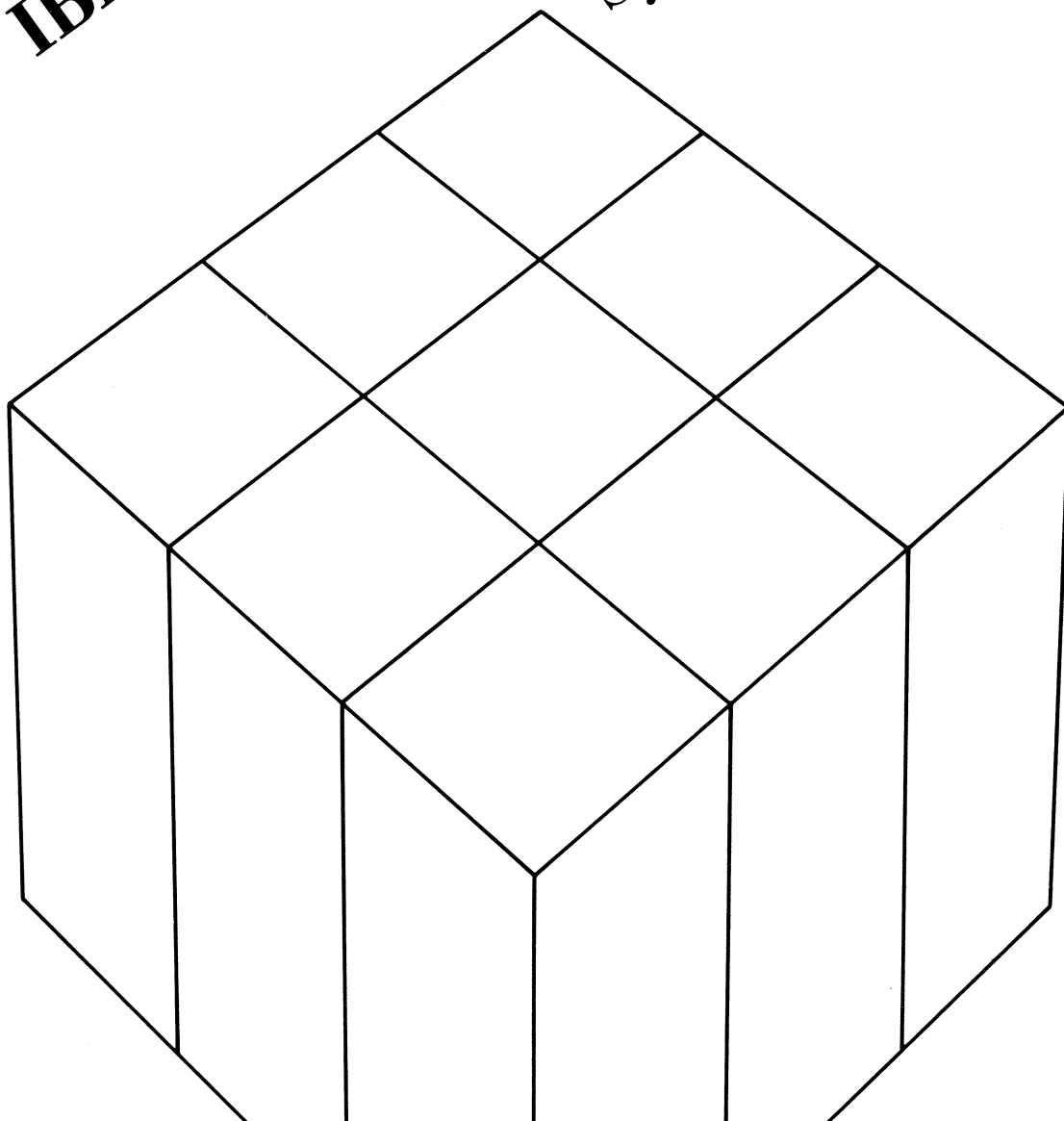




IBM Virtual Storage Extended System Package

System Planning



IBM Virtual Storage Extended/ System Package

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Preface

Purpose

This manual describes planning considerations for the IBM Virtual Storage Extended/System Package (VSE/SP) Version 3, Release 1. It provides information which helps you plan for the use of your VSE/SP system.

Audience

The manual is intended for those who perform administrative tasks. A knowledge of VSE and the IBM licensed programs included in VSE/SP is required.

Contents

The information in this manual is primarily meant to help you plan for daily system use, once initial installation of VSE/SP is complete. Much of this involves *tailoring* your system to meet your particular data processing needs. Major topics include:

“Defining System Hardware,” page 1.

“Tailoring System Startup,” page 13.

“Tailoring the Interactive Interface,” page 25.

“Tailoring Other System Resources,” page 47.

“Managing VSE User Libraries,” page 61.

“Problem Solving,” page 67.

“Using Intelligent Work Station Support,” page 75.

“Tuning the System,” page 95.

“Adding a User-Written Application to Your System,” page 101.

“Protecting Resources,” page 103.

“DASD Sharing and CICS/DOS/VS Intersystem Communication,” page 111.

“Dialogs of the Interactive Interface,” page 205.

“Fast Paths and Synonyms for Dialogs,” page 213.

“Additional Applications,” page 221.

“VSE/SP Skeletons,” page 225.

“Reserved Names in the System,” page 233.

“VSE/ICCF and VSE/POWER Generation Parameters,” page 235.

“The CICS/DOS/VS Report Controller,” page 241.

“VSE/SP Definitions for Autoinstall Terminals,” page 247.

“CICS/DOS/VS Tables,” page 269.

Notes:

1. *A list of related publications and a glossary follow the appendixes.*
2. *The manual **IBM VSE/SP Communications and Networking** has planning information for adding remote devices or installing your system in a network. In addition, you may want to use publications for VSE/SP's licensed programs to make a planning decision.*

Manuals for VSE/SP

Along with the distribution tape(s) for VSE/SP, you will receive a set of the latest VSE/SP manuals. All of the manuals shown below will be shipped to you.



Figure 1. Manuals for VSE/SP

IBM VSE/SP General Information – A basic overview of VSE/SP that covers topics such as:

- Functions provided by VSE/SP.
- Installation and system use.
- Supported hardware devices.

IBM VSE/SP Installation Planning – Information that is primarily meant to help you plan for the initial installation of your VSE/SP system. Major sections include:

- New functions for VSE/SP 3.1.
- System organization.
- Various installation tasks.

Note that the two final chapters in the manual have planning information for migrating from an earlier VSE-based system and installing VSE/SP under VM/SP.

IBM VSE/SP System Planning – The manual you are reading.

IBM VSE/SP Installation – Detailed information for installing:

- VSE/SP and the Generation Feature.
- Optional programs.
- System service.

IBM VSE/SP Administration – Detailed information on how to perform tasks such as:

- Tailoring IPL and system startup.
- Configuring local hardware.
- Tailoring the Interactive Interface.
- File and catalog management.

IBM VSE/SP Operation – Detailed information on how to perform tasks such as:

- Managing batch queues.
- Backing up and restoring data.
- Displaying system activity.

IBM VSE/SP Using IBM 3270 Display Stations and Personal Computers – Information for programmers and application end users on how to use:

- Basic functions of the Interactive Interface.
- VSE/ICCF user libraries.
- Intelligent Work Station support (IWS).

