330

Start Track	No of Tracks	File ID
19	7638	UNUSED.SPACE[2]
7657	19	VTOC

---

2 This should be used for additional LIBR space if you install the VSE/SP Generation Feature.

3340 Disks

DOSRES -------- 3340

Start Track	No of Tracks	File ID
1	3935	VSE.SYSRES.LIBRARY
3936	60	DOS.LABEL.FILEUID.AREA1
3996	156	VSAM.MASTER.CATALOG
4152	1956	VSAM.DATA.SPACE.DOSRES
		%DOS.WORKFILE.SYSLNK
		CICS.AUTO.STATS.A
		CICS.AUTO.STATS.B
		CICS.TD.INTRA
		DFHTEMP
		CICS.CSD
6108	1188	PAGING.DATA.SET.ONE
7296	48	VSE.POWER.QUEUE.FILE
7344	36	VSE.POWER.ACCOUNT.FILE
7380	179	VSE.HARDCOPY.FILE
7559	60	VSE.RECORDER.FILE
7619	289	VSE.SYSTEM.HISTORY.FILE
7908	12	VSESP.JOB.MANAGER.FILE
7920	156	CICS.DUMPA
8076	36	CICS.DUMPB
8112	60	CICS.AUXTRACE
8172	24	CICS.MSGUSR
8196	144	UNUSED.SPACE
8340	12	VTOC

SYSWK1 -------- 3340

Start Track	No of Tracks	File ID
12	3792	VSAM.DATA.SPACE.SYSWK1
		%DOS.WORKFILE.SYS001
		%DOS.WORKFILE.SYS002
		%DOS.WORKFILE.SYS003
		%DOS.WORKFILE.SYS004
		%DOS.WORKFILE.SYS002.RECOVER
		%DOS.WORKFILE.SYS001.SORT
		%WORK.FILE.N11
		TO
		%WORK.FILE.N54
3804	3528	VSE.POWER.DATA.FILE
7332	8	INFO.ANALYSIS.DUMP.MGNT.FILE
7340	4	INFO.ANALYSIS.EXT.RTNS.FILE
7344	24	VTAM.TRACE.FILE
7368	96	CU370X.LOAD.FILE
7464	48	CU370X.DIAG.FILE
7512	828	UNUSED.SPACE
8340	12	VTOC

SYSWK2 -------- 3340

Start Track	No of Tracks	File ID
12	228	VSESP.USER.CATALOG
240	1020	VSAM.DATA.SPACE.SYSWK2
		VSE.CONTROL.FILE
		VSE.MESSAGES.ONLINE
		VSE.TEXT.REPSTORY.FILE
		VSE.ONLINE.PROB.DET.FILE
		%DOS.WORKFILE.SYS001.RECOVER
1260	1632	PAGING.DATA.SET.TWO
2892	4476	VSE.PRD1.LIBRARY
7368	972	UNUSED.SPACE
8340	12	VTOC

SYSWK3 -------- 3340

Start Track	No of Tracks	File ID
12	3408	LIBR.DATA.SPACE.SYSWK3 VSE.PRD2.LIBRARY
3420	4896	ICCF.LIBRARY
8316	24	UNUSED.SPACE
8340	12	VTOC

SYSWK4 -------- 3340

Start Track	No of Tracks	File ID
1	3935	SYS.NEW.RES
3936	289	WORK.HIST.FILE
4236	1380	VSE.POWER.DATA.FILE
5616	2640	VSE.DUMP.LIBRARY
8256	84	UNUSED.SPACE
8340	12	VTOC

SYSWK5 -------- 3340

Start Track	No of Tracks	File ID
12	8328	UNUSED.SPACE[3]
8340	12	VTOC

[3] This should be used for additional LIBR space if you install the VSE/SP Generation Feature.

3350 Disks

DOSRES -------- 3350

Start Track	No of Tracks	File ID
1	1859	VSE.SYSRES.LIBRARY
1860	30	DOS.LABEL.FILEUID.AREA1
1890	30	VSE.POWER.QUEUE.FILE
1920	90	VSAM.MASTER.CATALOG
2010	2340	VSAM.DATA.SPACE.DOSRES
		%DOS.WORKFILE.SYSLNK
		VSE.CONTROL.FILE
		VSE.TEXT.REPSTORY.FILE
		VSE.MESSAGES.ONLINE
		VSE.ONLINE.PROB.DET.FILE
		%DOS.WORKFILE.SYS001.RECOVER
		CICS.AUTO.STATS.A
		CICS.AUTO.STATS.B
		CICS.TD.INTRA
		DFHTEMP
		CICS.CSD
4350	540	PAGING.DATA.SET.ONE
4890	2130	VSE.PRD1.LIBRARY
7020	3000	LIBR.DATA.SPACE.DOSRES
		VSE.PRD2.LIBRARY
10020	6600	UNUSED.SPACE
16620	30	VTOC

SYSWK1 -------- 3350

Start Track	No of Tracks	File ID
1	1859	SYS.NEW.RES
1860	109	WORK.HIST.FILE
1980	4500	LIBR.DATA.SPACE.SYSWK1
6480	1260	VSE.DUMP.LIBRARY
7740	120	VSESP.USER.CATALOG
7860	1020	VSAM.DATA.SPACE.SYSWK1
		%DOS.WORKFILE.SYS001
		%DOS.WORKFILE.SYS002
		%DOS.WORKFILE.SYS003
		%DOS.WORKFILE.SYS004
		%DOS.WORKFILE.SYS002.RECOVER
		%DOS.WORKFILE.SYS001.SORT
		%WORK.FILE.N11
		TO
		%WORK.FILE.N54
8880	2970	ICCF.LIBRARY
11850	540	PAGING.DATA.SET.TWO
12390	2850	VSE.POWER.DATA.FILE
15240	90	VSE.POWER.ACCOUNT.FILE
15330	30	VSESP.JOB.MANAGER.FILE
15360	180	VSE.HARDCOPY.FILE
15540	41	VSE.RECORDER.FILE
15581	109	VSE.SYSTEM.HISTORY.FILE
15690	20	INFO.ANALYSIS.DUMP.MGNT.FILE
15710	10	INFO.ANALYSIS.EXT.RTNS.FILE
15720	30	VTAM.TRACE.FILE
15750	30	CU370X.LOAD.FILE
15780	30	CU370X.DIAG.FILE
15810	75	CICS.DUMPA
15885	45	CICS.DUMPB
15930	30	CICS.AUXTRACE
15960	30	CICS.MSGUSR
15990	630	UNUSED.SPACE
16620	30	VTOC

3370 Disks

DOSRES -------- 3370

Start Block	No of Blocks	File ID
2	55116	VSE.SYSRES.LIBRARY
55118	744	DOS.LABEL.FILEUID.AREA1
55862	1488	VSE.POWER.QUEUE.FILE
57350	2232	VSAM.MASTER.CATALOG
59582	62372	VSAM.DATA.SPACE.DOSRES
		%DOS.WORKFILE.SYSLNK
		VSE.CONTROL.FILE
		VSE.TEXT.REPSTORY.FILE
		VSE.MESSAGES.ONLINE
		VSE.ONLINE.PROB.DET.FILE
		%DOS.WORKFILE.SYS001.RECOVER
		CICS.AUTO.STATS.A
		CICS.AUTO.STATS.B
		CICS.TD.INTRA
		DFHTEMP
		CICS.CSD
121954	16864	PAGING.DATA.SET.ONE
138818	63240	VSE.PRD1.LIBRARY
202058	90768	LIBR.DATA.SPACE.DOSRES
		VSE.PRD2.LIBRARY
292826	265112	UNUSED.SPACE
557938	62	VTOC

SYSWK1 -------- 3370

Start Block	No of Blocks	File ID
2	55116	SYS.NEW.RES
55118	3460	WORK.HIST.FILE
58590	136152	LIBR.DATA.SPACE.SYSWK1
194742	37200	VSE.DUMP.LIBRARY
231942	2976	VSESP.USER.CATALOG
234918	67704	VSAM.DATA.SPACE.SYSWK1
		%DOS.WORKFILE.SYS001
		%DOS.WORKFILE.SYS002
		%DOS.WORKFILE.SYS003
		%DOS.WORKFILE.SYS004
		%DOS.WORKFILE.SYS002.RECOVER
		%DOS.WORKFILE.SYS001.SORT
		%WORK.FILE.N11
		TO
		%WORK.FILE.N54
302622	75144	ICCF.LIBRARY
377766	17048	PAGING.DATA.SET.TWO
394816	73656	VSE.POWER.DATA.FILE
468472	2232	VSE.POWER.ACCOUNT.FILE
470704	100	VSESP.JOB.MANAGER.FILE
470804	4994	VSE.HARDCOPY.FILE
475798	752	VSE.RECORDER.FILE
476550	3460	VSE.SYSTEM.HISTORY.FILE
480010	186	INFO.ANALYSIS.DUMP.MGNT.FILE
480196	62	INFO.ANALYSIS.EXT.RTNS.FILE
480258	500	VTAM.TRACE.FILE
480758	1600	CU370X.LOAD.FILE
482358	1000	CU370X.DIAG.FILE
483358	2512	CICS.DUMPA
485870	580	CICS.DUMPB
486450	1000	CICS.AUXTRACE
487450	340	CICS.MSGUSR
487790	70148	UNUSED.SPACE
557938	62	VTOC

3370-2 Disks

DOSRES -------- 3370-2

Start Block	No of Blocks	File ID
2	55116	VSE.SYSRES.LIBRARY
55118	744	DOS.LABEL.FILEUID.AREA1
55862	1488	VSE.POWER.QUEUE.FILE
57350	2232	VSAM.MASTER.CATALOG
59582	62372	VSAM.DATA.SPACE.DOSRES
		%DOS.WORKFILE.SYSLNK
		VSE.CONTROL.FILE
		VSE.TEXT.REPSTORY.FILE
		VSE.MESSAGES.ONLINE
		VSE.ONLINE.PROB.DET.FILE
		%DOS.WORKFILE.SYS001.RECOVER
		CICS.AUTO.STATS.A
		CICS.AUTO.STATS.B
		CICS.TD.INTRA
		DFHTEMP
		CICS.CSD
121954	16864	PAGING.DATA.SET.ONE
138818	63240	VSE.PRD1.LIBRARY
202058	90768	LIBR.DATA.SPACE.DOSRES
		VSE.PRD2.LIBRARY
292826	419864	UNUSED.SPACE
712690	62	VTOC

SYSWK1 -------- 3370-2

Start Block	No of Blocks	File ID
2	55116	SYS.NEW.RES
55118	3460	WORK.HIST.FILE
58590	136152	LIBR.DATA.SPACE.SYSWK1
194742	37200	VSE.DUMP.LIBRARY
231942	2976	VSESP.USER.CATALOG
234918	67704	VSAM.DATA.SPACE.SYSWK1
		%DOS.WORKFILE.SYS001
		%DOS.WORKFILE.SYS002
		%DOS.WORKFILE.SYS003
		%DOS.WORKFILE.SYS004
		%DOS.WORKFILE.SYS002.RECOVER
		%DOS.WORKFILE.SYS001.SORT
		%WORK.FILE.N11
		TO
		%WORK.FILE.N54
302622	75144	ICCF.LIBRARY
377766	17048	PAGING.DATA.SET.TWO
394816	73656	VSE.POWER.DATA.FILE
468472	2232	VSE.POWER.ACCOUNT.FILE
470704	100	VSESP.JOB.MANAGER.FILE
470804	4994	VSE.HARDCOPY.FILE
475798	752	VSE.RECORDER.FILE
476550	3460	VSE.SYSTEM.HISTORY.FILE
480010	186	INFO.ANALYSIS.DUMP.MGNT.FILE
480196	62	INFO.ANALYSIS.EXT.RTNS.FILE
480258	500	VTAM.TRACE.FILE
480758	1600	CU370X.LOAD.FILE
482358	1000	CU370X.DIAG.FILE
483358	2512	CICS.DUMPA
485870	580	CICS.DUMPB
486450	1000	CICS.AUXTRACE
487450	340	CICS.MSGUSR
487790	224900	UNUSED.SPACE
712690	62	VTOC

3375 Disks

DOSRES -------- 3375

Start Track	No of Tracks	File ID
1	1103	VSE.SYSRES.LIBRARY
1104	48	DOS.LABEL.FILEUID.AREA1
1152	24	VSE.POWER.QUEUE.FILE
1176	120	VSAM.MASTER.CATALOG
1296	2664	VSAM.DATA.SPACE.DOSRES
		%DOS.WORKFILE.SYSLNK
		VSE.CONTROL.FILE
		VSE.TEXT.REPSTORY.FILE
		VSE.MESSAGES.ONLINE
		VSE.ONLINE.PROB.DET.FILE
		%DOS.WORKFILE.SYS001.RECOVER
		CICS.AUTO.STATS.A
		CICS.AUTO.STATS.B
		CICS.TD.INTRA
		DFHTEMP
		CICS.CSD
3960	324	PAGING.DATA.SET.ONE
4284	1272	VSE.PRD1.LIBRARY
5556	1800	LIBR.DATA.SPACE.DOSRES
		VSE.PRD2.LIBRARY
7356	4140	UNUSED.SPACE
11496	12	VTOC

SYSWK1 -------- 3375

Start Track	No of Tracks	File ID
1	1103	SYS.NEW.RES
1104	61	WORK.HIST.FILE
1176	2700	LIBR.DATA.SPACE.SYSWK1
3876	744	VSE.DUMP.LIBRARY
4620	168	VSESP.USER.CATALOG
4788	1104	VSAM.DATA.SPACE.SYSWK1
		%DOS.WORKFILE.SYS001
		%DOS.WORKFILE.SYS002
		%DOS.WORKFILE.SYS003
		%DOS.WORKFILE.SYS004
		%DOS.WORKFILE.SYS002.RECOVER
		%DOS.WORKFILE.SYS001.SORT
		%WORK.FILE.N11
		TO
		%WORK.FILE.N54
5892	2376	ICCF.LIBRARY
8268	336	PAGING.DATA.SET.TWO
8604	2316	VSE.POWER.DATA.FILE
10920	72	VSE.POWER.ACCOUNT.FILE
10992	12	VSESP.JOB.MANAGER.FILE
11004	24	VSE.HARDCOPY.FILE
11028	35	VSE.RECORDER.FILE
11063	61	VSE.SYSTEM.HISTORY.FILE
11124	8	INFO.ANALYSIS.DUMP.MGNT.FILE
11132	4	INFO.ANALYSIS.EXT.RTNS.FILE
11136	24	VTAM.TRACE.FILE
11160	48	CU370X.LOAD.FILE
11208	48	CU370X.DIAG.FILE
11256	72	CICS.DUMPA
11328	24	CICS.DUMPB
11352	24	CICS.AUXTRACE
11376	24	CICS.MSGUSR
11400	96	UNUSED.SPACE
11496	12	VTOC

3380 Disks

DOSRES -------- 3380

Start Track	No of Tracks	File ID
1	899	VSE.SYSRES.LIBRARY
900	45	DOS.LABEL.FILEUID.AREA1
945	30	VSE.POWER.QUEUE.FILE
975	105	VSAM.MASTER.CATALOG
1080	2040	VSAM.DATA.SPACE.DOSRES
		%DOS.WORKFILE.SYSLNK
		VSE.CONTROL.FILE
		VSE.TEXT.REPSTORY.FILE
		VSE.MESSAGES.ONLINE
		VSE.ONLINE.PROB.DET.FILE
		%DOS.WORKFILE.SYS001.RECOVER
		CICS.AUTO.STATS.A
		CICS.AUTO.STATS.B
		CICS.TD.INTRA
		DFHTEMP
		CICS.CSD
3120	240	PAGING.DATA.SET.ONE
3360	1020	VSE.PRD1.LIBRARY
4380	1470	LIBR.DATA.SPACE.DOSRES
		VSE.PRD2.LIBRARY
5850	7410	UNUSED.SPACE
13260	15	VTOC

SYSWK1 -------- 3380

Start Track	No of Tracks	File ID
1	899	SYS.NEW.RES
900	46	WORK.HIST.FILE
960	2205	LIBR.DATA.SPACE.SYSWK1
3165	600	VSE.DUMP.LIBRARY
3765	135	VSESP.USER.CATALOG
3900	840	VSAM.DATA.SPACE.SYSWK1
		%DOS.WORKFILE.SYS001
		%DOS.WORKFILE.SYS002
		%DOS.WORKFILE.SYS003
		%DOS.WORKFILE.SYS004
		%DOS.WORKFILE.SYS002.RECOVER
		%DOS.WORKFILE.SYS001.SORT
		%WORK.FILE.N11
		TO
		%WORK.FILE.N54
4740	1785	ICCF.LIBRARY
6525	240	PAGING.DATA.SET.TWO
6765	1740	VSE.POWER.DATA.FILE
8505	60	VSE.POWER.ACCOUNT.FILE
8565	15	VSESP.JOB.MANAGER.FILE
8580	30	VSE.HARDCOPY.FILE
8610	39	VSE.RECORDER.FILE
8649	51	VSE.SYSTEM.HISTORY.FILE
8700	10	INFO.ANALYSIS.DUMP.MGNT.FILE
8710	5	INFO.ANALYSIS.EXT.RTNS.FILE
8715	15	VTAM.TRACE.FILE
8730	45	CU370X.LOAD.FILE
8775	45	CU370X.DIAG.FILE
8820	60	CICS.DUMPA
8880	30	CICS.DUMPB
8910	30	CICS.AUXTRACE
8940	30	CICS.MSGUSR
8970	4290	UNUSED.SPACE
13260	15	VTOC

Appendix C. VSE/Advanced Functions Supervisor Generation

The following are the specifications for the pregenerated supervisor which is shipped with VSE/SP.