IBM VSE/SP Communications and Networking – Information on how to:

- Configure local and remote communication devices.
- Operate the communication part of a single-domain or multiple-domain network.

Planning information for these tasks is also included.

IBM VSE/SP Messages and Codes – Messages that are issued by VSE/SP and the programs included in it. Message explanations have a description of what action, if any, should be taken.

Online explanations for messages are also available through VSE/SP's system console function.

IBM VSE/SP Guide for Solving Problems – Instructions for isolating the cause of operating problems and collecting data for further analysis. The manual also describes utilities and aids for problem determination and resolution.

IBM VSE/SP Master Index – An index for finding information in VSE/SP's manuals and key-related publications. The entries in the index point to manuals, not to specific page numbers. When referred to a manual, use its more detailed index to locate page numbers.

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Summary of Amendments

The manual *VSE/SP Planning*, SC33-6177, was written for VSE/SP 2.1. This manual has been split into two for VSE/SP 3.1:

- *IBM VSE/SP System Planning*, SC33-6304, which is the manual you are reading, and
- *IBM VSE/SP Installation Planning*, SC33-6303.

Topics from the *VSE/SP Planning* manual for VSE/SP 2.1, which reappear here, have been completely rewritten for VSE/SP 3.1. For an overview of the functions new with VSE/SP 3.1, refer to the manual *IBM VSE/SP Installation Planning*.

Chapter 1. Defining System Hardware

Your VSE/SP system can operate in several possible user environments. For example, it can operate as an independent system with local devices only or with a mixture of local and remote devices. It can also be part of a communications network with two or more processors.

You can connect hardware devices and other systems to your VSE/SP system through:

- Data channels.
- Integrated Communication Adapters (ICA) and Display Printer Adapters (DPA) available with IBM 4300 series processors.
- Work Station Adapters (WSA) available with IBM 4361 processors.
- Work Station Subsystem Controllers and Telecommunications Subsystem Controllers available with IBM 9370 series processors.
- Communication controllers.

Supported IBM 37xx communication controllers can operate using either:

- ACF/NCP (Advanced Communication Function/Network Control Program) or
- EP (Emulation Program).

During VSE/SP initial installation, you complete your hardware configuration by signing on with the user ID **POST**. The manual *IBM VSE/SP Installation* describes how to perform this task.

After initial installation, you can use dialogs and skeletons provided by VSE/SP to define local and remote devices and to create network definitions. The manual *IBM VSE/SP Administration* describes how to modify the system's local configuration. The manual *IBM VSE/SP Communications and Networking* has information for configuring remote devices or adding your system to a network of two or more systems.

Startup Members for the Hardware Configuration

Your hardware configuration is determined during startup by the processing and loading of a number of startup members. Figure 2 lists the members for ACF/VTAM and CICS/DOS/VS terminal definitions.

ACF/VTAM Books:

1. VTMSNA for local non-SNA terminals.
2. VTMSNA for local SNA terminals.
3. VTMCA1, VTMCA3, and VTMSW1 for remote SNA terminals.

CICS/DOS/VS Terminal Control Tables:

1. DFHTCTSP for terminals and base CICS/DOS/VS. Members associated with DFHTCTSP are:
 - a. DTRTCT1L for local non-SNA terminals.
 - b. DTRTCT1S for local SNA terminals.
 - c. DTRTCT1R for remote SNA terminals (attached via ICA).
 - d. DTRTCT1N for remote SNA terminals (controlled by NCP).
2. DFHTCTP1 for terminals and a second CICS/DOS/VS. Members associated with DFHTCTP1 are:
 - a. DTRTCT2L for local non-SNA terminals.
 - b. DTRTCT2S for local SNA terminals.
 - c. DTRTCT2R for remote SNA terminals (attached via ICA).
 - d. DTRTCT2N for remote SNA terminals (controlled by NCP).
3. DFHTCTP2 for terminals and a third CICS/DOS/VS. Members associated with DFHTCTP2 are:
 - a. DTRTCT3L for local non-SNA terminals.
 - b. DTRTCT3S for local SNA terminals.
 - c. DTRTCT3R for remote SNA terminals (attached via ICA).
 - d. DTRTCT3N for remote SNA terminals (controlled by NCP).

Figure 2. Hardware Configuration Startup Members

During initial installation, the IPL procedure is cataloged into libraries IJSYSRS.SYSLIB and PRD2.SAVE. The ACF/VTAM and CICS/DOS/VS startup members are cataloged into library PRD2.CONFIG.

The manual *IBM VSE/SP Administration* describes how to use the *Configure Hardware* dialog to maintain startup members for the hardware configuration. When you use the dialog to change startup members shipped with the system, the dialog will automatically:

- Create related source members in VSE/ICCF library 51.
- Create job streams to catalog ACF/VTAM books.
- Assemble and catalog CICS/DOS/VS Terminal Control Tables.
- Rename old ACF/VTAM and CICS/DOS/VS configuration members to file type `.SAVE`.
- Rename the old IPL procedure in IJSYSRS. The first character of the file name is changed from `$` to `S`.

Notes:

1. *The TCT members shown in Figure 2 on page 2 are needed if you do not use the CICS/DOS/VS function RDO (Resource Definition Online) to define terminals.*

If you do define terminals using the Configure Hardware dialog, you can select one of the following TCT names: TCTSP, TCTP1, or TCTP2. VSE/SP uses these names for the tables DFHTCTSP, DFHTCTP1, and DFHTCTP2.

2. *RDO cannot be used to define BTAM terminals.*

Defining Terminals

As shown in Figure 2 on page 2, defining terminals and terminal printers involves creating both ACF/VTAM and CICS/DOS/VS definitions.

In VSE/SP 3.1, you should create ACF/VTAM definitions using the *Configure Hardware* dialog. You can define terminals to CICS/DOS/VS, however, in one of three ways. You can use:

- The *Configure Hardware* dialog to create permanent TCT entries.
- The Resource Definition Online (RDO) function to create permanent entries in the CICS/DOS/VS System Definition (CSD) file. The transaction ID for the RDO function is CEDA. For a detailed description of the RDO function, refer to the manual *CICS/DOS/VS Resource Definition (Online)*.
- Models for *autoinstall* terminals that are delivered with the system or that you define yourself. For autoinstall terminals, CICS/DOS/VS creates temporary TCT entries.

This section briefly describes the first and third of these possibilities. The *Configure Hardware* dialog has been changed for VSE/SP 3.1, and the autoinstall facility is new for CICS/DOS/VS 1.7.

Defining Terminals Using the Configure Hardware Dialog

You can define the following devices using the *Configure Hardware* dialog provided by the Interactive Interface:

- Local non-SNA and SNA terminals and
- Remote SNA terminals.

When you use the dialog, defaults selected by VSE/SP for each terminal type are displayed. You may change the defaults or specify other parameters for which no defaults are available.

Note: The defaults used in the dialog are the same as those specified in the model definitions for autoinstall terminals. Appendix H, “VSE/SP Definitions for Autoinstall Terminals” on page 247 lists the contents of the model definitions.

Local Terminals

For local non-SNA terminals, you must specify each terminal’s device type and address. For local SNA terminals, you must also define the channel address of an IBM 3174/3274 control unit. The control unit is the physical device to which you connect terminals as logical devices. A terminal is attached to one of the control unit’s ports.

After you define the control unit for an SNA terminal, you must enter the terminal's device type and local address.

Remote Terminals

The manual *IBM VSE/SP Communications and Networking* describes how to use the *Configure Hardware* dialog to define remote SNA terminals. This includes:

- ICA-connected terminals.

After first specifying the link address, you use the dialog to:

- Define, alter, or delete links.
- Add, alter, delete, or show physical units.
- Add, alter, delete, or show logical units.

- NCP-connected terminals.

The dialog helps you:

- Define a new NCP.
- Alter an NCP.
- Display an NCP.
- Delete an NCP.
- Generate an NCP.

Note: With the *Configure EP Connected Terminals* dialog, you can define remote terminals that are connected to a communication controller operated by EP. This dialog also displays sample default values that you can change.

Defining Autoinstall Terminals

Overview

As described in the manual *CICS/DOS/VS Resource Definition (Online)*, CICS/DOS/VS 1.7 offers a number of new facilities that are designed to make defining terminals easier. One of the most important of these is the *autoinstall* facility. Through the autoinstall facility, CICS/DOS/VS can create TCT entries for devices only when they are actually needed. You do not have to have permanent table definitions for every terminal or terminal printer in your configuration.

Besides saving you time in updating and assembling tables, this may also mean that less virtual storage is required by CICS/DOS/VS. Table entries created in this way exist only while the terminal remains in session.

In CICS/DOS/VS 1.7, definition of autoinstall terminals is split into the:

- *TYPETERM* definition, which describes the characteristics of a generalized terminal, and
- *TERMINAL* definition, which describes the characteristics of a particular terminal. This definition refers to the name of the *TYPETERM* definition with which it is associated.

To make use of the autoinstall facility, a terminal must be defined to ACF/VTAM. When a user signs on from a terminal that is defined to ACF/VTAM but unknown to CICS/DOS/VS (no entry in the TCT), the autoinstall facility is activated. It provides CICS/DOS/VS with ACF/VTAM, *TYPETERM*, and *TERMINAL* information. CICS/DOS/VS then creates an entry for the terminal in the TCT (“automatic installation”). The entry remains in the TCT as long as a CICS/DOS/VS session is active for that terminal.

It is important to note that you do *not* need to have a separate *TERMINAL* definition for each autoinstall terminal. In fact, you may need as few as one per device type. This is known as *model definition*. CICS/DOS/VS supplies *TERMINAL* and *TYPETERM* model definitions for autoinstall terminals. They are stored in the CICS/DOS/VS System Definition (CSD) file.

VSE/SP supports the autoinstall facility of CICS/DOS/VS by providing:

- Its own *TYPETERM* and *TERMINAL* model definitions.
- Its own ACF/VTAM LOGMODE table.
- Its own autoinstall user exit program IESZATDX.

VSE/SP Considerations for Autoinstall Terminals

To use the CICS/DOS/VS autoinstall facility with VSE/SP, the following is required:

- You must create ACF/VTAM definitions for autoinstall terminals with the *Configure Hardware* dialog. To create correct definitions, proceed as follows:
 - Do **not** enter an *X* in the TCT parameter for the terminal. Leaving the TCT parameter blank means that no permanent TCT entry is created for the terminal.
 - Do **not** enter a *name* for the ACF/VTAM LOGAPPL. The default name for VSE/SP is DBDCCICS. Leaving the name blank means that the terminal will not be automatically connected to CICS/DOS/VS during system startup.

Note: It is recommended *not* to define terminal printers as autoinstall terminals. If you do however, you must enter a name for

the LOGAPPL parameter. For details about defining terminal printers, consult the manual *CICS/DOS/VS Resource Definition (Online)*.

- If you want to use the `TERMINAL` and `TYPETERM` model definitions provided by VSE/SP, you must add the following operand to table `DFHSITSP`:

```
GRPLIST=VSELIST,
```

This group list includes the groups `VSETYPE` and `VSETERM` that are predefined by VSE/SP for autoinstall terminals.

Also, you may want to change the `AUTOINST` operand of table `DFHSITSP`. This operand sets a limit for autoinstall terminals that can be active at the same time. The default value is 10.

Note: On autoinstall terminals, VSE/SP displays the VTAM Application Selection Menu as initial panel. From it, users can select an ACF/VTAM application (DBDCCICS, for example). This causes VSE/SP to display the VSE/SP Online panel for signing on to the system.

VSE/SP Model Definitions

To ensure that the autoinstall facility works with the VSE/SP Interactive Interface, VSE/SP provides its own `TYPETERM` and `TERMINAL` model definitions. Appendix H, “VSE/SP Definitions for Autoinstall Terminals” on page 247 shows the contents of those definitions. The model definitions are shipped as a phase in the system library `IJSYSRS.SYSLIB`. During VSE/SP installation they are added to the `CICS/DOS/VS System Definition (CSD)` file as group `VSETYPE` and `VSETERM`. Both groups are part of the `LIST VSELIST`. Refer also to Figure 118 on page 247. The groups `VSETYPE` and `VSETERM` can be activated by specifying `GRPLIST=VSELIST` in table `DFHSITSP` or by adding both groups to a user-provided list.

If you wish, you can use the model definitions as is, or change them, or provide your own definitions. You change model definitions with `CEDA` commands. `CEDA` is the transaction ID for `RDO (Resource Definition Online)`.

ACF/VTAM Parameters and LOGMODE Table

The ACF/VTAM LOGMODE table (IESINCLM) contains an entry for each model definition provided by VSE/SP. When defining your autoinstall terminals with the *Hardware Configuration* dialog to ACF/VTAM, the following parameters are created:

- MODETAB - This parameter identifies LOGMODE table IESINCLM.
- DLOGMOD - Connects the terminal type to the correct entry in IESINCLM.

Both parameters are included in the ACF/VTAM source books. You can modify both parameters via the *Hardware Configuration: VTAM Parm Table List* panel of the *Configure Hardware* dialog.

Note: If you change the DLOGMOD parameter, be aware of VSE/SP naming conventions. The DLOGMOD parameter is identical to the label of the corresponding entry in IESINCLM.

The source code of LOGMODE table IESINCLM is available in VSE/ICCF library 59. You may add your own entries to it or change those provided.

Autoinstall User Exit Program IESZATDX

The CICS/DOS/VS autoinstall user exit program DFHZATDX (Assembler version) has been modified for VSE/SP. The name of the VSE/SP version is IESZATDX and is defined in the AUTOINST parameter of table DFHSITSP. IESZATDX is automatically activated when a user signs on from a terminal defined to ACF/VTAM but unknown to CICS/DOS/VS. The modifications ensure that the correct VSE/SP provided model definitions and terminal IDs are selected. The modifications follow the VSE/SP naming conventions for a:

- CICS/DOS/VS terminal ID.
- ACF/VTAM netname.
- VM/SP line address (cuu, if VSE/SP is running under VM/SP).

These naming conventions and the resulting dependencies are described in the comment sections of program IESZATDX. The source code of program IESZATDX is available in VSE/ICCF library 59. This allows you to include user modifications if required for your environment. User modifications may also be implemented by providing your own user-written exit routine.

Figure 3 on page 9 shows the criteria used by IESZATDX for selecting terminal models and printer models, and how IESZATDX determines the terminal ID.