Macro	Option	E	370	VM
SUPVR	ID	E	3	V
	MICR	1419	1419	NO
	NPARTS	12	12	12
	MODE	E	370	VM
FOPT	DASDSHR	YES	YES	YES
	FASTTR	YES	YES	NO
	RPS	YES	YES	YES
	TRKHLD	12	12	12
	TTIME	NO	NO	NO
IOTAB	IODEV	254	254	254
	NPGR	3060	3060	3060

Figure 46. VSE/Advanced Functions Supervisor Generation Parameters

Appendix D. CICS/DOS/VS Tables

List of CICS/DOS/VS Tables and Library Member Names

VSE/SP ships the following CICS/DOS/VS tables as part of the pregenerated system. The tables contain the options which VSE/SP uses.

The VSE/ICCF library members contain copy statements which copy information from the VSE library. You cannot change the VSE library members. You should use the ICCF library member when you tailor any options.

CICS/DOS/VS Table	ICCF Library Member	VSE Library Members	
		VSE/SP Related	IWS Related
Program Control Table (PCT)	DFHPCTSP	IESZPCT	IESWPCT
Processing Program Table (PPT)	DFHPPTSP	IESZPPT/ IESZPPTL	IESWPPT/ IESWPPTL
File Control Table (FCT) Main CICS/ICCF Additional CICS	 DFHFCTSP DFHFCTSO	 IESZFCTP IESZFCTO	 IESWFCT
Program List Table (PLT) Initiation Shutdown	 DFHPLTPI DFHPLTSD	 IESZPLTI IESZPLTS	 --- ---
Destination Control Table (DCT)	DFHDCTSP	IESZDCT	IESWDCT IESWDCTC
Transaction List Table (XLT)	DFHXLTSP	IESZXLT	---
System Initialization Table (SIT)	DFHSITSP	---	---

Note: The TCT is created by the Interactive Interface dialogs. Therefore, no sample is provided here.

Program Control Table

The PCT member in the VSE/SP library contains entries which VSE/SP requires and entries which VSE/ICCF requires.

```
         TITLE 'DFHPCTSP -- SUPPLIED WITH VSE/SP'
         DFHPCT TYPE=INITIAL,SUFFIX=SP,
               TRANSEC=(EDF(60),      EXEC DEBUG             FACILITIES
               FE(62),                FIELD ENGINEERING      FACILITIES
               INTERPRETER(60),       COMMAND INTERPRETER    FACILITIES
               MASTER(64),            MASTER TERMINAL        FACILITIES
               MIRROR(1),             MIRROR TRANSACTION     FACILITIES
               ROUTING(1),            ROUTING TRANSACTION    FACILITIES
               SPI(64),               RESOURCE DEFINITION    FACILITIES
               SVR(63))               SUPERVISOR TERMINAL    FACILITIES
*-------------------------------------------------------------------*

         COPY  IESZPCT       -- VSE/SP PCT ENTRIES MUST BE BEFORE CICS'S
         COPY  IESWPCT       -- INTELLIGENT WORK STATION SUPPORT
         COPY  DFHXPCT       -- BASIC CICS/VS FACILITIES
*-------------------------------------------------------------------*
*      NOTE THAT THE COPY STATEMENT TO INCLUDE THE ICCF ENTRIES      *
*      HAS BEEN REMOVED.  THE ENTRY WHICH COPIES VSE/SP MEMBERS      *
*      INCLUDES THE OLD ICCF ENTRIES AS WELL AS NEW ONES WHICH       *
*      ARE REQUIRED FOR VSE/SP.                                      *
*-------------------------------------------------------------------*

*-------------------------------------------------------------------*
*          LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX            *
*-------------------------------------------------------------------*

*-------------------------------------------------------------------*
*          LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX            *
*-------------------------------------------------------------------*

         DFHPCT TYPE=FINAL
         END   DFHPCTBA
```

Figure 47. ICCF Library Member of PCT

```
*-------------------------------------------------------------------*
*                                                                   *
*       FOLLOWING ARE THE PCT ENTRIES REQUIRED FOR VSE/SP           *
*                                                                   *
*-------------------------------------------------------------------*
CSGM     DFHPCT TYPE=ENTRY,TRANSID=CSGM,PROGRAM=IESIES01,CLASS=SHORT,
               TRNPRTY=99,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1
IE$L     DFHPCT TYPE=ENTRY,TRANSID=IE$L,PROGRAM=IESLIBD,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IE$M     DFHPCT TYPE=ENTRY,TRANSID=IE$M,PROGRAM=IESCOMM,CLASS=LONG,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IE$1     DFHPCT TYPE=ENTRY,TRANSID=IE$1,PROGRAM=IESICCF,CLASS=SHORT,
               TRNPRTY=99,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1
IE$2     DFHPCT TYPE=ENTRY,TRANSID=IE$2,PROGRAM=IESICCF,CLASS=SHORT,
               TRNPRTY=99,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1
IEA$     DFHPCT TYPE=ENTRY,TRANSID=IEA$,PROGRAM=IESLIBA,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IEC$     DFHPCT TYPE=ENTRY,TRANSID=IEC$,PROGRAM=IESLIBC,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IEDA     DFHPCT TYPE=ENTRY,TRANSID=IEDA,PROGRAM=IESXDA,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IEDS     DFHPCT TYPE=ENTRY,TRANSID=IEDS,PROGRAM=IESXSIO,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IEEP     DFHPCT TYPE=ENTRY,TRANSID=IEEP,PROGRAM=IESFPEP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IELA     DFHPCT TYPE=ENTRY,TRANSID=IELA,PROGRAM=IESXDA,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IELS     DFHPCT TYPE=ENTRY,TRANSID=IELS,PROGRAM=IESXSIO,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IEMD     DFHPCT TYPE=ENTRY,TRANSID=IEMD,PROGRAM=IESMDP,CLASS=LONG,
               SCRNSZE=ALTERNATE,TRNPRTY=20,TWASIZE=128,TRANSEC=1,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,
               TPURGE=YES,SPURGE=YES
```

Figure 48 (Part 1 of 4). VSE Library Member of PCT (VSE/SP Related)

```
IEPW     DFHPCT TYPE=ENTRY,TRANSID=IEPW,PROGRAM=IESXPWD,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESA     DFHPCT TYPE=ENTRY,TRANSID=IESA,PROGRAM=IESXAPM,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESB     DFHPCT TYPE=ENTRY,TRANSID=IESB,PROGRAM=IESVFELD,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESC     DFHPCT TYPE=ENTRY,TRANSID=IESC,PROGRAM=IESVFECP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESD     DFHPCT TYPE=ENTRY,TRANSID=IESD,PROGRAM=IESVFEFD,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESI     DFHPCT TYPE=ENTRY,TRANSID=IESI,PROGRAM=IESFPIP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESL     DFHPCT TYPE=ENTRY,TRANSID=IESL,PROGRAM=IESLIBI,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESM     DFHPCT TYPE=ENTRY,TRANSID=IESM,PROGRAM=IESVFE,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESN     DFHPCT TYPE=ENTRY,TRANSID=IESN,PROGRAM=IESNEWS,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESO     DFHPCT TYPE=ENTRY,TRANSID=IESO,PROGRAM=IESOPINI,CLASS=LONG,
               TRNPRTY=20,TWASIZE=700,TPURGE=YES,SPURGE=NO,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESP     DFHPCT TYPE=ENTRY,TRANSID=IESP,PROGRAM=IESVFEFP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESQ     DFHPCT TYPE=ENTRY,TRANSID=IESQ,PROGRAM=IESBQUP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESS     DFHPCT TYPE=ENTRY,TRANSID=IESS,PROGRAM=IESXSPM,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IEST     DFHPCT TYPE=ENTRY,TRANSID=IEST,PROGRAM=IESTUP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1
IESV     DFHPCT TYPE=ENTRY,TRANSID=IESV,PROGRAM=IESVTOCF,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
```

Figure 48 (Part 2 of 4). VSE Library Member of PCT (VSE/SP Related)

```
IESW     DFHPCT TYPE=ENTRY,TRANSID=IESW,PROGRAM=IESXUPM,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESX     DFHPCT TYPE=ENTRY,TRANSID=IESX,PROGRAM=IESLQBP,CLASS=SHORT,
               TRNPRTY=100,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESY     DFHPCT TYPE=ENTRY,TRANSID=IESY,PROGRAM=IESLQDP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IESZ     DFHPCT TYPE=ENTRY,TRANSID=IESZ,PROGRAM=IESIMSG,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IES1     DFHPCT TYPE=ENTRY,TRANSID=IES1,PROGRAM=IESFPEP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IES6     DFHPCT TYPE=ENTRY,TRANSID=IES6,PROGRAM=IESIES01,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1
IES8     DFHPCT TYPE=ENTRY,TRANSID=IES8,PROGRAM=IESOPFE,CLASS=SHORT,
               SCRNSZE=ALTERNATE,TRNPRTY=20,TWASIZE=700,TRANSEC=61,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,
               TPURGE=YES,SPURGE=YES
IES9     DFHPCT TYPE=ENTRY,TRANSID=IES9,PROGRAM=IESOPID,CLASS=SHORT,
               SCRNSZE=ALTERNATE,TRNPRTY=20,TWASIZE=700,TRANSEC=61,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,
               TPURGE=YES,SPURGE=YES
IETA     DFHPCT TYPE=ENTRY,TRANSID=IETA,PROGRAM=IESXDA,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
IETS     DFHPCT TYPE=ENTRY,TRANSID=IETS,PROGRAM=IESXSIO,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
HELP     DFHPCT TYPE=ENTRY,TRANSID=HELP,PROGRAM=IESFPEP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1
OLPD     DFHPCT TYPE=ENTRY,TRANSID=OLPD,PROGRAM=IESOPFE,CLASS=SHORT,
               SCRNSZE=ALTERNATE,TRNPRTY=20,TWASIZE=700,TRANSEC=61,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,
               TPURGE=YES,SPURGE=YES
PF1      DFHPCT TYPE=ENTRY,TASKREQ=PF1,PROGRAM=IESFPEP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1
PF13     DFHPCT TYPE=ENTRY,TASKREQ=PF13,PROGRAM=IESFPEP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1
```

Figure 48 (Part 3 of 4). VSE Library Member of PCT (VSE/SP Related)

```
PF15     DFHPCT TYPE=ENTRY,TASKREQ=PF15,PROGRAM=IESFPEP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1
PF3      DFHPCT TYPE=ENTRY,TASKREQ=PF3,PROGRAM=IESFPEP,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1
USER     DFHPCT TYPE=ENTRY,TRANSID=USER,PROGRAM=IESDUSR,CLASS=SHORT,
               TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,
               DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61
         EJECT
*-------------------------------------------------------------------*
*                    PCT ENTRIES FOR ICCF                           *
*-------------------------------------------------------------------*
     DFHPCT TYPE=ENTRY,TRANSID=ICCF,PROGRAM=DTSICCF,TWASIZE=1650,
               SCRNSZE=ALTERNATE
     DFHPCT TYPE=ENTRY,TRANSID=I$$P,PROGRAM=DTSICCF,TWASIZE=1650,
               SCRNSZE=ALTERNATE
     DFHPCT TYPE=ENTRY,TRANSID=I$$Q,PROGRAM=DTSICCF,TWASIZE=512
     DFHPCT TYPE=ENTRY,TRANSID=I$$1,PROGRAM=DTSICCF,TWASIZE=1650,
               SCRNSZE=ALTERNATE
     DFHPCT TYPE=ENTRY,TRANSID=I$$2,PROGRAM=DTSICCF,TWASIZE=1650,
               SCRNSZE=ALTERNATE
     DFHPCT TYPE=ENTRY,TRANSID=I$$3,PROGRAM=DTSICCF,TWASIZE=1650,
               SCRNSZE=ALTERNATE
     DFHPCT TYPE=ENTRY,TRANSID=I$$4,PROGRAM=DTSICCF,TWASIZE=1650,
               SCRNSZE=ALTERNATE
     DFHPCT TYPE=ENTRY,TRANSID=I$$5,PROGRAM=DTSICCF,TWASIZE=512
     DFHPCT TYPE=ENTRY,TRANSID=I$$6,PROGRAM=DTSICCF,TWASIZE=512,
               SCRNSZE=ALTERNATE
     DFHPCT TYPE=ENTRY,TRANSID=I$$7,PROGRAM=DTSICCF,TWASIZE=1650,
               SCRNSZE=ALTERNATE
     DFHPCT TYPE=ENTRY,TRANSID=I$$8,PROGRAM=DTSICCF,TWASIZE=1650,
               SCRNSZE=ALTERNATE
     DFHPCT TYPE=ENTRY,TRANSID=I$$9,PROGRAM=DTSICCF,TWASIZE=1650,
               SCRNSZE=ALTERNATE
*-------------------------------------------------------------------*
*                  END OF VSE/SP PCT ENTRIES                        *
*-------------------------------------------------------------------*
```