TERMINAL MODELS:		
Device Characteristics	Local non-SNA Terminal	Local/Remote SNA Terminal
QUERY SUPPORT:		
Any number of lines	VSE3278Q	VSELU2Q
NO QUERY SUPPORT:		
27 lines (alternate)	VSE32785	VSELU2D
32 lines (alternate)	VSE32783	VSELU2B
43 lines (alternate)	VSE32784	VSELU2C
xx lines	VSE32782	VSELU2A

PRINTER MODELS:		
Device Characteristics	Local non-SNA Terminal	Local/Remote SNA Terminal
QUERY SUPPORT:		
LU type: 1 (SCS)	—	VSESCSPQ
LU type: 3	—	VSELU3Q
LU type: none	VSEDCSPQ	—
NO QUERY SUPPORT:		
LU type: 1 (SCS)	—	VSESCSPA
LU type: 3	—	VSELU3A
LU type: none	VSEDCSP	—

TERMINAL ID:		
To be identified for terminal and printer models.	Local non-SNA Terminal	Local/Remote SNA Terminal
	First four characters of ACF/VTAM netname	Annn (nnn is an internally generated number)

Figure 3. Parameter Identification for Autoinstall Terminals

For a general description of autoinstall user exit programs, refer to the manual *CICS/DOS/VS Customization Guide*.

Communicating With Other Systems

Through ACF/VTAM, VSE/SP can communicate with the types of IBM systems shown in Figure 4.

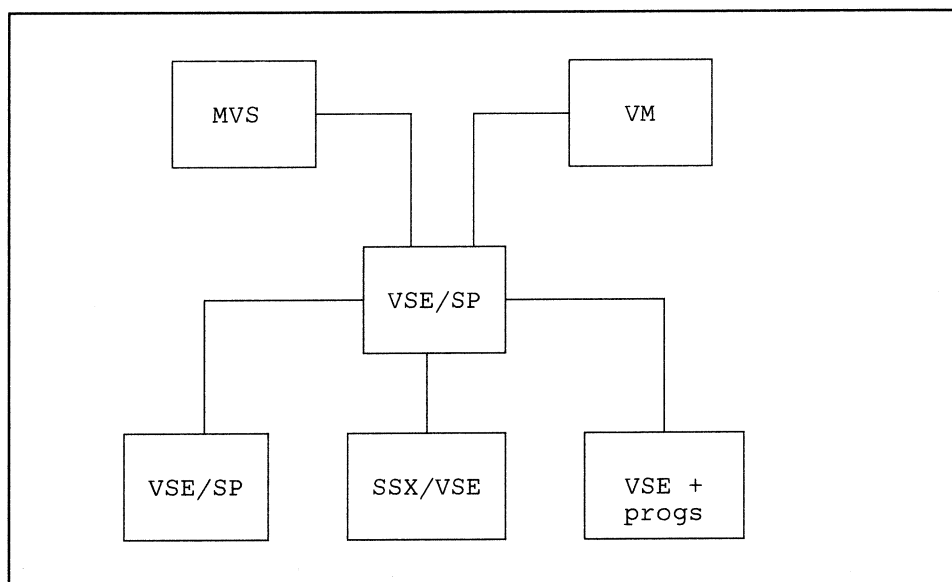


Figure 4. Network Links Supported by ACF/VTAM

When you select ACF/VTAM as your telecommunications access method during initial installation, an ACF/VTAM communications environment exists from the first IPL. Cross-domain communication with other systems is possible using:

- ICA links.
- NCP links.
- Channel-to-Channel-Attachment (CTCA). Two host processors with ACF/VTAM Version 3 and channel-to-channel adapters can be connected by a channel. This allows for direct transfer of data without an intervening NCP.

In a network with two or more processors:

- VSE/POWER PNET can communicate with:
 - PNET operating in other VSE systems, such as VSE/SP or SSX/VSE.
 - VM/RSCS systems.
 - MVS systems with JES2 or JES3.
- CICS/DOS/VS can communicate with:
 - Other CICS/DOS/VS systems.
 - IMS, DPPX/8100, and industry systems such as the IBM 4700, 3650, 3660, and 3680.

Installing Your System in an SNA Network

VSE/SP provides a skeleton for creating the resource definitions that are needed for installing and operating a VSE/SP system in a SNA network. This skeleton, *SKDTRNET.B*, is in library IJSYSRS.SYSLIB. A skilled network administrator at the network's central location can use it for each separate network location (*node*). When the resource definitions are complete, they can be transferred to tape using the *Create Network Tape* dialog and sent to each location.

After receiving the tape, a local VSE/SP administrator should use the *Install Network Tape* dialog to store the resource definitions into system library members. This dialog does not require any additional input from the local administrator.

Other tasks may need to be performed once the network tape is installed. *IBM VSE/SP Communications and Networking* describes these tasks, which include defining the host subarea number of the system and the number of subareas in the network.

Note: VSE/SP allows a signon from other systems that have ACF/VTAM, ACF/VTAME, or ACF/TCAM. A network administrator at an MVS or VSE central system thus can access administration and operation functions that the Interactive Interface of VSE/SP supports. This skilled person can perform work at the node to support the local administrator.

Chapter 2. Tailoring System Startup

VSE/SP provides a *Startup* facility for performing system startups. You may use the procedures and jobs of the Startup facility as shipped by IBM, or you can tailor them to meet your needs.

The Startup facility provides a fast and efficient system startup. In most cases, no operator intervention is required, except for IPL.

This chapter helps you plan startup requirements for your installation. For detailed information about tailoring startup procedures and jobs, refer to the manual *IBM VSE/SP Administration*.

Notes:

1. *During initial installation, you must specify the predefined system environment that you want to use. Because of this, you should read both the information given here and in Chapter 3 of the manual **IBM VSE/SP Installation Planning**. Carefully planning for your system's environment may considerably reduce any tailoring that you later may do.*
2. *If you wish, you may also create your own startup procedures instead of using or modifying the ones supplied by IBM.*

Using Predefined Startup Procedures

If you use VSE/SP as shipped by IBM, the startup procedures provided with the system are processed during startup. These procedures create a system with the partition layout for partitions BG through F5 that is shown in Figure 5 on page 14. The layout for these partitions is *always* the same and independent of the system environment selected during initial installation. Additional partitions (F6 to FB) may be available, depending on the environment selected.

PARTITION	USE
BG	Available
F1	VSE/POWER active
F2	CICS/DOS/VS and VSE/ICCF active
F3	ACF/VTAM active (if used)
F4	Available
F5	Available

Figure 5. Predefined Layouts for BG and F1 through F5

As shown above, licensed programs included in VSE/SP run in partitions F1, F2, and F3. Storage is allocated to all other partitions belonging to the environment, and VSE/POWER starts them.

You may use the system as it is, or you may install optional licensed programs or your own application programs. This requires that you tailor system startup according to your needs.

Components of the Startup Facility

The main components of the Startup facility are:

- IPL procedure.
- JCL ASI procedures and jobs.
- Startup program *DTRISTR*T.
- Procedures *CPUVAR**n* and *\$COMVAR*.

IPL Procedure

During initial installation, the name of your system's original IPL procedure is determined by the system mode (E, VM, or 370) chosen and the disk type on which VSE/SP resides (DOSRES). For example, a system in 370 mode that resides on an IBM 3380 will have an IPL procedure called *\$IPL780*.

After the first IPL (during initial installation), the IPL procedure is renamed to *\$IPLE* (for E mode) or to *\$IPL370* (for VM or 370 mode). This name then appears when you use the *Tailor IPL Procedure* dialog to change IPL parameters.

JCL ASI Procedures and Jobs

After IPL successfully completes, the JCL ASI procedure for the BG partition is called. The default name of this procedure is *\$0JCL370* or *\$0JCLE*.

As shown in "Overview of Startup Processing" on page 19, the procedure calls various other procedures and releases jobs necessary for specific startup tasks. This includes the startup program *DTRISTR*T, which determines the startup *modes* to be used.

Startup Program DTRISTR

The startup program *DTRISTR*T determines the startup mode for *each* partition. This decision is based on system status analysis and the startup request (if any) made by the operator.

*DTRISTR*T is activated by the JCL ASI procedure for the BG partition (*\$0JCL370*). At that time, the system variables of *CPUVAR**n* (see below) still reflect the status of the last shutdown, or the last startup if no shutdown was performed.

*DTRISTR*T analyzes the information stored in *CPUVAR**n* for each partition. In addition, *DTRISTR*T issues messages that allow the operator to intervene and request a particular startup mode. After deciding on the startup modes, *DTRISTR*T sets the system variables in *CPUVAR**n* accordingly. The JCL ASI procedures retrieve these variables to initiate the correct startup procedures and jobs.

Procedure CPUVARn

A CPUVARn procedure consists of SETPARM statements that contain system variables. These variables describe the system and reflect each partition's status. For a single CPU, one procedure is required. **n** is the CPU number.

A CPUVARn procedure is used to store the following information:

- **Use of Partitions** – This information shows which partitions are used and which programs run in the partitions.
- **Partition Status** – A partition can be either active or inactive. For example, if a partition shows status ACTIVE at startup time, it indicates that the previous shutdown was not successful.
- **Outstanding Requests** – VSE/SP functions may request a certain partition startup mode. For example, a COLD start is requested for the VSE/POWER partition after the VSE/POWER queues have been extended.
- **Results of Status Analysis and Operator Requests** – The startup program DTRISTRTRT updates system variables according to these requests.
- **Synchronization Points** – Synchronization points can be used to define how partitions interact during startup. For example, a synchronization point in one partition may trigger further processing in another partition.
- **System Environment** – This is the environment that was selected at initial installation.

*Note: As described in the manual **IBM VSE/SP Administration**, the DTRSETP utility program helps you create and modify CPUVARn procedures.*

Procedure \$COMVAR

\$COMVAR is a CPU-independent procedure where the CPU ID and number are stored. It is used to determine the CPU number of the CPU where the startup is to be performed.

The default \$COMVAR procedure is set to a single system environment. In a shared DASD environment with two or more CPUs, you *must* modify \$COMVAR to identify the different CPUs in use. In addition, each CPU requires its own CPUVARn procedure. Chapter 11, “DASD Sharing and CICS/DOS/VS Intersystem Communication” on page 111 shows the kinds of changes that you must make to these procedures.

Startup Modes

VSE/SP provides several startup modes to be able to react properly to a specific system status. The startup modes are:

- **WARM** – A WARM startup is performed by the system if the last shutdown was completed successfully. The system is in normal, re-usable condition.
- **RECOV** – A RECOV (recovery) startup is performed by the system if the last shutdown of one or more partitions could not be completed successfully or if no shutdown was performed at all.
- **COLD** – A COLD startup is performed or should be selected by the operator if, for example, there is a need to reformat the VSE/POWER queues. This means, however, that the jobs in the VSE/POWER reader queue are lost unless they are saved and reloaded afterwards.

The manual *IBM VSE/SP Operation* describes how to save and reload user jobs. System jobs are reloaded automatically.

- **BASIC** – A BASIC startup is performed or should be selected by the operator when the system does not start as normally required due to an error condition. VSE/VSAM space or ACF/VTAM buffer space could be exhausted, for example.

A BASIC startup gives you a “basic” system (Figure 5 on page 14) with the original system tables active. *Your modifications are ignored.*

During a BASIC startup, the operator is requested to specify up to three terminal addresses. These terminals are activated and allow interactive correction of errors.

- **MINI** – A MINI startup is performed or should be selected by the operator if library problems exist or library maintenance is necessary. MINI starts two partitions only, BG and F1 (VSE/POWER).

VSE/SP allows the operator to interrupt startup processing. The operator can then request a COLD, BASIC, or MINI start and override the startup modes selected by the system. *Startup modes WARM and RECOV can only be selected by the system.*

During a WARM or RECOV startup, a startup mode is selected individually for every partition of the system. This means that during startup, partitions may be started in different modes.

If startup mode is BASIC or MINI, only a certain set of partitions is started (all in BASIC or MINI mode). If the operator selects COLD, COLD is used as startup mode for all the partitions of the system.

Notes:

1. *These five startup modes have been developed for VSE/SP. They are not identical to the startup modes defined by CICS/DOS/VS.*
2. *During startup, CICS/DOS/VS selects its startup mode from the restart data set. Only specifying a BASIC or COLD startup mode forces CICS/DOS/VS to perform a cold start.*
3. *The manual **IBM VSE/SP Guide for Solving Problems** describes system conditions that should be handled with COLD, BASIC and MINI starts.*

Overview of Startup Processing

This section gives an example of the events that occur during a system startup. It assumes that:

- The system was installed on 3380 disks.
- The environment selected at initial installation specifies 6 partitions and 16M of virtual storage. A `MODE=370` supervisor is used.
- The name of the JCL ASI procedure for BG is `$0JCL370`.

When the operator initializes startup, the IPL procedure is processed first. The JCL ASI procedures and jobs are processed next.

The following summarizes the actions performed after the IPL procedure passes control to `$0JCL370`:

1. `$0JCL370` calls procedure `STDLABEL` to write system file labels into the label information area.
2. `STDLABEL` calls procedures `STDLABUP` and `STDLABUS`.

`STDLABUP` contains labels for VSE/VSAM files that are defined by the Interactive Interface. `STDLABUS` contains labels for other user-created files. For more information about `STDLABUS`, see “Creating Standard Labels for Non-VSAM User Files” on page 52.

3. `$0JCL370` then calls the procedure `SETSDL`. This procedure writes phase names into the system directory list and optionally loads selected phases into the SVA.
4. After `SETSDL` completes, `$0JCL370` calls the procedure `$COMVAR` to determine the CPU where startup is to be performed.
5. `$0JCL370` then calls the startup program `DTRISTR`. `DTRISTR` decides which startup modes are to be used. It bases its decisions on the information stored in `CPUVARn` and the startup mode requested by the operator (if any).
6. When `DTRISTR` completes, `$0JCL370` calls `VSEALC31`, which allocates partitions for a `MODE=370` supervisor.

Note: If startup mode is BASIC or MINI, the procedure `BSXALLC3` is called instead of `VSEALC31`.

VSEALCV1 is the procedure for allocating partitions for a `MODE=VM` or `E` supervisor. `BSXALLCV` is the related procedure for a BASIC or MINI startup.

7. Once partitions are allocated, the F1 partition is started, and the JCL ASI for the F1 partition, *\$1JCL370*, gets control. *\$1JCL370* starts VSE/POWER.
8. *\$1JCL370* calls procedures:
 - a. *LIBDEF* for the definitions of the partition library and sublibrary search chains.
 - b. *POWSTRTn* to start all partitions allocated. *n* is environment dependent.