Figure 48 (Part 4 of 4). VSE Library Member of PCT (VSE/SP Related)

```
*-------------------------------------------------------------------*
*                                                                   *
*            FOLLOWING ARE THE PCT ENTRIES REQUIRED FOR             *
*                                                                   *
*                INTELLIGENT WORK STATION                           *
*                                                                   *
*-------------------------------------------------------------------*
IND$     DFHPCT TYPE=ENTRY,TRANSID=IND$,PROGRAM=HFTR,TWASIZE=128,
               SCRNSZE=DEFAULT,TRANSEC=1,TPURGE=YES,SPURGE=YES
INWM     DFHPCT TYPE=ENTRY,TRANSID=INWM,PROGRAM=INWMRXA1,TWASIZE=256,
               SCRNSZE=DEFAULT,TRANSEC=1,TPURGE=YES,SPURGE=YES
INW1     DFHPCT TYPE=ENTRY,TRANSID=INW1,PROGRAM=INWMRXS1,TWASIZE=256,
               SCRNSZE=DEFAULT,TRANSEC=1,TPURGE=YES,SPURGE=YES
INW2     DFHPCT TYPE=ENTRY,TRANSID=INW2,PROGRAM=INWMRXS2,TWASIZE=256,
               SCRNSZE=DEFAULT,TRANSEC=1,TPURGE=YES,SPURGE=YES
INW3     DFHPCT TYPE=ENTRY,TRANSID=INW3,PROGRAM=INWMRXS3,TWASIZE=256,
               SCRNSZE=DEFAULT,TRANSEC=1,TPURGE=YES,SPURGE=YES
INW4     DFHPCT TYPE=ENTRY,TRANSID=INW4,PROGRAM=INWMRXS4,TWASIZE=256,
               SCRNSZE=DEFAULT,TRANSEC=1,TPURGE=YES,SPURGE=YES
INW5     DFHPCT TYPE=ENTRY,TRANSID=INW5,PROGRAM=INWMRXS5,TWASIZE=256,
               SCRNSZE=DEFAULT,TRANSEC=1,TPURGE=YES,SPURGE=YES
INW6     DFHPCT TYPE=ENTRY,TRANSID=INW6,PROGRAM=INWMRXS6,TWASIZE=256,
               SCRNSZE=DEFAULT,TRANSEC=1,TPURGE=YES,SPURGE=YES
*-------------------------------------------------------------------*
*            END OF INTELLIGENT WORK STATION PCT ENTRIES             *
*-------------------------------------------------------------------*
```

Figure 49. VSE Library Member of PCT (IWS Related)

Processing Program Table

```
         TITLE 'DFHPPTSP -- SUPPLIED WITH VSE/SP'
         DFHPPT TYPE=INITIAL,SUFFIX=SP
         COPY   IESZPPT             - VSE/SP CICS/VS PROGRAMS
         COPY   IESZPPTL            - VSE/SP MAPSETS AND OTHERS
         COPY   IESWPPT             - INTELLIGENT WORK STATION PROGRAMS
         COPY   IESWPPTL            - INTELLIGENT WORK STATION MAPSETS
         COPY   DFHXPPT             - BASIC CICS/VS FACILITIES
         COPY   DFHXPPTI            - ICCF PPT ENTRIES

*--------------------------------------------------------------------*
*          LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX             *
*--------------------------------------------------------------------*

*--------------------------------------------------------------------*
*          LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX             *
*--------------------------------------------------------------------*

         DFHPPT TYPE=FINAL
         END    DFHPPTBA
```

Figure 50. ICCF Library Member of PPT

```
*-------------------------------------------------------------------*
*                                                                   *
*       FOLLOWING ARE THE PPT ENTRIES REQUIRED FOR VSE/SP           *
*       NOTE THAT THIS IS NOT A COMPLETE LIST -- THE REMAINDER ARE  *
*       COPIED IN MEMBER 'IESZPPTL'                                 *
*                                                                   *
*-------------------------------------------------------------------*

*-------------------------------------------------------------------
 DFHPPT TYPE=ENTRY,PROGRAM=DFHPLTPI  POST INITIALIZATION LIST TABLE
 DFHPPT TYPE=ENTRY,PROGRAM=DFHPLTSD  SHUT DOWN LIST TABLE
 DFHPPT TYPE=ENTRY,PROGRAM=DFHXLTSP  TRANSACTION LIST TABLE - SHUTDOWN
 DFHPPT TYPE=ENTRY,PROGRAM=IESAPT    APPLICATION PROFILE TABLE
 DFHPPT TYPE=ENTRY,PROGRAM=IESBQE    BATCH QUEUE PROCESSOR EXIT
 DFHPPT TYPE=ENTRY,PROGRAM=IESBQUP   BATCH QUEUE PROCESSOR
 DFHPPT TYPE=ENTRY,PROGRAM=IESBQUR   BATCH QUEUE PROCESSOR RECOVERY
 DFHPPT TYPE=ENTRY,PROGRAM=IESCFA    CONTROL FILE ACCESS PROGRAM
 DFHPPT TYPE=ENTRY,PROGRAM=IESCICIN  CICS INITIALIZATION
 DFHPPT TYPE=ENTRY,PROGRAM=IESCICSD  CICS TERMINATION
 DFHPPT TYPE=ENTRY,PROGRAM=IESCOMM   XPCCB COMMUNICATION PROGRAM
 DFHPPT TYPE=ENTRY,PROGRAM=IESDUSR   DISPLAY USERS
 DFHPPT TYPE=ENTRY,PROGRAM=IESFPEP   FUNCTION PROCESSOR END PROGRAM
 DFHPPT TYPE=ENTRY,PROGRAM=IESFPIP   FUNCTION PROCESSOR INITIATE PGM
 DFHPPT TYPE=ENTRY,PROGRAM=IESHTAB   ICCF MESSAGE HASH TABLE
 DFHPPT TYPE=ENTRY,PROGRAM=IESICCF   VSE/SP /  ICCF INTERFACE
 DFHPPT TYPE=ENTRY,PROGRAM=IESICCFF  ICCF CALL FORMATTER
 DFHPPT TYPE=ENTRY,PROGRAM=IESIES01  SIGN ON PROGRAM
 DFHPPT TYPE=ENTRY,PROGRAM=IESIES5   SIGN OFF PROGRAM
 DFHPPT TYPE=ENTRY,PROGRAM=IESIMSG   ICCF MESSAGE DELIVERY
 DFHPPT TYPE=ENTRY,PROGRAM=IESLCASE  SET OFF THE 'UCTRAN' FEATURE
 DFHPPT TYPE=ENTRY,PROGRAM=IESLIBA   ADD PROCESSOR
 DFHPPT TYPE=ENTRY,PROGRAM=IESLIBC   COMPILE OPTION PROCESSOR
 DFHPPT TYPE=ENTRY,PROGRAM=IESLIBD   LIBRARY PROCESSOR DISPLAY
 DFHPPT TYPE=ENTRY,PROGRAM=IESLIBE   LIBRARY PROCESSOR EXIT
 DFHPPT TYPE=ENTRY,PROGRAM=IESLIBI   LIBRARY PROCESSOR INITIATION
 DFHPPT TYPE=ENTRY,PROGRAM=IESLIBM   MULTIPLE OPTION PROCESSOR
 DFHPPT TYPE=ENTRY,PROGRAM=IESLIBR   LIBRARY PROCESSOR RECOVERY
 DFHPPT TYPE=ENTRY,PROGRAM=IESLQBP   LOG QUEUE BUILD PROGRAM
 DFHPPT TYPE=ENTRY,PROGRAM=IESLQDP   LOG QUEUE DISPLAY PROGRAM
 DFHPPT TYPE=ENTRY,PROGRAM=IESMDP    MESSAGE DELIVERY PROGRAM
```

Figure 51 (Part 1 of 2). First VSE Library Member of PPT (VSE/SP Related)

```
 DFHPPT TYPE=ENTRY,PROGRAM=IESMRTP   MESSAGE RETRIEVAL PROGRAM
 DFHPPT TYPE=ENTRY,PROGRAM=IESNEWS   NEWS REPORTER/RECORDER
 DFHPPT TYPE=ENTRY,PROGRAM=IESOPADD  O-L PROBDET - FILE MANAGER
 DFHPPT TYPE=ENTRY,PROGRAM=IESOPDC   O-L PROBDET - DATA COLLECTION
 DFHPPT TYPE=ENTRY,PROGRAM=IESOPERR  O-L PROBDET - FILE MANAGER
 DFHPPT TYPE=ENTRY,PROGRAM=IESOPFE   O-L PROBDET - DISPLAY FRONT-END
 DFHPPT TYPE=ENTRY,PROGRAM=IESOPID   O-L PROBDET - INCIDENT DISPLAY
 DFHPPT TYPE=ENTRY,PROGRAM=IESOPINI  O-L PROBDET - FILE MANAGER
 DFHPPT TYPE=ENTRY,PROGRAM=IESOPLRP  O-L PROBDET - FILE MANAGER (LRP)
 DFHPPT TYPE=ENTRY,PROGRAM=IESOPRO   O-L PROBDET - FILE MANAGER
 DFHPPT TYPE=ENTRY,PROGRAM=IESSCRH   HELPER FOR THE SCREEN I/O MODULE
 DFHPPT TYPE=ENTRY,PROGRAM=IESSCRIO  SCREEN I/O MODULE
 DFHPPT TYPE=ENTRY,PROGRAM=IESSVL    VSE/SP / CICS SYSTEM VECTOR LIST
 DFHPPT TYPE=ENTRY,PROGRAM=IESTUP    TUTORIAL PROGRAM
 DFHPPT TYPE=ENTRY,PROGRAM=IESUCASE  SET ON THE 'UCTRAN' FEATURE
 DFHPPT TYPE=ENTRY,PROGRAM=IESVFE    VSAM MENU   PGM
 DFHPPT TYPE=ENTRY,PROGRAM=IESVFECP  V CAT PROC  PGM
 DFHPPT TYPE=ENTRY,PROGRAM=IESVFEFB  V Q L BLDR  PGM
 DFHPPT TYPE=ENTRY,PROGRAM=IESVFEFD  V DEFINE    PGM
 DFHPPT TYPE=ENTRY,PROGRAM=IESVFEFP  V PROCESSOR PGM
 DFHPPT TYPE=ENTRY,PROGRAM=IESVFELD  VSAM STUFF
 DFHPPT TYPE=ENTRY,PROGRAM=IESVFER   VSAM RECVRY PGM
 DFHPPT TYPE=ENTRY,PROGRAM=IESVTOCF  LVTOC       PGM
 DFHPPT TYPE=ENTRY,PROGRAM=IESVTOCR  LVTOC RCVRY PGM
 DFHPPT TYPE=ENTRY,PROGRAM=IESXAPM   APPLICATION PROFILE MAINT
 DFHPPT TYPE=ENTRY,PROGRAM=IESXDA    DISPLAY ACTIVE PARTITIONS
 DFHPPT TYPE=ENTRY,PROGRAM=IESXPWD   PASSWORD CHANGE
 DFHPPT TYPE=ENTRY,PROGRAM=IESXSIO   DISPLAY SIO STATS
 DFHPPT TYPE=ENTRY,PROGRAM=IESXSPM   SELECTION PANEL MAINTENANCE
 DFHPPT TYPE=ENTRY,PROGRAM=IESXUPM   USER PROFILE MAINTENANCE
*-------------------------------------------------------------------*
*                 END OF VSE/SP PPT MEMBER                          *
*-------------------------------------------------------------------*
```

Figure 51 (Part 2 of 2). First VSE Library Member of PPT (VSE/SP Related)

```
*-------------------------------------------------------------------*
*                                                                   *
*       FOLLOWING ARE THE PPT ENTRIES REQUIRED FOR VSE/SP           *
*       NOTE THAT THIS IS NOT A COMPLETE LIST -- THE REMAINDER ARE  *
*       COPIED IN MEMBER 'IESZPPT'                                  *
*                                                                   *
*-------------------------------------------------------------------*

*-------------------------------------------------------------------*
 DFHPPT TYPE=ENTRY,MAPSET=IESEADA  MAP SET -- XSPM AND XAPM
 DFHPPT TYPE=ENTRY,MAPSET=IESEADM  MAP SET -- IESFPIP, IESNEWS
 DFHPPT TYPE=ENTRY,MAPSET=IESEADS  MAP SET -- XSPM AND XAPM
 DFHPPT TYPE=ENTRY,MAPSET=IESEBQU  MAP SET -- BATCH QUEUE PROCESSORS
 DFHPPT TYPE=ENTRY,MAPSET=IESEDA   MAP SET -- DISPLAY ACTIVE
 DFHPPT TYPE=ENTRY,MAPSET=IESEDUM  MAP SET -- DISPLAY USERS
 DFHPPT TYPE=ENTRY,MAPSET=IESEFRS  MAP SET -- VSAM VOLUME FREE SPACE
 DFHPPT TYPE=ENTRY,MAPSET=IESEIMG  MAP SET -- ICCF MESSAGE DISPLAY
 DFHPPT TYPE=ENTRY,MAPSET=IESELIB  MAP SET -- LIBRARY PROCESSORS
 DFHPPT TYPE=ENTRY,MAPSET=IESELOGO USER TAILORABLE LOGO MODULE
 DFHPPT TYPE=ENTRY,MAPSET=IESELQM  MAP SET -- DISPLAY LOQ QUEUE MSGS
 DFHPPT TYPE=ENTRY,MAPSET=IESELVT  MAP SET -- LVTOC
 DFHPPT TYPE=ENTRY,MAPSET=IESEOPM  MAP SET -- ONLINE PROBLEM DETERM
 DFHPPT TYPE=ENTRY,MAPSET=IESEPWD  MAP SET -- PASSWORD CHANGE
 DFHPPT TYPE=ENTRY,MAPSET=IESESER  MAP SET -- DELIVERY OF HELP TEXT
 DFHPPT TYPE=ENTRY,MAPSET=IESESIO  MAP SET -- XSIO
 DFHPPT TYPE=ENTRY,MAPSET=IESESOP  MAP SET -- SIGN ON
 DFHPPT TYPE=ENTRY,MAPSET=IESETUT  MAP SET -- TUTORIAL
 DFHPPT TYPE=ENTRY,MAPSET=IESEUPM  MAP SET -- USER PROFILE MAINT
 DFHPPT TYPE=ENTRY,MAPSET=IESEVCF  MAP SET -- VSAM CATALOG & FILE
 DFHPPT TYPE=ENTRY,MAPSET=IESEVCT  MAP SET -- VSAM CATALOG
 DFHPPT TYPE=ENTRY,MAPSET=IESEVFC  MAP SET -- VSAM CATALOG LIST
 DFHPPT TYPE=ENTRY,MAPSET=IESEVFD  MAP SET -- VSAM DEFINE
 DFHPPT TYPE=ENTRY,MAPSET=IESEVFE  MAP SET -- VSAM MENU
 DFHPPT TYPE=ENTRY,MAPSET=IESEVFP  MAP SET -- VSAM PROCES
 DFHPPT TYPE=ENTRY,MAPSET=IESEVFT  MAP SET -- VSAM PROCES
 DFHPPT TYPE=ENTRY,MAPSET=IESEVFY  MAP SET -- VSAM PROCES
 DFHPPT TYPE=ENTRY,PROGRAM=IESMRE  EMERGENCY MESSAGES FOR IESMRTP
*-------------------------------------------------------------------*
*                  END OF VSE/SP PPTL MEMBER                        *
*-------------------------------------------------------------------*
```

Figure 52. Second VSE Library Member of PPT (VSE/SP Related)

```
*-------------------------------------------------------------------*
*                                                                   *
*       FOLLOWING ARE THE PPT ENTRIES REQUIRED FOR                  *
*          INTELLIGENT WORK STATION.                                *
*       NOTE THAT THIS IS NOT A COMPLETE LIST -- THE REMAINDER ARE  *
*       COPIED IN MEMBER 'IESWPPTL'.                                *
*                                                                   *
*-------------------------------------------------------------------*

*-------------------------------------------------------------------*
 DFHPPT TYPE=ENTRY,PROGRAM=INWERASE
 DFHPPT TYPE=ENTRY,PROGRAM=INWFMGR
 DFHPPT TYPE=ENTRY,PROGRAM=INWMCHNG
 DFHPPT TYPE=ENTRY,PROGRAM=INWMCOPY
 DFHPPT TYPE=ENTRY,PROGRAM=INWMPRIN
 DFHPPT TYPE=ENTRY,PROGRAM=INWMRXA1
 DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS1
 DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS2
 DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS3
 DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS4
 DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS5
 DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS6
 DFHPPT TYPE=ENTRY,PROGRAM=INWMSHAR
 DFHPPT TYPE=ENTRY,PROGRAM=INWMTSQU
 DFHPPT TYPE=ENTRY,PROGRAM=INWPCCOM
 DFHPPT TYPE=ENTRY,PROGRAM=INWTUID
*-------------------------------------------------------------------*
*            END OF INTELLIGENT WORK STATION PPT MEMBER              *
*-------------------------------------------------------------------*
```

Figure 53. First VSE Library Member of PPT (IWS Related)

```
*-------------------------------------------------------------------*
*                                                                   *
*       FOLLOWING ARE THE PPT ENTRIES REQUIRED FOR                  *
*          INTELLIGENT WORK STATION.                                *
*       NOTE THAT THIS IS NOT A COMPLETE LIST -- THE REMAINDER ARE  *
*       COPIED IN MEMBER 'IESWPPT'.                                 *
*                                                                   *
*-------------------------------------------------------------------*

 DFHPPT TYPE=ENTRY,MAPSET=INWEXM1  MAP SET -- INTELLIGENT WORK STATION

*-------------------------------------------------------------------*
*          END OF INTELLIGENT WORK STATION PPTL MEMBER               *
*-------------------------------------------------------------------*
```

Figure 54. Second VSE Library Member of PPT (IWS Related)

File Control Tables

FCT for the Main CICS/DOS/VS Partition

```
         TITLE 'DFHFCTSP -- SUPPLIED WITH VSE/SP'
         DFHFCT TYPE=INITIAL,SUFFIX=SP

*--------------------------------------------------------------------*
*     IF YOU WANT TO REMOVE THE DATASET WHICH SUPPORTS RESOURCE       *
*     DEFINITION ONLINE (RDO), THEN PLACE AN * IN COLUMN 1 OF THE    *
*     LINE FOLLOWING THIS BOX.                                       *
*--------------------------------------------------------------------*
         COPY  DFHXFCT       - ENTRY FOR RDO CSD DATASET

         COPY  IESZFCTP  - DATASET ENTRIES FOR VSE/SP -- ADMINISTRATIVE

*--------------------------------------------------------------------*
*     IF YOU WANT TO ADD THE DATASET WHICH IS REQUIRED FOR            *
*     INTELLIGENT WORK STATION SUPPORT, THEN REMOVE THE * IN          *
*     COLUMN 1 OF THE LINE FOLLOWING THIS BOX.                       *
*--------------------------------------------------------------------*
*        COPY  IESWFCT       - ENTRY FOR INTELLIGENT WORK STATION

*--------------------------------------------------------------------*
*          LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX             *
*--------------------------------------------------------------------*

*--------------------------------------------------------------------*
*          LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX             *
*--------------------------------------------------------------------*

         DFHFCT TYPE=FINAL
         END   DFHFCTBA
```

Figure 55. ICCF Library Member of FCT for Main CICS/DOS/VS Partition

```
*-------------------------------------------------------------------*
*                                                                   *
*       FOLLOWING ARE THE FCT ENTRIES REQUIRED FOR VSE/SP           *
*                                                                   *
*     THIS COPY BOOK IS FOR USE IN THE ADMINISTRATIVE PARTITION     *
*                                                                   *
*-------------------------------------------------------------------*

*-------------------------------------------------------------------*
*            ONLINE PROBLEM DETERMINATION INCIDENT FILE              *
*-------------------------------------------------------------------*
IESPRB   DFHFCT TYPE=DATASET,DATASET=IESPRB,
               ACCMETH=(VSAM,KSDS),
               SERVREQ=(GET,UPDATE,NEWREC),   READ/WRITE ACCESS
               RECFORM=(VARIABLE,UNBLOCKED),
               FILSTAT=(ENABLED,OPENED),
               BUFNI=2,
               BUFND=3,
               STRNO=2,
               LOG=NO

*-------------------------------------------------------------------*
*            MESSAGE FILE FOR VSE/SP CICS PROGRAMS                  *
*-------------------------------------------------------------------*
IESTRFL  DFHFCT TYPE=DATASET,DATASET=IESTRFL,
               ACCMETH=(VSAM,KSDS),
               SERVREQ=(NEWREC,DELETE,UPDATE),    READ/WRITE ACCESS
               RECFORM=(VARIABLE,UNBLOCKED),
               FILSTAT=(ENABLED,OPENED),
               BUFNI=2,
               BUFND=3,
               STRNO=2,
               LOG=NO

*-------------------------------------------------------------------*
*            CONTROL FILE FOR VSE/SP SYSTEM RECORDS                 *
*-------------------------------------------------------------------*
IESCNTL  DFHFCT TYPE=DATASET,DATASET=IESCNTL,
               ACCMETH=(VSAM,KSDS),
               SERVREQ=(NEWREC,DELETE,UPDATE,BROWSE), READ/WRITE ACCESS
               RECFORM=(VARIABLE,UNBLOCKED),
               FILSTAT=(ENABLED,OPENED),
               BUFNI=2,
               BUFND=3,
               STRNO=2,
               LOG=NO
*-------------------------------------------------------------------*
*                 END OF VSE/SP FCT ENTRIES                         *
*-------------------------------------------------------------------*
```

Figure 56. VSE Library Member of FCT for Main CICS/DOS/VS Partition

FCT for Other CICS/DOS/VS Partitions

```
         TITLE 'DFHFCTSO -- SUPPLIED WITH VSE/SP'
         DFHFCT TYPE=INITIAL,SUFFIX=SO

*--------------------------------------------------------------------*
*     IF YOU WANT TO REMOVE THE DATASET WHICH SUPPORTS RESOURCE       *
*     DEFINITION ONLINE (RDO), THEN PLACE AN * IN COLUMN 1 OF THE    *
*     LINE FOLLOWING THIS BOX.                                       *
*--------------------------------------------------------------------*
         COPY  DFHXFCT       - ENTRY FOR RDO CSD DATASET

         COPY IESZFCTO -- DATASET ENTRIES FOR VSE/SP -- OTHER PARTITION

*--------------------------------------------------------------------*
*     IF YOU WANT TO ADD THE DATASET WHICH IS REQUIRED FOR            *
*     INTELLIGENT WORK STATION SUPPORT, THEN REMOVE THE * IN          *
*     COLUMN 1 OF THE LINE FOLLOWING THIS BOX.                       *
*--------------------------------------------------------------------*
*        COPY  IESWFCT       - ENTRY FOR INTELLIGENT WORK STATION

*--------------------------------------------------------------------*
*          LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX             *
*--------------------------------------------------------------------*

*--------------------------------------------------------------------*
*          LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX             *
*--------------------------------------------------------------------*

         DFHFCT TYPE=FINAL
         END   DFHFCTBA
```

Figure 57. ICCF Library Member of FCT for Secondary CICS/DOS/VS Partition

```
*-------------------------------------------------------------------*
*                                                                   *
*       FOLLOWING ARE THE FCT ENTRIES REQUIRED FOR VSE/SP           *
*                                                                   *
*   THIS COPY BOOK IS FOR USE IN OTHER PARTITIONS THAN THE ONE      *
*   CONTAINING THE ADMINSTRATIVE COMPONENTS OF VSE/SP AND ICCF.     *
*                                                                   *
*-------------------------------------------------------------------*

*-------------------------------------------------------------------*
*            ONLINE PROBLEM DETERMINATION INCIDENT FILE              *
*-------------------------------------------------------------------*
IESPRB   DFHFCT TYPE=DATASET,DATASET=IESPRB,
               ACCMETH=(VSAM,KSDS),
               SERVREQ=(GET,UPDATE,NEWREC),   READ/WRITE ACCESS
               RECFORM=(VARIABLE,UNBLOCKED),
               FILSTAT=(ENABLED,OPENED),
               BUFNI=2,
               BUFND=3,
               STRNO=2,
               LOG=NO

*-------------------------------------------------------------------*
*            MESSAGE FILE FOR VSE/SP CICS PROGRAMS                  *
*-------------------------------------------------------------------*
IESTRFL  DFHFCT TYPE=DATASET,DATASET=IESTRFL,
               ACCMETH=(VSAM,KSDS),
               SERVREQ=(GET),              READ ONLY ACCESS
               RECFORM=(VARIABLE,UNBLOCKED),
               FILSTAT=(ENABLED,OPENED),
               BUFNI=2,
               BUFND=3,
               STRNO=2,
               LOG=NO

*-------------------------------------------------------------------*
*            CONTROL FILE FOR VSE/SP SYSTEM RECORDS                 *
*-------------------------------------------------------------------*
IESCNTL  DFHFCT TYPE=DATASET,DATASET=IESCNTL,
               ACCMETH=(VSAM,KSDS),
               SERVREQ=(GET,BROWSE),       READ ONLY ACCESS
               RECFORM=(VARIABLE,UNBLOCKED),
               FILSTAT=(ENABLED,OPENED),
               BUFNI=2,
               BUFND=3,
               STRNO=2,
               LOG=NO
*-------------------------------------------------------------------*
*                 END OF VSE/SP FCT ENTRIES                         *
*-------------------------------------------------------------------*
```

Figure 58. VSE Library Member of FCT for Secondary CICS/DOS/VS Partition

IWS Related VSE Library Member for Main and Additional CICS/DOS/VS

```
*-------------------------------------------------------------------*
*                                                                   *
*          FOLLOWING IS THE FCT ENTRY REQUIRED FOR THE              *
*                                                                   *
*          INTELLIGENT WORK STATION HOST TRANSFER FILE              *
*                                                                   *
*-------------------------------------------------------------------*
INWFILE  DFHFCT TYPE=DATASET,DATASET=INWFILE,
               ACCMETH=(VSAM,KSDS,KEY),
               SERVREQ=(GET,PUT,UPDATE,NEWREC,BROWSE,DELETE),
               FILSTAT=(ENABLED,OPENED),
               BUFND=11,
               BUFNI=13,
               STRNO=10,
               LOG=NO
```

Figure 59. VSE Library Member of FCT For Main and Additional CICS/DOS/VS (IWS Related)

Program List Tables

The Program List Tables (PLTs) are lists of programs which are needed for the post-initialization of a CICS/DOS/VS partition and for the shutdown of a CICS/DOS/VS partition.

PLT for CICS/DOS/VS Partition Initialization

```
         DFHPLT TYPE=INITIAL,SUFFIX=PI

*-------------------------------------------------------------------*
*                                                                   *
*            VSE/SP ENTRIES FOR PLTPI FOLLOW HERE                   *
*                                                                   *
*-------------------------------------------------------------------*
         COPY  IESZPLTI            COPY VSE/SP ENTRIES
*-------------------------------------------------------------------*
*           LOCAL ENTRIES SHOULD BE MADE AFTER THIS POINT           *
*-------------------------------------------------------------------*

         DFHPLT TYPE=FINAL
         END
```

Figure 60. ICCF Member of PLT for CICS/DOS/VS Partition Initialization

```
*-------------------------------------------------------------------*
*                                                                   *
*       FOLLOWING ARE THE PLTPI ENTRIES REQUIRED FOR VSE/SP         *
*                                                                   *
*-------------------------------------------------------------------*
         DFHPLT TYPE=ENTRY,PROGRAM=IESCICIN
*-------------------------------------------------------------------*
*                  END OF VSE/SP PLTPI ENTRIES                      *
*-------------------------------------------------------------------*
```

Figure 61. VSE Library Member of PLT for CICS/DOS/VS Partition Initialization

PLT for CICS/DOS/VS Partition Shutdown

```
         DFHPLT TYPE=INITIAL,SUFFIX=SD

*-------------------------------------------------------------------*
*                                                                   *
*            VSE/SP ENTRIES FOR PLTSD FOLLOW HERE                   *
*                                                                   *
*-------------------------------------------------------------------*
         COPY  IESZPLTS            COPY VSE/SP ENTRIES
*-------------------------------------------------------------------*
*           LOCAL ENTRIES SHOULD BE MADE AFTER THIS POINT           *
*-------------------------------------------------------------------*
         DFHPLT TYPE=ENTRY,PROGRAM=DFHDELIM
         DFHPLT TYPE=FINAL
         END
```

Figure 62. ICCF Library Member of PLT for CICS/DOS/VS Partition Shutdown

```
*-------------------------------------------------------------------*
*                                                                   *
*       FOLLOWING ARE THE PLTSD ENTRIES REQUIRED FOR VSE/SP         *
*                                                                   *
*-------------------------------------------------------------------*
         DFHPLT TYPE=ENTRY,PROGRAM=IESCICSD  FOR VSE/SP SHUTDOWN
         DFHPLT TYPE=ENTRY,PROGRAM=DTSICCF  FOR ICCF LONG-RUNNING TASKS
*-------------------------------------------------------------------*
*                 END OF VSE/SP PLTSD ENTRIES                       *
*-------------------------------------------------------------------*
```

Figure 63. VSE Library Member of PLT for CICS/DOS/VS Partition Shutdown

Destination Control Table

```
         TITLE 'DFHDCTSP -- SUPPLIED WITH VSE/SP'
         DFHDCT TYPE=INITIAL,SUFFIX=SP
         EJECT
*------------------------------------------------------------------------*
*                                                                        *
*                                                                        *
*    IN SUPPORT OF THE MESSAGE LOG DISPLAY FUNCTION OF VSE/SP,           *
*    THE FOLLOWING ARRANGEMENT HAS BEEN MADE FOR THE MESSAGE             *
*    LOG ENTRIES USED BY CICS AND VSE/SP TRANSACTIONS -----              *
*                                                                        *
*    1)  THE CICS-SUPPLIED MEMBER 'DFHXDCT', USED TO PROVIDE             *
*      THOSE DESTINATIONS USED BY CICS, IS NOT USED.                     *
*    2)  THE DESTINATIONS REQUIRED BY CICS ARE DEFINED IN                *
*      'IESZDCT', SUPPLIED BY VSE/SP.                                    *
*    3)  THE DESTINATIONS USED BY CICS AND VSE/SP ARE NOW MADE           *
*      INDIRECT AND ROUTED THROUGH DESTINATION 'IESL'.                   *
*    4)  DESTINATION 'IESL' INITIATES TRANSACTION 'IESX', PROGRAM        *
*      'IESLQBP', WHICH MAKES A COPY OF THE MESSAGE FOR THE LOG          *
*      QUEUE DISPLAY FUNCTION, PROGRAM 'IESLQDP', AND REQUEUES           *
*      THE MESSAGE INTO 'IESM'.                                          *
*    5) DESTINATION 'IESM' IS AN INDIRECT DESTINATION TO 'IESN'.         *
*    6) DESTINATION 'IESN' IS DEFINED OUTSIDE OF 'IESZDCT' FOR           *
*      THE EXPRESS PURPOSE THAT IF THE USER WISHES TO CHANGE THE         *
*      FINAL DESTINATION OF THESE MESSAGES, DESTINATION 'IESN'           *
*      CAN BE CHANGED IN 'DFHDCTSP' AND THERE IS NO NEED FOR             *
*      THE USER TO ALTER 'IESZDCT'.                                      *
*                                                                        *
*                                                                        *
*------------------------------------------------------------------------*
```