When partitions are started via this procedure, the JCL ASI procedure for each partition is processed (*\$2JCL370*, *\$3JCL370*, and so on).

Notes:

- 1) *If startup mode is COLD, the VSE/POWER queues are also formatted.*
 - 2) *If startup mode is BASIC, \$1JCLBSX:*
 - *Brings up the F1 partition (VSE/POWER).*
 - *Formats temporary VSE/POWER queues on SYSWK1.*
 - *Starts partitions BG, F2, F3, F4, and F5.*
 - 3) *If startup mode is MINI, \$1JCLMIN initializes a two-partition system (BG and F1).*
9. After partition startup completes, *\$0JCL370* resumes startup processing. The BG partition is now under control of VSE/POWER.

Depending on the startup mode, the following procedures are called. These procedures determine the remaining startup activities:

- WARM – *USERBG*

USERBG calls the procedure *LIBDEF* and releases the jobs *CICSICCF* and *VTAMSTRT* (if ACF/VTAM is part of the system).

- COLD – *COLDJOBS* and *USERBG*

COLDJOBS reloads jobs provided by VSE/SP into the VSE/POWER reader queue. *USERBG* performs the same function as for a WARM start.

- BASIC – *COLDJOBS* and *BASICBG*

BASICBG is processed in the BG partition if startup mode is BASIC. BASICBG loads the jobs *VTAMBSX* and *CICSBSX* into the VSE/POWER reader queue.

Together with *COLDJOBS*, BASICBG completes the building of a basic system without user modifications. A basic system helps you recover from problem situations that may be caused, for example, by your own modifications.

- MINI – *MINIBG*

MINIBG completes the building of a two-partition system (BG and F1). You can use such a system for library maintenance, for example.

Considerations for Tailoring System Startup

The following should be considered if you plan to tailor your system's startup:

- The startup procedures and jobs are written in the job control language (JCL). Functions such as conditional job control, symbolic parameters, and nested procedures are used. These functions are described in detail in the *VSE/Advanced Functions System Management Guide*.
- Procedures CPUVARn and \$COMVAR mainly contain JCL *SETPARM* statements. For details about *SETPARM* statements, refer to the manual *VSE/Advanced Functions System Control Statements*.
- Figure 6 on page 23 shows the skeletons that VSE/SP provides in VSE/ICCF library 59 for startup tailoring tasks. The manual *IBM VSE/SP Administration* lists the contents of these skeletons and has detailed information about changing them.

When you change startup skeletons, do *not* use the original members. Copy them and apply your changes to the copied versions. Test these changed versions carefully. It is your responsibility that the changed startup is error free and runs correctly.

- You should *not* change the following:
 - \$nJCLBSX and all related procedures and jobs for BASIC startup.
 - \$nJCLMIN and all related procedures for MINI startup.

This ensures that you can still perform a BASIC or MINI startup if problems arise. This may be your only chance to correct an error.

Tasks for Tailoring System Startup

The following figure shows the tasks that are involved in tailoring your system's startup. You may perform some or all of these tasks, depending on the scope of your changes.

The manual *IBM VSE/SP Administration* has detailed information about the tailoring tasks and instructions on how to perform them. That information is not repeated in this chapter.

TASK	SKELETON(S) USED
Modify IPL procedure	(See Note 1.)
Modify allocations for partitions (See Note 2.)	SKALLxx
Modify BG partition startup	SKJCLO SKUSERBG
Modify VSE/POWER partition startup	SKJCL1 SKPWSTRT
Modify other VSE partition startups (See Note 3.)	SKINITNN SKLIBCHN SKVTAM SKCICS
Define CPU IDs in a DASD-sharing environment	SKCOMVAR
Load VSE/POWER queues after a COLD start	SKCOLD
Create a startup job for CICS/DOS/VS to be used during a BASIC start	SKLOAD

Figure 6. Tasks for Tailoring System Startup

Notes:

1. *The Interactive Interface provides the **Tailor IPL Procedure** dialog for this task.*

2. *You usually modify just one of the six skeletons available in VSE/ICCF library 59 for partition allocations:*
 - *Supervisor MODE = VM or E*
 - *SKALLC1 = 1 addr. space, 6 partitions*
 - *SKALLC2 = 1 addr. space, 8 partitions*
 - *Supervisor MODE = 370*
 - *SKALLC13 = 1 addr. space, 6 partitions*
 - *SKALLC23 = 1 addr. space, 8 partitions*
 - *SKALLC33 = 2 addr. spaces, 9 partitions*
 - *SKALLC43 = 3 addr. spaces, 12 partitions*
3. *After you modify startup skeletons, use the skeleton SKENVSEL to catalog them. SKENVSEL is also a member of VSE/ICCF library 59.*

Chapter 3. Tailoring the Interactive Interface

Overview of the Interactive Interface

The VSE/SP Interactive Interface makes it easier for you to use VSE/SP and the licensed programs included in it. Through *selection panels* of the Interactive Interface, you can select data processing tasks that you want to perform (define files or back up libraries, for example). To complete a specific task, you provide information in an Interactive Interface *dialog*.

Appendix A, “Dialogs of the Interactive Interface” on page 205 lists the dialogs that VSE/SP ships as part of the Interactive Interface. If you wish, you can use licensed programs of VSE/SP in *native* mode, instead of through dialogs.

VSE/SP User Profiles

In VSE/SP, a *user profile* defines a system user to the Interactive Interface. At initial installation, VSE/SP creates the four user profiles shown in Figure 7.

PROFILE	USER ID	PASSWORD
Model system administrator	SYSA	SYSA
Model system console operator	OPER	OPER
Model programmer	PROG	PROG
Complete initial installation	POST	BASE

Figure 7. VSE/SP Predefined User Profiles

The above passwords are defined with no expiration date. For security reasons, however, you should change the passwords soon after initial installation.

The POST user ID is a reserved ID. It is used *only* during initial installation for performing special tasks. 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 profiles for an administrator, programmer, or system console operator. You should not use them for daily operation, because they may be affected if you later install a system refresh.

Interactive Interface Panels

The Interactive Interface has several types of panels:

- Selection Panels

A selection panel displays up to nine options from which you can choose one. 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 8 on page 28 shows an 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.

- Function Lists (FULISTs)

A FULIST is a special type of data entry panel. It displays a list of items that you can process. It also displays options that you use to process the items. Each option corresponds to a specific number. You enter the number of the option you want to perform next to the item you want to process.

Figure 9 on page 28 shows an example of a FULIST.