Figure 64 (Part 1 of 2). ICCF Library Member of DCT

```
*-------------------------------------------------------------------*
*         THE CICS-SUPPLIED SDSCI ENTRY FOLLOWS THIS BOX            *
*-------------------------------------------------------------------*
         COPY  DFHXDCT1      - SDSCI ENTRY
*-------------------------------------------------------------------*
*    THE SDSCI ENTRY FOR INTELLIGENT WORK STATION FOLLOWS THIS BOX.  *
*-------------------------------------------------------------------*
         COPY  IESWDCTC      - SDSCI ENTRY FOR INTELLIGENT WORK STATION
*-------------------------------------------------------------------*
*    LOCAL ENTRIES FOR TYPE=SDSCI SHOULD BE PLACED BELOW THIS BOX    *
*-------------------------------------------------------------------*

*-------------------------------------------------------------------*
*    LOCAL ENTRIES FOR TYPE=SDSCI SHOULD BE PLACED ABOVE THIS BOX    *
*-------------------------------------------------------------------*
IESN     DFHDCT TYPE=EXTRA,         ALL THE MESSAGES COME THROUGH HERE
               DESTID=IESN,         'IESM' POINTS TO HERE
               DSCNAME=MSGUSR       POINT TO THE CICS-SUPPLIED DEST
         COPY  IESZDCT       - CICS-REQUIRED AND VSE-SP REQUIRED DESTS
         COPY  IESWDCT       - INTELLIGENT WORK STATION ENTRIES
         COPY  DFHXDCTI      - ICCF ENTRIES
*-------------------------------------------------------------------*
*         OTHER LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX       *
*-------------------------------------------------------------------*

*-------------------------------------------------------------------*
*         OTHER LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX       *
*-------------------------------------------------------------------*
         DFHDCT TYPE=FINAL
         END   DFHDCTBA
```

Figure 64 (Part 2 of 2). ICCF Library Member of DCT

```
*-------------------------------------------------------------------*
*                                                                   *
*       FOLLOWING ARE THE DCT ENTRIES REQUIRED FOR VSE/SP           *
*                                                                   *
*-------------------------------------------------------------------*
IESL    DFHDCT TYPE=INTRA,       VSE/SP TRANSACTIONS LOG MESSAGES HERE*
               DESTID=IESL,        THE NAME OF THE LOG IS 'IESL'
               DESTFAC=FILE,       IT DOES NOT REQUIRE A TERMINAL
               TRANSID=IESX,       INITIATE TRANSACTION 'IESX'
               TRIGLEV=1           EACH TIME THERE'S A MESSAGE
IESM    DFHDCT TYPE=INDIRECT,      OUTPUT FROM PROGRAM 'IESLQBP'
               DESTID=IESM,        DEFINE THE DESTINATION ID
               INDDEST=IESN        SEND IT TO THE VSE/SP OUTPUT QUEUE

*-------------------------------------------------------------------*
*    THE FOLLOWING ENTRIES REPLACE THE ENTRIES DEFINED IN 'DFHXDCT'   *
*-------------------------------------------------------------------*
CPLI    DFHDCT TYPE=INDIRECT,      PL/I SYSPRT OUTPUT
               DESTID=CPLI,        DEFINE THE DESTINATION ID
               INDDEST=IESL        SEND IT THROUGH THE VSE/SP QUEUE
CSSL    DFHDCT TYPE=INDIRECT,      STATISTICS LOG OUTPUT
               DESTID=CSSL,        DEFINE THE DESTINATION ID
               INDDEST=IESM  -->   BYPASS PROGRAM 'IESLQBP'
CPLD    DFHDCT TYPE=INDIRECT,      PL/I DUMPS
               DESTID=CPLD,        DEFINE THE DESTINATION ID
               INDDEST=IESL        SEND IT THROUGH THE VSE/SP QUEUE
CSCS    DFHDCT TYPE=INDIRECT,      MESSAGES FROM SIGN OFF PROGRAM
               DESTID=CSCS,        DEFINE THE DESTINATION ID
               INDDEST=IESL        SEND IT THROUGH THE VSE/SP QUEUE
CSDL    DFHDCT TYPE=INDIRECT,      CEDA COMMAND LOGGING COMES HERE
               DESTID=CSDL,        DEFINE THE DESTINATION ID
               INDDEST=IESL        SEND IT THROUGH THE VSE/SP QUEUE
CSML    DFHDCT TYPE=INDIRECT,      MESSAGES FROM SIGN ON PROGRAM
               DESTID=CSML,        DEFINE THE DESTINATION ID
               INDDEST=IESL        SEND IT THROUGH THE VSE/SP QUEUE
CSMT    DFHDCT TYPE=INDIRECT,      TERMINAL AND TRANSACTION ERRORS
               DESTID=CSMT,        DEFINE THE DESTINATION ID
               INDDEST=IESL        SEND IT THROUGH THE VSE/SP QUEUE
CSTL    DFHDCT TYPE=INDIRECT,      TERMINAL ERROR LOG
               DESTID=CSTL,        DEFINE THE DESTINATION ID
               INDDEST=IESL        SEND IT THROUGH THE VSE/SP QUEUE
*-------------------------------------------------------------------*
*    THE PREVIOUS ENTRIES REPLACE THE ENTRIES DEFINED IN 'DFHXDCT'    *
*-------------------------------------------------------------------*

*-------------------------------------------------------------------*
*                  END OF VSE/SP DCT ENTRIES                        *
*-------------------------------------------------------------------*
```

Figure 65. VSE Library Member of DCT

```
*-------------------------------------------------------------------*
*                                                                   *
*            FOLLOWING ARE THE DCT ENTRIES REQUIRED FOR             *
*                                                                   *
*                INTELLIGENT WORK STATION                           *
*                                                                   *
*-------------------------------------------------------------------*
         DFHDCT TYPE=EXTRA,
                DESTID=INWP,
                DSCNAME=INWPRI
*-------------------------------------------------------------------*
*            END OF INTELLIGENT WORK STATION DCT ENTRIES             *
*-------------------------------------------------------------------*
```

Figure 66. First VSE Library Member of DCT (IWS Related)

```
*-------------------------------------------------------------------*
*                                                                   *
*         FOLLOWING ARE THE SDSCI DCT ENTRIES REQUIRED FOR          *
*                                                                   *
*                INTELLIGENT WORK STATION                           *
*                                                                   *
*-------------------------------------------------------------------*
         DFHDCT TYPE=SDSCI,
                DEVICE=1403,
                DEVADDR=SYS015,
                RECFORM=VARUNB,
                DSCNAME=INWPRI,
                BLKSIZE=133,
                TYPEFLE=OUTPUT
*-------------------------------------------------------------------*
*         END OF INTELLIGENT WORK STATION SDSCI DCT ENTRIES          *
*-------------------------------------------------------------------*
```

Figure 67. Second VSE Library Member of DCT (IWS Related)

Transaction List Table

```
         TITLE 'DFHXLTSP -- SUPPLIED WITH VSE/SP'
         DFHXLT TYPE=INITIAL,SUFFIX=SP

*-------------------------------------------------------------------*
*                  NORMALLY USEFUL ENTRIES FOLLOW THIS BOX          *
*-------------------------------------------------------------------*
         DFHXLT TYPE=ENTRY,TRANSID=(CEMT,  MASTER TERMINAL TRANSACTION
               CSMT,           AND OLD MASTER TERMINAL
               CSSN,           YOU MIGHT NEED SIGNON TO USE THEM
               CSNE,           IN CASE YOU HAVE ERRORS WITH VTAM
               CSTE)           IN CASE YOU HAVE ERRORS WITH NON-VTAM
*-------------------------------------------------------------------*
*                 NORMALLY USEFUL ENTRIES PRECEED THIS BOX          *
*-------------------------------------------------------------------*

         COPY  IESZXLT       - VSE/SP FACILITIES
*-------------------------------------------------------------------*
*        OTHER LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX        *
*-------------------------------------------------------------------*

*-------------------------------------------------------------------*
*        OTHER LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX        *
*-------------------------------------------------------------------*
         DFHXLT TYPE=FINAL
         END   DFHXLTBA
```

Figure 68. ICCF Library Member of XLT

```
*-------------------------------------------------------------------*
*                                                                   *
*       FOLLOWING ARE THE XLT ENTRIES REQUIRED FOR VSE/SP           *
*                                                                   *
*-------------------------------------------------------------------*
        DFHXLT TYPE=ENTRY,TRANSID=(CSGM,  VSE/SP SIGNON TRANSACTION
               IES6,              SIGN ON COMPLETION
               IESI,              FUNCTION SELECTION
               HELP,              BACK TO FUNCTION SELECTION
               IE$1,              ICCF COMMAND COMPLETION
               IE$2,              ICCF LOGOFF  COMPLETION
               I$$P,              ICCF INVOCATION
               I$$4)              ICCF CANCEL USER
*-------------------------------------------------------------------*
*                 END OF VSE/SP XLT ENTRIES                         *
*-------------------------------------------------------------------*
```

Figure 69. VSE Library Member of XLT

System Initialization Table

```
TITLE 'DFHSITSP  --  SUPPLIED BY VSE/SP'
DFHSIT TYPE=CSECT,
       AKPFREQ=0,                  NO ACTIVITY KEYPOINTING
       ALT=NO,                     NO APPLICATION LOAD TABLE
       AMXT=10,                    MAX ACTIVE TASKS
       ATP=NO,                     NO ASYNCH TRANS PROCESSING
       BFP=1$,                     BUILTIN FUNCTION, BASIC + WTRET
       BMS=S$,                     FULL BASIC MAPPING SUPPORT
       CMP=NO,                     NO MONITORING PROGRAM
       CMXT=(10,10,10,10,10,10,10,10,10,10), 10 TASKS/ TRANS CL
       CSA=YES,                    STANDARD CSA
       DATFORM=MMDDYY,             EXTERNAL DATE DISPLAY
       DBP=NO,                     DYNAMIC BACKOUT
       DBUFSZ=700,                 DYNAMIC BACKOUT BUFFER SIZE
       DCP=D$,                     DUMP TO DISK
       DCT=SP,                     SUPPLIED WITH VSE/SP
       DIP=NO,                     NO BATCH DATA INTERCHANGE
       DLI=NO,                     NO DL/I SUPPORT
       EXEC=YES,                   EXEC LEVEL SUPPORT
       EXITS=NO,                   NO USER EXIT INTERFACE
       EXTSEC=NO,                  NO RACF SUPPORT
       FCP=S$,                     FULL SUPPORT IN FILE CONTROL
       FCT=SP,                     SUPPLIED WITH VSE/SP
       FDP=(,FORMAT),              FORMATTED DUMP PROGRAM
       FERS=NO,                    FE TERMINAL ERROR TOOL
       ICP=YES,                    INTERVAL CONTROL PGM
       ICV=1000,                   INTERVAL CONTROL EXIT TIME-MS
       ICVR=20000,                 RUNAWAY TASK TIME
       ICVS=20000,                 DELAY BEFORE STALL PURGE
       ICVSWT=40,                  'SHORT WAIT' INTERVAL
       ICVTSD=250,                 TERMINAL SCAN DELAY
       IRCSTRT=NO,                 NO INTERREGION COMMUNICATION
       ISC=NO,                     NO INTERSYSTEM COMMUNICATION
       JCP=1$,                     DYNAMIC LOG IN MAIN STORAGE
       JCT=NO,                     NO JOURNALLING
       KCP=YES,                    TASK CTRL PGM
       KPP=NO,                     NO KEY POINT PROGRAM
```

Figure 70 (Part 1 of 2). ICCF Library Member of SIT

```
         MCT=NO,                  NO MONITOR CONTROL TABLE
         MSGLVL=2,                START-UP MSGS ON SYSLOG/SYSLST
         MXT=999,                 MAX NO. OF ALL CONCURRENT TASKS
         NLT=NO,                  DEFAULT LOAD ORDER FOR NUCLEUS
         PCP=3$,                  PL/I, ASSEMBLER AND COBOL
         PCT=SP,                  SUPPLIED WITH VSE/SP
         PGCHAIN=X/,              BMS CHAINING COMMAND
         PGCOPY=C/,               BMS COPY COMMAND
         PGPURGE=T/,              BMS PURGE COMMAND
         PGRET=P/,                BMS RETRIEVAL COMMAND
         PGSIZE=2048,             SIZE OF VIRTUAL PAGING AREA
         PLTPI=PI,                POST-INITIALIZATION PLT
         PLTSD=SD,                SHUTDOWN PLT
         PL1=NO,                  NO PL/1 SUPPORT
         PPT=SP,                  SUPPLIED WITH VSE/SP
         PRINT=PA1,               PRINT WITH PA1 AND TCP PRINT
         PRGDLAY=100,             ONE HOUR PURGE DELAY
         SCP=YES,                 STANDARD STORAGE CONTROL
         SCS=12288,               STORAGE CUSHION-MIN OF 4 PAGES
         SRP=1$,                  SYSTEM RECOVERY PGM
         SRT=1$,                  DEFAULT SRT
         START=COLD,              REFRESH EVERYTHING
         SUFFIX=SP,               SUPPLIED WITH VSE/SP
         SVD=YES,                 STORAGE VIOLATION DUMP&RECOVERY
         TBP=NO,                  NO TRANSACTION BACKOUT
         TCP=S$,                  TERMINAL CONTROL PROGRAM
         TCT=SP,                  BUILT AFTER CONFIGURATION
         TDP=7$,                  MAXI TRANSIENT DATA
         TRP=(D$,ON),             AUX TRACE ON DISK + MAIN
         TRT=800,                 TRACE TABLE
         TSMGSET=4,               4 MESSAGE SET ENTRIES
         TSP=3$,                  AUX WITH RECOVERY
         TST=NO,                  NO TEMP STORAGE TABLE INCLUDED
         WRKAREA=512,             COMMON WORK AREA OF THE CSA
         XLT=SP,                  SUPPLIED WITH VSE/SP
         XSP=YES,                 ENABLE TRANSACTION SECURITY
         XTP=NO,                  NO ISC TRANSFORMER
         ZCP=S$,                  ALL ACCESS METHODS
         DUMMY=DUMMY              TO END MACRO
END      DFHSITBA
```

Figure 70 (Part 2 of 2). ICCF Library Member of SIT

Program Error Program (DFHPEP)

```
PEP      TITLE 'CUSTOMER INFORMATION CONTROL SYSTEM   P R O G R A M  E
               R R O R  P R O G R A M'
         PUNCH ' PHASE   DFHPEP,S'
DFHPEP   CSECT
*****************************************************************
*                                                               *
* MODULE NAME = DFHPEP                                          *
*                                                               *
* DESCRIPTIVE NAME = C.I.C.S./VS PROGRAM ERROR PROGRAM          *
*                                                               *
* COPYRIGHT = 5740-XX1 COPYRIGHT IBM CORP. 1975, 1980           *
*          AND 5746-XX3 COPYRIGHT IBM CORP. 1975, 1980          *
*              LICENSED MATERIAL - PROGRAM PROPERTY OF IBM       *
*              REFER TO COPYRIGHT INSTRUCTIONS FORM NO. G120-2083*
*                                                               *
* STATUS = 1.6.0                                                *
*                                                               *
*---------------------------------------------------------------*
*       THIS MODULE IS UPDATED TO PROVIDE THE HOOK TO THE ONLINE *
*       PROBLEM DETERMINATION (OLPD) DATA COLLECTOR, IESOPDC.    *
*---------------------------------------------------------------*
*                                                               *
*****************************************************************
* * *          R E G I S T E R   D E F I N I T I O N          * * *
*****************************************************************
PCTCBAR  EQU   8                  PCT BASE REGISTER
TCASBAR  EQU   9                  TCA SYSTEM AREA REGISTER
PEPBAR   EQU   10                 PEP BASE REGISTER
         DFHEJECT
*****************************************************************
* * *          D U M M Y   S E C T I O N S                  * * *
*****************************************************************
         DFHPRINT  DSCT=START
         COPY  DFHCSADS
         DFHTCA  CICSYST=YES
*******  COPY  DFHTERID
         COPY  DFHPCTDS
         DFHEJECT
         DFHPRINT  DSCT=END
```