- HELP Panels

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

A HELP panel often provides information about a message that 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.

```

IESADMSL.IESEADM          VSE/SP FUNCTION SELECTION          APPLID: DBDCCICS
Enter the number of your selection and press the ENTER key:

1  Installation
2  Resource Definition
3  Operations
4  Problem Handling
5  Program Development
6  Command Mode
7  CICS Supplied Transactions

PF1=HELP          3=SIGN OFF          6=ESCAPE(U)
                  9=Escape(m)

==>

```

Figure 8. Example of a Selection Panel

```

IESFILFL1          DISPLAY OR PROCESS A FILE          Page 2 of 3
CATALOG:  VSAM.MASTER.CATALOG          IJSYSCT
OPTIONS:  1 = SHOW      2 = SORT      3 = PRINT      4 = COPY      5 = DELETE
          6 = VERIFY      7 = LOAD

OPT      FILE ID          FILE NAME  FILE TYPE
-        NAS.MESSAGES.ONLINE      IESMSG5      B
-        TEST.AIX.NOREUSE          AIX11        A
-        TEST.DEFAIX.NOREUSE        DEFAIX        B
-        TEST.DEFAIX.REUSE          DEFAIX2       B
-        TEST.ESDS.PRINT.CLUSTER    ESDS          B
-        VSE.LOVLIB6.LIBRARY        LOVLIB6       B
-        VSE.LOVLIB7.LIBRARY        LOVLIB7       B
-        VSE.PR02.LIBRARY          PRD2          B

PF1=HELP      2=REFRESH      3=END      4=RETURN
PF7=BACKWARD  8=FORWARD      9=PREFIX

LOCATE FILE ID ==> _____

```

Figure 9. Example of a FULIST

Panel Hierarchies for Predefined Users

A *panel hierarchy* refers to the complete set of selection panels that are available to a user. VSE/SP supplies three separate panel hierarchies, one each for the predefined users SYSA, PROG, and OPER. If you wish, you can create hierarchies for your own system.

VSE/SP Application Profiles

VSE/SP provides an *application profile* for each dialog in the Interactive Interface. This profile defines execution parameters for the dialog.

The application profiles defined for Interactive Interface dialogs are important to you when creating your own selection panels and panel hierarchies. Appendix A, “Dialogs of the Interactive Interface” on page 205 lists the application profile names for the dialogs of the Interactive Interface.

Note: VSE/SP also provides a number of applications that are not included in the Interactive Interface. You can also include these applications, which are listed in Appendix C, “Additional VSE/SP Applications” on page 221, in selection panels that you create.

Overview of Interface Tailoring

Dialogs for Interface Tailoring

Although VSE/SP ships three panel hierarchies, these may not accurately reflect your specific system environment. Because of this, VSE/SP provides a function called *user interface tailoring*.

Through four VSE/SP dialogs, you can change the appearance of the Interactive Interface so that it reflects your environment and your users. As shown in the manual *IBM VSE/SP Administration*, you can use the:

1. *Maintain User Profiles* dialog to define users to the system.

Every user of the Interactive Interface has a *user profile record* that specifies:

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

“Defining User Profiles” on page 35 explains what you need to enter in the *Maintain User Profiles* dialog to create user profile records.

2. *Maintain Selection Panels* dialog to create your own selection panels.

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.

“Creating Selection Panels” on page 39 describes the kind of information you provide in the *Maintain Selection Panels* dialog.

3. *Maintain Application Profiles* dialog to define your CICS/DOS/VS applications to the system and access them from the Interactive Interface.

An *application profile record* defines a CICS/DOS/VS application to the Interactive Interface. The record contains execution information about the application such as:

- 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.

VSE/SP ships records for each dialog of the Interactive Interface. It also provides additional profile records which you can incorporate into the Interactive Interface.

“Defining Applications to VSE/SP” on page 43 has information about using the *Maintain Application Profiles* dialog.

4. *Maintain Synonyms* dialog to define names (synonyms) for selection panels and applications.

VSE/SP 2.1 supported a “fast path” function for reaching dialogs. This function, which is also supported by VSE/SP 3.1, allows users to enter a number string in a selection panel. Doing this means that they do not have to go through a series of panels to reach a dialog.

With the new *Maintain Synonyms* dialog, you also can create character strings that users can enter for accessing dialogs and applications. Users can enter such synonyms (which are easier to remember than number strings) from any selection panel of the Interactive Interface or from selection panels that you create.

Appendix B, “Fast Paths and Synonyms for Dialogs” on page 213 shows the number and character strings that are predefined for quick access to dialogs. The manual *IBM VSE/SP Administration* has information about using the *Maintain Synonym* dialog.

Note: The records for user profiles, selection panels, Interactive Interface applications, and synonyms are part of the VSE/SP control file (*VSE.CONTROL.FILE* on DOSRES).

General Planning Considerations

After you install your system, you must define profiles for each user of the Interactive Interface. Remember that you can use the SYSA, PROG, and OPER profiles that VSE/SP defines as models for various users. Do *not* use POST.

You should carefully consider who can access the dialogs for user interface tailoring. For example, 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.

You should probably use the Interactive Interface for some time before changing it. As you and other users work with the system, compare the default panels and panel hierarchies of the Interactive Interface with the distribution of tasks and responsibilities in your company. Remember that 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.

If you decide to create your own selection panels and panel hierarchies, 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.

Examples of Profile-Driven System Entries

When you create a user profile, you define what a specific user sees of the entire system.

Figure 10 on page 33 is a simple example of how a system could look to several users, each of whom has a different profile. Note that all of these users sign on to the system from the same panel. What is defined in their user profiles, however, causes the system to show each of them something different.