Figure 71 (Part 1 of 2). CICS/DOS/VS Program Error Program

```
*********************************************************************
* * * * *              P R O G R A M   E R R O R              * * * * *
* * * * *                    P R O G R A M                    * * * * *
*********************************************************************
DFHPEP   CSECT                     PROGRAM ERROR PROGRAM CSECT
         DFHVM PEP                 GENERATE HEADING CONSTANT
         ENTRY DFHPEPNA            ESTABLISH ENTRY POINT
DFHPEPNA DS    0H                  ENTRY POINT
         BALR  PEPBAR,0            ESTABLISH ADDRESSABILITY
         USING *,PEPBAR            .. AND BASE REGISTER
         L     TCASBAR,TCASYAA     LOAD TCA SYSTEM AREA ADDRESS
         USING DFHSYTCA,TCASBAR

*--------------------------------------------------------------------*
*                                                                    *
*       TRANSFER TO THE VSE/SP  ONLINE PROBLEM DETERMINATION         *
*                 DATA COLLECTION MODULE -- IESOPDC                  *
*                                                                    *
*--------------------------------------------------------------------*
         DFHPC TYPE=XCTL,PROGRAM=IESOPDC, TO OLPD DATA COLLECTION
               COND=YES            IF NOT THERE, FALL INTO RETURN
*--------------------------------------------------------------------*

         DFHPC TYPE=RETURN         ISSUE CICS RETURN MACRO
         LTORG *
DFHPEPEA DS    0H                  MODULE END ADDRESS
         END   DFHPEPNA
```

Figure 71 (Part 2 of 2). CICS/DOS/VS Program Error Program

Appendix E. Reserved Names in the System

VSE/SP uses certain prefixes for naming the following items in the system.

- VSE libraries, sublibraries, and members
- VSE/ICCF
  - Library members
  - Files (in DLBL statements)
- CICS/DOS/VS
  - Programs
  - Maps and map sets
  - Transaction IDs
  - T/S queue IDs
  - Transient data queues
  - Files
- Selection panels
- Application profiles
- Message prefixes

When you name any of these items for your own use, you should not use the reserved prefixes shown in this appendix. There cannot be duplicate names for these.

The prefixes described below are reserved for VSE/SP. You **should not** use these prefixes.

Note: This list only includes reserved names which VSE/SP functions use.

```
I$
IE
INW
INF
DTR
DTS
VSE
```

In addition, all names with $ in the second or fourth position are reserved:

```
X$X$XXX
```

CICS/DOS/VS uses the following transaction IDs:

```
HELP
OLPD
PF1
PF3
USER
ICCF
```

The CMS EXEC 'SUBVSE' is also a reserved system name.

Appendix F. List of VSE/SP Skeletons

Startup Skeletons

Member Name	Library	Function
ASI0VAE	59	System startup (BG ASI procedure) for 370 mode (VAE).
ASI0	59	System startup (BG ASI procedure) for VM mode or E mode.
ASI1	59	Start up VSE/POWER partition in F1.
ASIBATCH	59	Define search chains and assignments for VSE/POWER controlled partitions.
ASIN	59	Start up VSE/POWER controlled batch partitions.
VTAMSTRT	59	Startup ACF/VTAM in partition controlled by VSE/POWER.
ASIVTPWR	59	System startup with ACF/VTAM not controlled by VSE/POWER.
ICCFCICS	59	Startup ICCF/CICS with BTAM-ES or ACF/VTAM.

Figure 72. Startup Skeletons

CICS/DOS/VS Tables Which VSE/SP Ships

Member Name	Library	Function
DFHDCTSP	59	Create a new DCT.
DFHFCTSO	59	Create a new FCT for a non-development system.
DFHFCTSP	59	Create a new FCT for the development system.
DFHPCTSP	59	Create a new PCT.
DFHPEP	59	Insert your code into the transaction abend process.
DFHPLTPI	59	Create a new PLT for partition initialization.
DFHPLTSD	59	Create a new PLT for partition shutdown.
DFHPPTSP	59	Create a new PPT.
DFHSITSP	59	Create a new SIT.
DFHXLTSP	59	Create a new XLT.

Figure 73. CICS/DOS/VS Tables

Skeletons for the IBM Personal Computer

Member Name	Library	Function
SKIWSTF	59	Create the Host Transfer File.
INWEXTA1	68	Sample exit routine for IWS Move Utilities (Assembler).
INWEXTA2	68	Sample exit routine for IWS Move Utilities (Assembler).
INWEXTC1	68	Sample exit routine for IWS Move Utilities (COBOL).
INWDAT1	68	File used by the IWS Move Utility exit routines.
INWDAT2	68	File used by the IWS Move Utility exits routines.
INWDESC1	68	Descriptor record used for Move Utility exit routines.
INWDESC2	68	Descriptor record used for Move Utility exit routines.
INWPROM	68	Set up SEND/RECEIVE commands.
INWRJE01	68	Set up the UPLOAD function.
INWRJE02	68	Redefine the down-loaded files.
INWRJE03	68	PC command procedure for UPLOAD function.
INWRJE04	68	PC command procedure for REDEFINE function.
INWRJE05	68	VSE/POWER job that is to be uploaded
INWRJE06	68	Installation description for File Transfer Support program for RJE.
INWRJE08	68	Procedure to send a member from ICCF library to a remote workstation.

Figure 74. Skeletons for the IBM Personal Computer

Skeletons for Non-VSAM Libraries

Member Name	Library	Function
SKLIBDEF	59	Define a library in non-VSAM managed space.
SKLIBDEL	59	Delete a library in non-VSAM managed space.
SKLIBEXT	59	Extend a library in non-VSAM managed space.

Figure 75. Skeletons for Non-VSAM Libraries

Skeletons for Network Definitions

Member Name	Library	Function
SKNCPCDF	59	Create ACF/NCP diagnostic file.
SKNCPCKD	59	Load 3705 from CKD device using ACF/SSP.
SKNCPCLF	59	Create NCP load module file.
SKNCPCST	59	Set up NCP configurable station.
SKNCPFBA	59	Load 3705 from FBA device using ACF/SSP.
SKNCPICA	59	Define ICA connections.
SKNCPSAL	59	Define the Subarea Link.
SKVTMCA2	59	Define an ACF/VTAM major node.
SKVTMCDR	59	Define CDRM and CDRS ACF/VTAM major nodes.
SKVTMPAT	59	Create the ACF/VTAM path table.
SKVTMUSS	59	Create the ACF/VTAM USS table.

Figure 76. Skeletons for Network Definitions

Skeletons for VSE/POWER Definitions

Member Name	Library	Function
SKPWRGEN	59	Change VSE/POWER parameters.
SKPWRBSC	59	Define POWER BSC lines and workstations.
SKPWRNDT	59	Create the VSE/POWER PNET network definition table.
SKPWRSNA	59	Define SDLC workstations.

Figure 77. Skeletons for VSE/POWER Definitions

Compile Skeletons

Member Name	Library	Function
C$$COONL	2	COBOL online program.
C$$COBAT	2	COBOL batch program.
C$$COSUB	2	COBOL batch subroutine.
C$$COMAP	2	COBOL BMS map definition.
C$$PLONL	2	PL/I online program.
C$$PLBAT	2	PL/I batch program.
C$$PLSUB	2	PL/I batch subroutine.
C$$PLMAP	2	PL/I BMS map definition.
C$$ASONL	2	Assembler online program.
C$$ASBAT	2	Assembler batch program.
C$$ASSUB	2	Assembler batch subroutine.
C$$ASMAP	2	Assembler BMS map definition.
C$$RPONL	2	RPG-II online program.
C$$RPBAT	2	RPG-II batch program.
C$$RPSUB	2	RPG-II batch subroutine.
C$$RPMAP	2	RPG-II BMS map definition.
C$$FOBAT	2	FORTRAN batch program.
C$$FOSUB	2	FORTRAN batch subroutine.

Figure 78. Compile Skeletons

Additional Skeletons

Member Name	Library	Function
SKICFFMT	59	Example of how the ICCF DTSFILE is formatted for VSE/SP.
SKICFGEN	59	Change the ICCF DTSOPTNS parameters.
STDLABUS	59	Create standard labels for your files and data sets.
IESELOGO	59	Change Interactive Interface sign-on panel.
IESBLDUP	59	User Profile Migration Utility
SKVMVSE	59	Punch VM/VSE Interface modules to VM user

Figure 79. Additional Skeletons

Appendix G. VSE/POWER and VSE/ICCF Tailoring Skeletons

The job stream SKICFGEN shows the generation parameters which VSE/SP uses for VSE/ICCF. You can use this skeleton to generate your own parameters.

```
* $$ JOB JNM=SKICFGEN,CLASS=0,DISP=D
* $$ LST CLASS=Q
// JOB ICCF GENERATION
LIBDEF PHASE,CATALOG=PRD2.CONFIG
// OPTION CATAL
   PHASE DTSIGEN,*
// EXEC ASSEMBLY
         DTSOPTNS ALTSEC=NO,          <-----  Do not change
               ATN2741=YES,
               CANKEY=PA2,
               CISIZE=2048,
               COMLIB=2,              <-----  Do not change
               CRJE=(YES,Q,A,D,A),    <-----  Do not change
               DISPKEY=PA3,                   (See Note on next page)
               EDFLAG=73,
               EDEND=72,
               HCLINE=132,
               INTCOMP=YES,
               INTRVAL=1,
               LOADPRT=YES,
               NBUFS=20,
               NRECS=22,
               NUSRS=30,
               NPARTS=5,
               NTASKS=4,
               PGMRINP=5,
               PGMRLST=6,
               PGMRPCH=7,
               PGMRPIN=8,
               PGMRLOG=9,
               PSIZE=256,
```

Figure 80 (Part 1 of 2). VSE/ICCF Tailoring Skeleton SKICFGEN

```
                PARTN=(0,2048,0,T,
                1,256,0,A,
                2,256,0,A,
                3,512,0,BA),
                4,512,0,BA),
                5,512,0,IBA),
                RDR=FFC,
                RDR2=FFA,
                PCH=FFD,
                PRT=FFE,
                SPOOL=250,
                TCUPSI=11100000,
                TIOA40=600,
                TIOA00=600,
                TCTOFS=8
          DTSIGEN
          END
/*
// EXEC LNKEDT
/&
* $$ EOJ
```

Figure 80 (Part 2 of 2). VSE/ICCF Tailoring Skeleton SKICFGEN

Note: These are the selected options:

- *POWER commands are allowed.*
- *Default print class is Q.*
- *Local printer is active for class A.*
- */ROUTEP command results in disposition D.*
- *GETR procedure default reader class is A.*

The SKPWRGEN skeleton shows the generation parameters which VSE/SP uses for VSE/POWER. It is shown in Figure 81. *VSE/SP System Use* describes the skeleton and how you can change it.

SKPWRGEN includes two other skeletons:

1. SKPWRBSC
2. SKPWRSNA

The SKPWRBSC skeleton establishes BSC connections to RJE workstations, other CPUs, or other terminals. It is shown in Figure 82 on page 207.

The SKPWRSNA skeleton contains a predefined set of SNA workstations. You do not change the SKPWRSNA skeleton. You use the remote configuration dialogs to define your workstations. SKPWRSNA is used internally by the system and should not be changed. The skeleton is not shown in this book.

VSE/SP Networking describes the SKPWRSNA skeletons and the remote configuration dialogs.

```
* $$ JOB JNM=SKPWRGEN,CLASS=0,DISP=D
* $$ LST CLASS=Q
// JOB POWER GENERATION
LIBDEF PHASE,CATALOG=PRD2.CONFIG
// OPTION CATAL
// EXEC ASSEMBLY
PWR      TITLE 'VSE/POWER - IPWPOWER  GENERATION '
*********************************************************************
         5666-273 (C) COPYRIGHT IBM CORP 1982
         LICENSED MATERIAL - PROGRAM PROPERTY OF IBM
         REFER TO COPYRIGHT INSTRUCTIONS
                  FORM NUMBER G120-2083
*********************************************************************


   V S E / P O W E R   G E N E R A T I O N   S K E L E T O N

   THE FOLLOWING GENERATION SKELETON SHOWS THE COMPLETE VSE/POWER
   GENERATION DECK WHICH HAS BEEN USED TO GENERATE THE PHASE
   IPWPOWER.

   IF ANY CHANGES ARE MADE TO THIS GENERATION DECK IT IS RECOMMENDED
   THAT ANOTHER PHASE NAME IS USED INSTEAD OF IPWPOWER BECAUSE THIS
   PHASE WILL BE SERVICED TOGETHER WITH THE VSE/POWER PRODUCT.

   --V100--     NAME OF VSE/POWER LOAD PHASE
```

Figure 81 (Part 1 of 3). VSE/POWER Generation Skeleton SKPWRGEN

```
--V100-- POWER
                ACCOUNT=YES,
                BLOCKGP=0,
                CLRPRT=YES,
                COPYSEP=YES,
                DBLK=0,
                FEED=NO,
                JLOG=YES,
                JSEP=(0,0),
                LTAB=(10,00,05,10,15,20,25,30,35,40,45,50,56),
                MRKFRM=YES,
                MULT12=NO,
                NTFYMSG=100,
                PAUSE=NO,
                PRI=3,
                RBS=(0,0),
                RDREXIT=NO,
                SHARED=NO,
                STDCARD=(0,0),
                STDLINE=(0,0),
                SPOOL=YES,
                MEMTYPE=P,
                TRACKGP=0

*************************************************************************
   INCLUDE THE MEMBER 'SKPWRBSC' AT THIS PLACE TO GET THE VSE/POWER
   RJE DEFINITIONS FOR BSC WORKSTATIONS. THE MEMBER HAS TO BE FILLED
   IN BEFORE THIS JOB CAN BE EXECUTED.

   REMOVE THE * IN FRONT OF THE /INCLUDE STATEMENT IF THE MEMBER
   HAS TO BE INCLUDED.

* /INCLUDE SKPWRBSC
```

Figure 81 (Part 2 of 3). VSE/POWER Generation Skeleton SKPWRGEN

```
************************************************************************
*
*  INCLUDE THE MEMBER 'SKPWRSNA' AT THIS PLACE TO GET THE VSE/POWER
*  RJE DEFINITIONS FOR SNA WORKSTATIONS. THE MEMBER CONTAINS A PRE-
*  DEFINED SET OF SNA WORKSTATIONS WHICH CAN BE CONFIGURED WITH THE
*  REMOTE CONFIGURATION. THIS DIALOG ALSO GENERATES THE REQUIRED
*  VTAM DEFINITIONS.
*  TO GET THE CONNECTION BETWEEN VSE/POWER AND VTAM THE VTAM APPLID
*  FOR VSE/POWER RJE HAS TO BE ADDED TO THE VTAM APPLICATION STARTUP
*  BOOK. THE SAME APPLID HAS TO BE DEFINED IN THE SNA PARAMETER OF
*  THE POWER MACRO DESCRIBED ABOVE.
*
*  REMOVE THE * IN FRONT OF THE /INCLUDE STATEMENT IF THE MEMBER
*  HAS TO BE INCLUDED.
*
************************************************************************

*/INCLUDE SKPWRSNA

         END
/*
// EXEC LNKEDT
/&
  $$ EOJ
END OF MEMBER
```

Figure 81 (Part 3 of 3). VSE/POWER Generation Skeleton SKPWRGEN

```
*  P L I N E
*             IN THE FOLLOWING DEFINITION YOU SEE ALL PARAMETERS WITH
*             THEIR DEFAULT VALUES. A VARIABLE (--V###--) INDICATES THA
*             THERE IS NO DEFAULT VALUE FOR THIS PARAMETER.
*
* --V101--    THREE DIGIT HEXADECIMAL ADDRESS OF BSC LINE. E.G. X'030'
* --V102--    EIGHT CHARACTER PASSWORD WHICH HAS TO BE SPECIFIED WHEN
*             THE REMOTE TERMINAL IS TO BE CONNECTED TO THE SYSTEM.
*             REPLACE THE --V102-- BY A PASSWORD OR DELETE THE LINE.
*
         PLINE ADDR=X'--V101--',
               CODE=EBCDIC,MODSET=AA,
               PSWRD=--V102--,
               SWITCH=NO,TIMEOUT=NO,TRNSP=YES
*
*  P R M T  ************************************************************
*
*             IN THE FOLLOWING DEFINITION YOU SEE ALL PARAMETERS WITH
*             THEIR DEFAULT VALUES. A VARIABLE (--V###--) INDICATES THA
*             THERE IS NO DEFAULT VALUE FOR THIS PARAMETER.
*
* --V201--    SPECIFIES WHERE THE LIST OUTPUT FROM JOBS SUBMITTED BY
*             THIS REMOTE-ID IS TO BE ROUTED BY DEFAULT.
* --V202--    SPECIFIES WHERE THE PUNCH OUTPUT FROM JOBS SUBMITTED BY
*             THIS REMOTE-ID IS TO BE ROUTED BY DEFAULT.
* --V203--    REMOTE IDENTIFIER, VARIES FROM 1 TO 20.
* --V204--    SPECIFIES THE TYPE OF TERMINAL, WHICH MAY BE A 2770, 2780
*             3741 OR 3780. FOR 3770 SPECIFY 2770 OR 3780 DEPENDING ON
*             THE BUFFER SIZE.
*
         PRMT  CS=NO,CSALST=0,CSAMSG=0,CSAPUN=0,HFC=NO,LIST=120,
*
               LSTROUT=--V201--,
*
               MRF=NO,MSG=120,MSGEJCT=YES,MSGSPCE=YES,PUN=80,
*
               PUNROUT=--V202--,
               REMOTE=--V203--,
*
               SCE=NO,TRNSP=NO,TURNEOJ=YES,
*
               TYPE=--V204--
```

Figure 82. VSE/POWER BSC Skeleton SKPWRBSC

Appendix H. Terminal Feature Definition Table Values

The terminal feature definition tables which VSE/SP provides are shown in Figure 83 on the following pages. The figure contains five parts. Part 5 of the figure is a blank form which you can use to fill in your own values, if you want to create your own feature table.

Table Name--->	D3178	D3277	D32782	D32783	D32784
Terminal(s)-->	3178	3277	3278-2	3278-3	3278-4
Screen Size					
Default				24x80	24x80
Alternate				32x80	43x80
Page Size					
Default					
Alternate					
Page Status	PAGE	PAGE	PAGE	PAGE	PAGE
Terminal Features					
AUDALARM	X	X	X	X	X
COLOR					
COPY					
Ext.Data Stream					
HILIGHT					
Programmed Symb.					
SELCTPEN					
TEXTKYBD					
Typewriter keyboard					
PRINT					
TRANSPARENCY					

Figure 83 (Part 1 of 5). Terminal Feature Table Values

Terminal 3278-5 does not support most task dialogs.

Table Name--->	D32785	D3279S2A	D3279S2B	D3279S3A	D3279S3B
Terminal(s)-->	3278-5	3279-S2A	3279-S2B	3279-S3A	3279-S3B
Screen Size					
Default	24x80			24x80	24x80
Alternate	27x132			32x80	32x80
Page Size					
Default					
Alternate					
Page Status	PAGE	PAGE	PAGE	PAGE	PAGE
Terminal Features					
AUDALARM	X	X	X	X	X
COLOR			X		X
COPY					
Ext.Data Stream			X		X
HILIGHT			X		X
Programmed Symb.					
SELCTPEN					
TEXTKYBD					
Typewriter keyboard					
PRINT					
TRANSPARENCY					

Figure 83 (Part 2 of 5). Terminal Feature Table Values

Table Name--->	D3279S3G	D32792X	D32793X	D3290	P3262
Terminal(s)-->	3279-S3G	3279-2X	3279-3X	3290	3262-3 3262-13
Screen Size					
Default	24x80		24x80		
Alternate	32x80		32x80		
Page Size					
Default					
Alternate					
Page Status	PAGE	PAGE	PAGE	PAGE	AUTOPAGE
Terminal Features					
AUDALARM	X	X	X	X	
COLOR	X				
COPY					X
Ext.Data Stream	X				
HILIGHT	X				
Programmed Symb.	X				
SELCTPEN					
TEXTKYBD					
Typewriter keyboard					
PRINT					X
TRANSPARENCY					

Figure 83 (Part 3 of 5). Terminal Feature Table Values

Table Name--->	P3268	P3287	P3287C	P3289	P5210
Terminal(s)-->	3268-2	3287-1 3287-2	3287-1C 3287-2C	3289-1 3289-2	5210-G01 5210-G02
Screen Size					
Default					
Alternate					
Page Size					
Default					
Alternate					
Page Status	AUTOPAGE	AUTOPAGE	AUTOPAGE	AUTOPAGE	AUTOPAGE
Terminal Features					
AUDALARM					
COLOR					
COPY	X	X	X	X	X
Ext.Data Stream					
HILIGHT					
Programmed Symb.					
SELCTPEN					
TEXTKYBD					
Typewriter keyboard					
PRINT	X	X	X	X	X
TRANSPARENCY					

Figure 83 (Part 4 of 5). Terminal Feature Table Values

Table Name--->					
Terminal(s)-->					
Screen Size					
Default					
Alternate					
Page Size					
Default					
Alternate					
Page Status					
Terminal Features					
AUDALARM					
COLOR					
COPY					
Ext.Data Stream					
HILIGHT					
Programmed Symb.					
SELCTPEN					
TEXTKYBD					
Typewriter keyboard					
PRINT					
TRANSPARENCY					

Figure 83 (Part 5 of 5). Terminal Feature Table Values

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Glossary

This glossary defines terms as they are used in this manual. If you do not find the term you are looking for, refer to the index or to the manual *Vocabulary for Data Processing, Telecommunications, and Office Systems, GC20-1699.*

The glossary includes definitions published in the:

- *American National Dictionary for Information Processing*, copyright 1977 by the Computer and Business Equipment Manufacturers Association. Copies may be purchased from the American National Standards Institute, 1430 Broadway, New York, New York, 10018.
- *ISO Vocabulary of Data Processing*, developed by the International Standards Organization, Technical Committee 97, Subcommittee 1.

Definitions from draft proposals and working papers under development by the ISO subcommittee also have been used.

A definition included from one of the above sources is marked by an asterisk.

abend. Short for abnormal end of task. Termination of a CICS/DOS/VS task before its completion because of an error condition that cannot be handled by automatic recovery facilities.

access method. A program for moving data between virtual storage and input/output devices.

ACF/VTAM. (Advanced Communication Function for Virtual Telecommunications Access Method) A Systems Network Architecture (SNA) access method that controls communication between resources of a single or multiple-processor network.

*** address.** See device address.

application program. A program written for or by a user; a program that applies to the user's own work. Often shortened in this manual to just application.

See also batch application and online application.

backup copy. A copy of a file or set of files that is kept for reference for the case that the original file or set of files is destroyed. In a VSE-based system, backup copies normally are done from disk to tape devices.

batch application. A set of programs that normally processes data without user interaction (an application to print a company payroll, for example). Such an application uses a device, a data file, or the processor intensively for a longer time than online applications.

*** batch processing.** (1) Loosely, the processing of computer programs serially. (2) Pertaining to the technique of processing a set of computer programs such that each is completed before the next program of the set is started. (3) In real-time systems, the processing of related transactions that have been grouped together.

BSC. (Binary Synchronous Communication) A communication line discipline that uses a standard set of control characters and control character sequences to transmit binary-coded data between stations.

BTAM-ES. (Basic Telecommunication Access Method Extended Storage) An IBM-supplied telecommunication access method. It permits read and write communication with remote devices.

channel. A functional unit, controlled by the processor, that handles the transfer of data between processor storage and local peripheral equipment.

CICS/DOS/VS. (Customer Information Control System/Disk Operating System/Virtual Storage) A general-purpose program product that controls online communication between terminal users and a data base.

CKD disk device. (Count-Key-Data disk device) A disk storage device on which storage is allocated by tracks and cylinders. Contrast with FBA disk device.

communication controller. A control unit whose operations are controlled by one or more programs stored and executed in the unit (an IBM 3705 Communications Controller, for example). A communication controller manages details of line control and the routing of data through a network.

communication control unit. A communication device that controls the transmission of data over lines in a network. Communication control units include transmission control units such as the IBM 2702 Transmission Control Unit and communication controllers such as the IBM 3705 Communications Controller.

configuration. (1) The arrangement of a computer system or network as defined by the nature, number, and the chief characteristics of its functional units. More specifically, the term may refer to a hardware configuration or a software configuration. (2) The devices and programs that make up a system, subsystem, or network.

*** control program.** A computer program designed to schedule and to supervise the processing of programs of a computer system.

control unit. A device that controls input/output operations at one or more devices.

data entry panel. A panel in which the user communicates with the system by filling in one or more fields. See also panel and selection panel.

data management. A major function of the operating system. It involves organizing, storing, locating, and retrieving data.

data processing system. A set of hardware and software that performs five functions: input, processing, storage, output, and control.

For a local data processing system, all five functions are done at the same location. For a remote data processing system, certain portions of the input and output functions are at different places and are connected by transmission facilities.

device address. The identification of an input/output device by its channel and unit number.

Device Support Facilities. A utility program for performing operations on disk volumes so that they can be accessed by programs running under VSE. Examples of these operations are initializing a disk volume and assigning an alternate track.

dialog. For VSE/SP, a set of panels that can be used to complete a specific data processing task (defining a file, for example).

*** direct access.** The facility to obtain data from a storage device, or to enter data into a storage device in such a way that the process depends only on the location of that data and not on a reference to data previously accessed.

See also sequential access.

disk device. A storage device in which the access time is effectively independent of the location of the data. Direct Access Storage Device (DASD) is often used synonymously for disk device.

display station. See terminal.

distribution tape. A magnetic tape that contains an IBM program product like VSE/SP. This tape is shipped to the customer for program installation.

DITTO. See VSE/DITTO.

domain. (1) In a network, the resources that are under control of one or more associated host processors. (2) The network resources that are under the control of a particular system services control point (SSCP).

DOS/VS. (Disk Operating System/Virtual Storage) See VSE.

*** dump.** (1) Data that has been dumped. (2) To write the contents of a storage, or of part of a storage, usually from an internal storage to an external medium, for a specific purpose, such as to allow other use of the storage, as a safeguard against faults or errors, or in connection with debugging.

EREP. (Environmental Recording, Editing and Printing Program) A service aid of VSE/Advanced Functions.

Whenever a hardware error occurs, VSE/SP writes information about the error into a system recorder file. Through EREP, both summarized and detailed reports about this file's contents can be printed.

external storage. Storage that is not part of the processing unit (storage on disk, for example).

FBA disk device. (Fixed Block Architecture disk device) A disk storage device on which storage is allocated by blocks of fixed size. Contrast with CKD disk device.

*** file.** (1) A set of related records that are treated as a unit. (2) Also known as a data set.

*** hardware.** (1) Physical equipment used in data processing, as opposed to computer programs, procedures, rules, and associated documentation. Contrast with software.

host processor. (1) In a network, the processor in which the access method for the network resides. (2) In an SNA network, the processor that contains a system services control point (SSCP).

ICA. (Integrated Communication Adapter) A hardware feature of IBM 4300 processors that permits telecommunication lines to be attached to these processors.

ICCF. See VSE/ICCF.

interactive. Pertaining to an application in which each entry causes a response from a system or program, as in an inquiry system or an airline reservation system. An interactive system may be conversational, implying a continuous dialog between the user and the system.

*** I/O.** (Input/Output) (1) Pertaining to a device or to a channel that may be involved in an input process, and, at a different time, in an output process. (2) Pertaining to a device whose parts can be performing an input process and an output process at the same time. (3) Pertaining to either input or output, or both.

*** I/O device.** A device in a data processing system by which data may be entered into the system, received from the system, or both.

IPL. (Initial Program Load) (1) The initialization procedure that causes an operating system to begin operation. (2) The process by which a configuration image is loaded into storage at the beginning of a work day or after a system malfunction.

JCL. (Job Control Language) A control language that can be used to: (a) identify a job to an operating system and (b) describe that job's requirements.

JES. (Job Entry Subsystem) A subsystem for use under OS/VS1 or MVS/SP.

job. (1) A set of data that completely defines a unit of work for a computer. A job usually includes all necessary computer programs, linkages, files, and instructions to the operating system. (2) The actual processing of a unit of work by a computer.

*** job stream.** The sequence of representations of jobs to be submitted to an operating system. Synonymous with input stream and run stream.

library. A collection of data elements on disk to which the system has quick access. These elements (programs or dumps, for example) are maintained by system services. VSE/SP has two main types of libraries, VSE libraries and ICCF libraries.

licensed program. Any separately priced program that bears an IBM copyright and is offered to customers under the terms and conditions of the Agreement for IBM Licensed Programs. Includes Program Products (PPs), Industry Application Programs (IAPs), Field-Developed Programs (FDPs), Installed User Programs (IUPs), and Programming RPQs (PRPQs).

line. See link connection.

link connection. A communication line is the physical medium of transmission (a telephone line, for example). A link connection includes the physical medium of transmission, the protocol, and associated devices and programming. It is both physical and logical.

megabyte. Roughly equal to 1 million bytes. A byte is the space required to represent one character.

member. A named set of one or more records in a library.

MSHP. (Maintain System History Program) A program used for automating and controlling various installation, tailoring, and service activities for a VSE system.

MVS/SP. (Multiple Virtual Storage/System Product) A program product that is an extension of OS/VS2.

network. (1) * An interconnected group of nodes. (2) The assembly of equipment through which connections are made between data stations.

node. In SNA, a junction point in a network that is represented by a physical unit. A node contains network addressable units.

object module. A program unit that is the output of an assembler or a compiler and is suitable for input to the linkage editor. Contrast with source program.

OLTEP. See VSE/OLTEP.

online. (1) Pertaining to a user's ability to interact with a computer. (2) Pertaining to a user's access to a computer via a display station. (3) * Pertaining to the operation of a functional unit that is under the continual control of a computer. The term is also used to describe a user's access to a computer via a display station.

online application. A set of programs that normally is used by people at display stations (an application that processes airline reservations, for example). When an online application is active, it waits for data to be sent to it. Once input arrives, it processes it and sends a response to the display station or to another device.

online processing. Processing by which the input data enters the computer directly from a display station and the output data is transmitted directly to the display station.

*** operating system.** (1) Software that controls the processing of computer programs and that may provide scheduling, debugging, input/output control, accounting, compilation, storage assignment, data management, and related services.

operator console. See system console.

*** output.** (1) Pertaining to a device, process, or channel involved in an output process, or to the data or states involved in an output process. (2) See I/O.

panel. In VSE/SP, the complete set of information that currently is shown on a display station screen. Each panel of the VSE/SP Interactive Interface is like a different page in a book; that is, you go backward and forward through panels, just like you do when turning a book's pages. See also selection panel and data entry panel.

partition. A division of the address space that is available for program execution. The supervisor control program, however, does not run in this space.

password. (1) A unique string of characters that a program, computer operator, or user must supply to meet security requirements before gaining access to data. (2) In systems with time sharing, a one-character to eight-character symbol that the user may be required to supply at the time he logs on to the system. The password is confidential, as opposed to the user identification.

phase. The smallest unit of executable code that can be referred to in a program library.

POWER. See VSE/POWER.

pregenerated operating system. An operating system like VSE/SP which is shipped by IBM mainly in object code. In such a system, definitions for key functions such as:

- Size of the main control program,
- Organization and size of libraries, and
- Required system areas on disk

are done by IBM, not the customer. Because of this, the customer does not need the source code necessary to generate an operating system.

printer. A device that writes output data from a system on paper or similar media.

processing. The performance of logical operations and calculations on data, including the temporary retention of data in processor storage while the data is being operated upon.

processor storage. The storage contained in a processing unit. Synonymous with real storage.

program. (1) * To design, write, and test programs. (2) A set of instructions that a machine can interpret and execute.

program product. A licensed IBM program that performs a function or set of functions for the user. It interacts with and relies upon either the hardware or other program products of IBM.

PTF. (Program Temporary Fix) A temporary solution or by-pass of a problem caused by a defect in a current, unaltered release of an IBM program.

queue. (1) A line or list formed by items in a system that are waiting for service (for example, tasks to be performed or messages to be transmitted in a message-switching system). (2) To arrange in, or form, a queue.

*** read.** To acquire or interpret data from a storage device, from a data medium, or from another source.

real storage. See processor storage.

*** record.** A collection of related data or words, treated as a unit (for example, in stock control, each invoice could constitute one record).

refresh. In VSE/SP, this refers to an upgraded VSE/SP system with the latest level of maintenance.

restore. To load a copy of: (a) an operating system or (b) user data into storage. The copy can be a backup copy that replaces destroyed data, or it can be a newly acquired copy that replaces outdated data.

RJE. (Remote Job Entry) Submission of jobs through an input unit that has access to a computer through a data link.

RSCS. (Remote Spooling Communications Subsystem) The component of VM/SP that transfers spool files between users, remote stations, and local and remote batch systems.

*** run.** (1) A single performance of one or more jobs. (2) A single, continuous performance of a computer program or routine.

SDLC. (Synchronous Data Link Control) A discipline for managing synchronous, code-transparent, serial-by-bit information transfer over a link connection. Transmission exchanges may be duplex or half-duplex over switched or non-switched links. The configuration of the link connection may be point-to-point, multipoint, or loop.

selection panel. A displayed list of functions (options) that are available for doing work. A display station user can select an option from a selection panel do a specific task. See also panel and data entry panel.

sequential access. An access mode in which records are read from or written into a file in such a way that each successive access to the file refers to the next record in the file.

shared spooling. A function of VSE/POWER that permits sharing of the POWER account file, data file, and queue file among several systems with VSE/POWER.

SNA. (Systems Network Architecture) A method for formally defining the responsibilities of components of an IBM communications network.

SNA network. The part of a user-application network that conforms to the formats and protocols of Systems Network Architecture. It enables reliable transfer of data among end users and provides protocols for controlling the resources of various network configurations. The SNA network consists of network addressable units (NAUs), boundary function components, and the path control network.

*** software.** (1) Programs, procedures, rules, and associated documentation for the operation of a computer system. Contrast with hardware.

*** source program.** A computer program expressed in a source language. Contrast with object module.

spooling. (1) * The use of external storage as buffer storage to reduce processing delays when transferring data between peripheral equipment and a processor. (2) The reading of input data streams and the writing of output data streams on external storage devices (concurrently with job processing) in a format convenient for later processing or output operations.

*** storage.** (1) The retention of data in a storage device. (2) A device, or part of a device, that can retain data. (3) A storage device.

*** storage device.** A functional unit into which data can be entered, in which it can be retained, and from which it can be retrieved.

subsystem. A secondary or subordinate system or programming support, usually capable of operating either independently of or together with the operating system.

supervisor control program. In a VSE-based system, the program that coordinates the use of resources and maintains the flow of processor operations.

SVA. (Shared Virtual Area) An area located in the high address range of virtual storage. It contains, primarily, phases that can be shared between partitions.

*** system console.** A functional unit containing devices that are used for communication between a computer operator and a data processing system.

System IPO/E. (System Installation Productivity Option/Extended) For VSE, a set of products and a series of optional features designed to aid in system installation and maintenance.

system libraries. In VSE/SP, a set of libraries in which the various parts of the operating system are stored.

system refresh. In VSE/SP, this refers to an upgraded VSE/SP system with the latest level of maintenance.

telecommunication. The transmission of data between computer systems and between such a system and remote devices.

terminal. (1) * A point in a system or communication network at which data can either enter or leave. (2) A

device, usually equipped with a keyboard and a screen, capable of sending and receiving information over a communication channel.

Display stations and display terminals are terminals with a keyboard and screen.

transaction. In CICS/DOS/VS, an application program (or programs) that can be used by a display station operator. A given transaction can be used concurrently by one or more operators.

A task is the execution of a transaction for a particular operator. A given task can relate only to one operator.

utility program. (1) A program that assists in the use of a computing system without contributing directly to the control of the system or the production of results. (2) A program that performs an everyday task such as copying data from one storage device to another. (3) * Synonym for service program.

virtual address. An address that refers to a location in virtual storage. It is translated by the system to a processor storage address when the information stored at the virtual address is to be used.

*** virtual storage.** The notation of storage space that may be regarded as addressable main storage by the user of a computer system in which virtual addresses are mapped into real addresses. The size of virtual storage is limited by the addressing scheme of the computer system and by the amount of available external storage, not by the actual size of processor storage.

VM/SP. (Virtual Machine/System Product) A program product that manages the resources of a single computer so that multiple computing systems appear to exist. Each virtual machine is the functional equivalent of a "real" machine.

volume. A disk pack, tape reel, or diskette (pack).

VSAM. See VSE/VSAM.

VSE. (Virtual Storage Extended) An operating system that is an extension of Disk Operating System/Virtual Storage.

A VSE system consists of: (a) licensed VSE/Advanced Functions support and (b) any IBM-supplied and user-written programs that are required to meet an installation's data processing needs. VSE and the hardware controlled by it form a complete computing facility.

VSE/Advanced Functions. The basic operating system support needed at a VSE-controlled installation.

VSE/DITTO. (VSE/Data Interfile Transfer, Testing and Operations Utility) An IBM program product that provides file-to-file services for card I/O, magnetic tape, and disk devices.

VSE/Fast Copy. (VSE/Fast Copy Data Set Program) This program is designed for: (a) fast copy data operations from disk to disk and (b) dump/restore operations via an intermediate dump file on magnetic tape or disk.

VSE/ICCF. (VSE/Interactive Computing and Control Facility) An IBM program product that makes the services of a VSE-controlled computing system available to authorized display station users. Availability of services is on a time-shared basis, and display stations must be linked to the system's central processor.

VSE/OLTEP. (VSE/Online Test Executive Program) An IBM program for managing the online tests that are available for device preventive maintenance and service. Normally, only IBM service personnel use this program.

VSE/POWER. (VSE/Priority Output Writers, Execution Processors, and Input Readers) An IBM program product primarily used for the spooling of input and output. VSE/POWER's networking functions enable a VSE/SP system to exchange files with or run jobs on another remote processor.

VSE/VSAM. (VSE/Virtual Storage Access Method) An access method for indexed or sequential processing of fixed and variable length records on direct access devices.

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Special Characters

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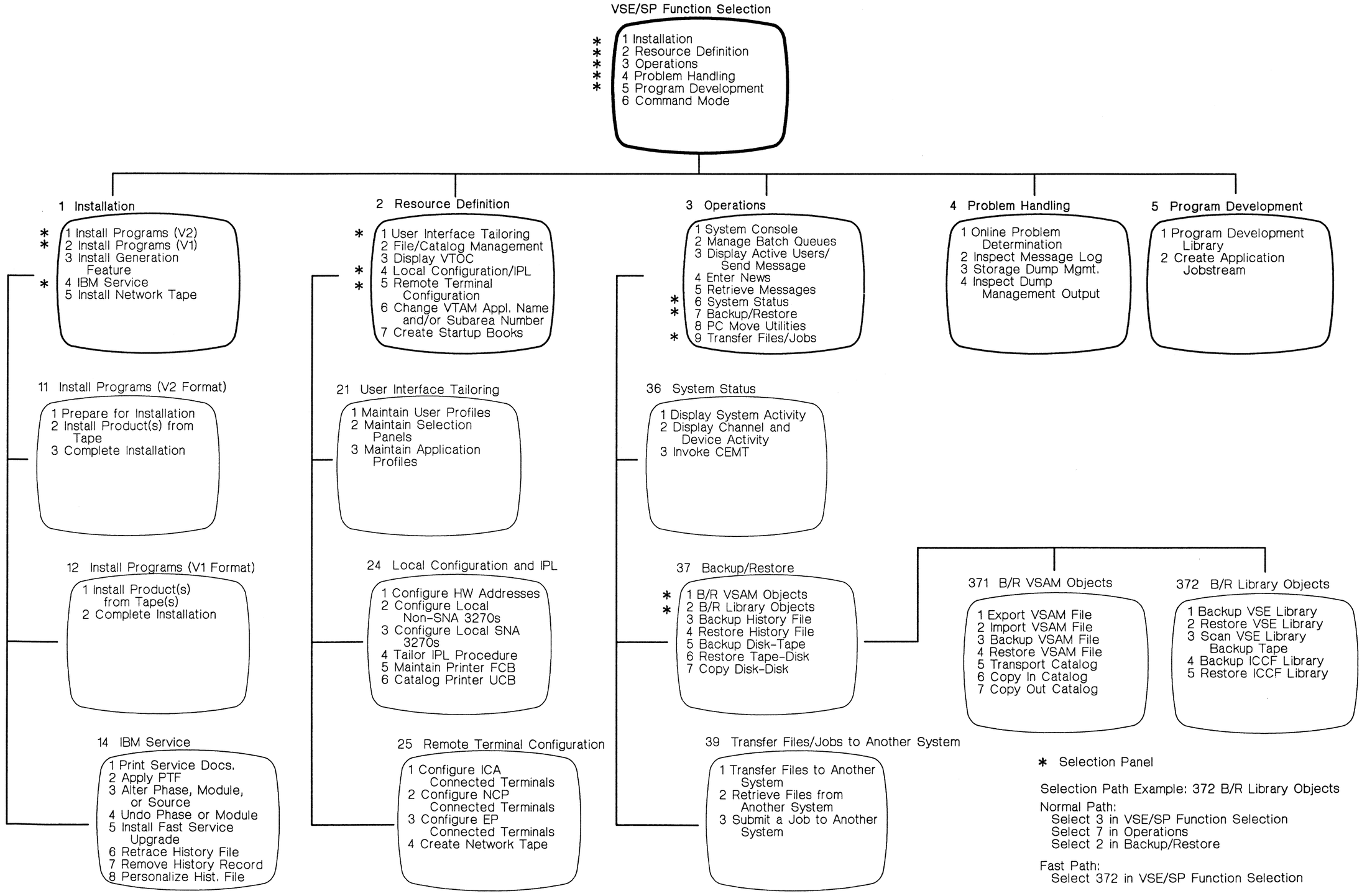
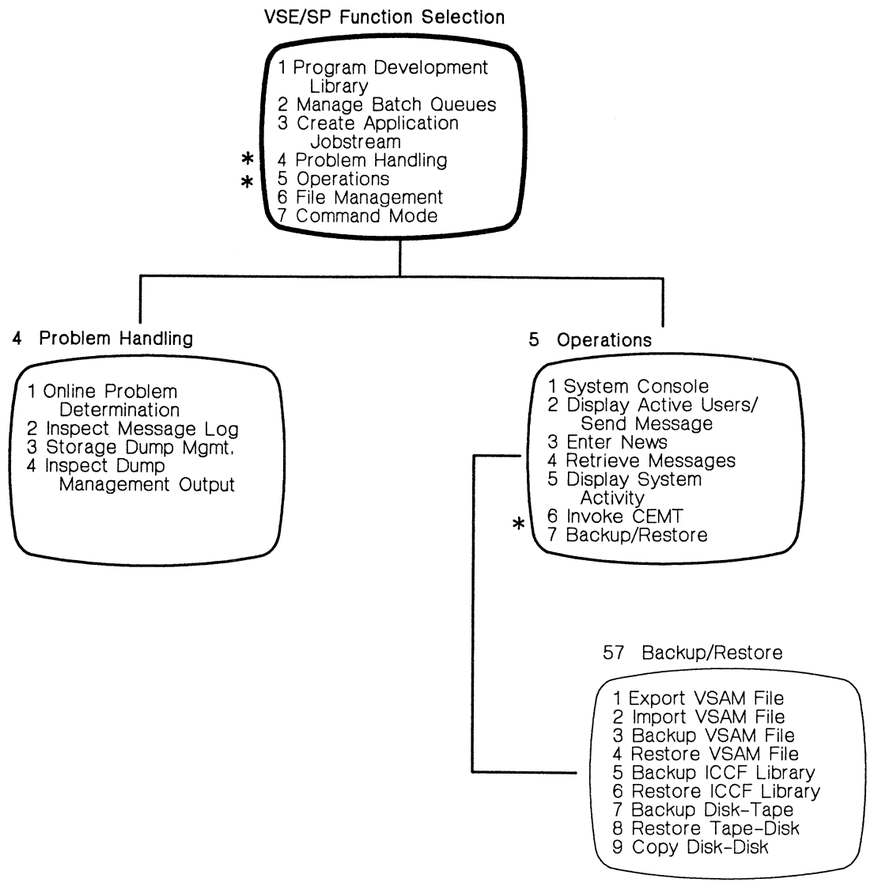
Default Selection Panel Hierarchy for System Administrator



Default Selection Panel Hierarchy for Programmer



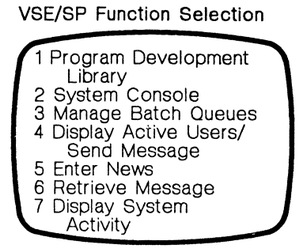
* Selection Panel

Selection Path Example: 57 Backup/Restore

Normal Path:
Select 5 in VSE/SP Function Selection
Select 7 in Operations

Fast Path:
Select 57 in VSE/SP Function Selection

Default Selection Panel for Operator



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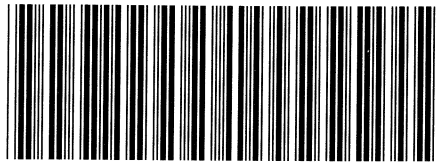

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