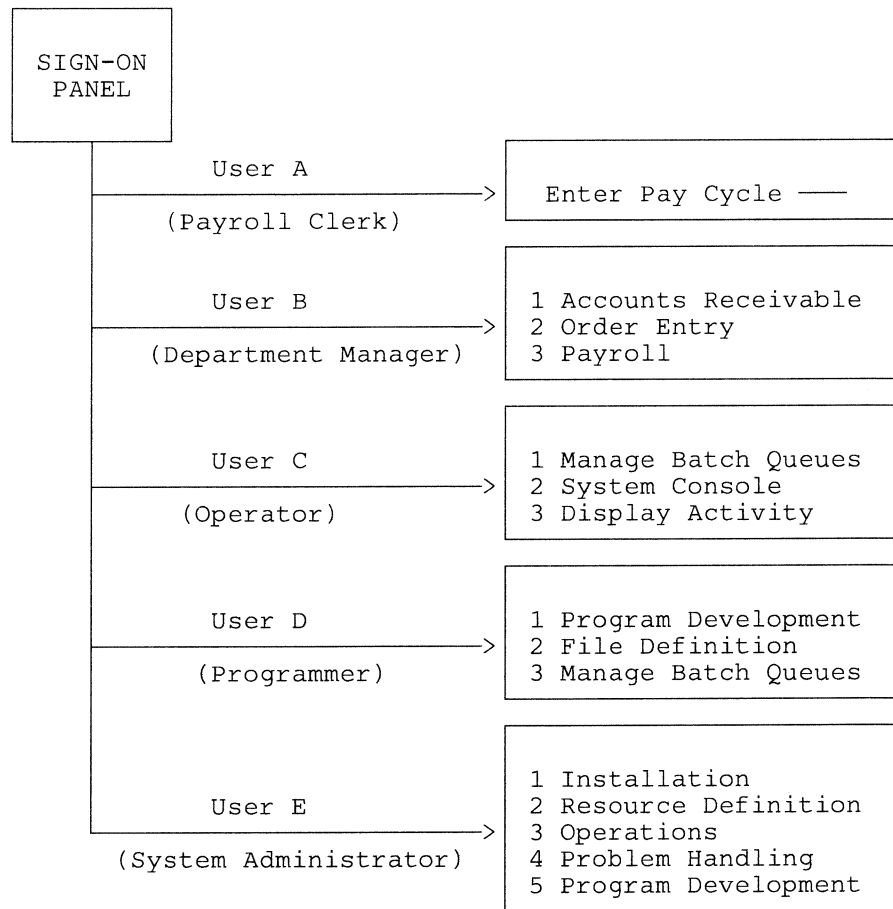
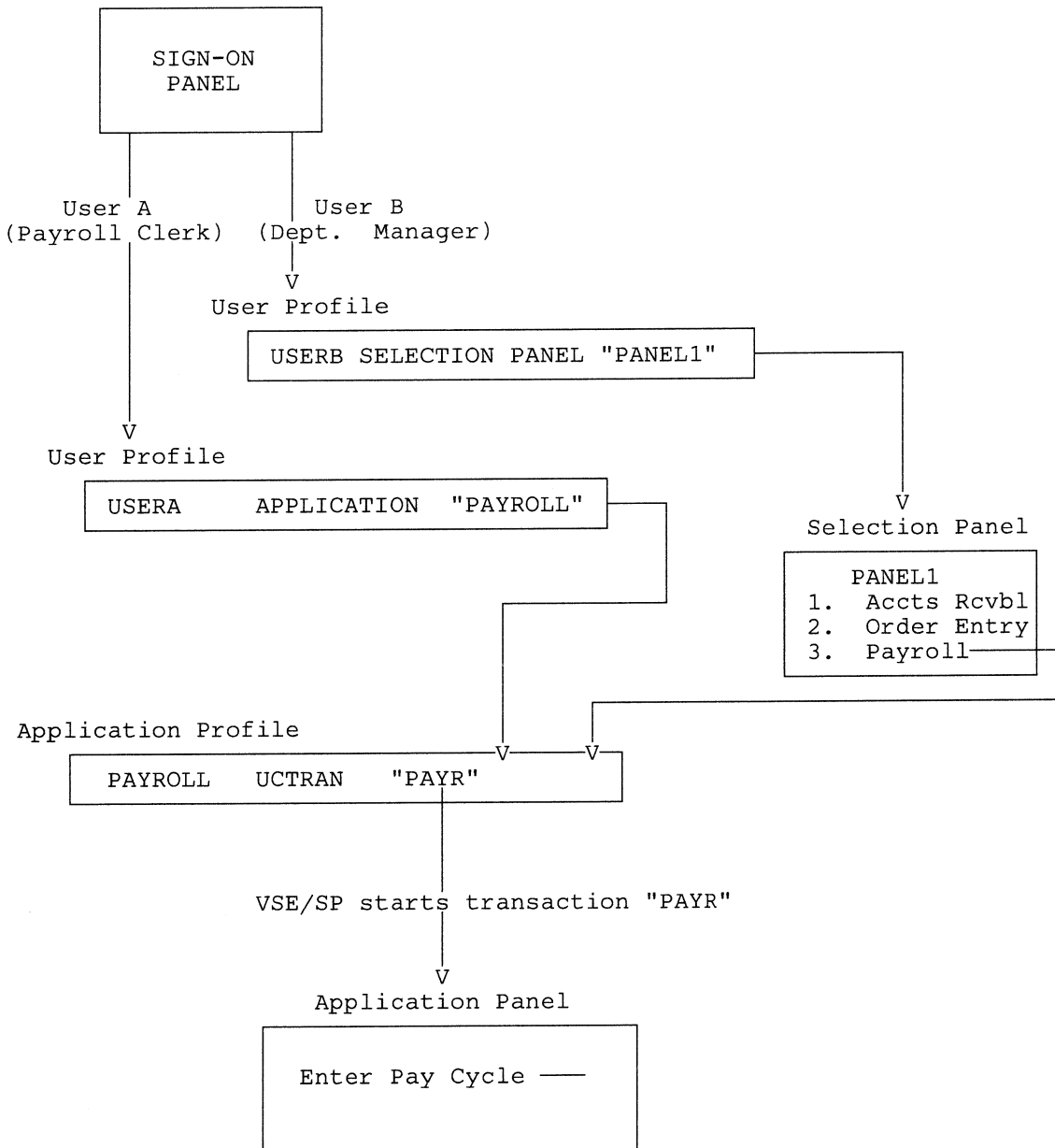


Figure 10. External View of Profile-Driven System Entry

Figure 11 on page 34 illustrates what happens when User A (a payroll clerk) and User B (a department manager) sign on to the system.

The payroll clerk's profile specifies that an application is to be invoked when this user signs on. Access to other system functions is not possible. At sign on, the system finds the corresponding application profile and then invokes the application.

Unlike the payroll clerk, the department manager needs access to several applications. This user's profile contains the name of a selection panel that offers options for these applications.



This is the first panel seen by user A.
User B sees it after selecting option 3.

Figure 11. Internal View of Profile-Driven System Entry

The rest of this chapter has planning information to help you do interface tailoring. Be sure to use the manual *IBM VSE/SP Administration* when actually performing this task. It has more detailed information about working with the dialogs for interface tailoring.

Defining 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

VSE/SP Information

When you create a user profile with the *Maintain User Profile* dialog, you need the following information for VSE/SP:

- User ID of four characters.
- User type – You can specify one of three user types:
 - Type 1 users have VSE/ICCF administrative authority. The **SYSA** and **OPER** profiles supplied by VSE/SP define a type 1 user.
 - Type 2 users have access to VSE/ICCF, but they do not have VSE/ICCF administrative authority. The **PROG** profile defines a type 2 user.
 - Type 3 users do *not* have access to VSE/ICCF. VSE/SP does not supply a predefined profile for a type 3 user.
- Password of three to six characters – The user ID and password are for signing on to the Interactive Interface.
- Number of days before the password expires.
- Name of the selection panel or application that the system invokes when the user signs on.
- Name type – This specifies whether the function that is invoked at sign on is a selection panel or an application.
- Synonym model – This is the four-character ID of another user. The synonyms defined for that user will be the defaults for the new user.
- Name of the user's default VSE/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 leave the Interactive Interface and use native CICS/DOS/VS. If a user has

this authorization, the selection panels display **PF6** and **PF9** for the escape function.

With the escape function, a user can access CICS/DOS/VS applications that you have not incorporated into the Interactive Interface.

- Define VSE/VSAM files.
- Manage VSE/VSAM catalogs.
- Delete Online Problem Determination (OLPD) incident reports.
- 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.

Note: Type 3 users are only authorized for the first two of the above options. Authorization for the last three options is only allowed for an administrator.

CICS/DOS/VS Information

You need to specify the following options for every user profile that you define. For detailed information about these options, refer to the appropriate CICS/DOS/VS manuals.

- Operator ID of three characters.
- Operator priority – This value (from 0 to 255) 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.
- Timeout limit – The number of minutes that the user's terminal can be inactive before the system performs an automatic sign off. *Only define this option for type 3 users, users with no access to VSE/ICCF..* Enter 0 (no timeout) for type 1 and 2 users.
- Security keys – CICS/DOS/VS allows you to specify up to 64 security keys for a user. Note that keys 1 and 61 are required in order to use the Interactive Interface.
- Operator classes – Up to 24 operator classes can be specified for a user.

- Resource security classes – Up to 24 resource security classes can be specified for a user.

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

VSE/ICCF Information

Only administrators (type 1 users) and programmers (type 2 users) have access to VSE/ICCF functions. You do not specify VSE/ICCF information for a type 3 user.

When creating a profile for an administrator or a programmer, you must define the user's *primary* VSE/ICCF library. The user can both read and write data to it.

When the user signs on, the system automatically will access the primary library. Its number will appear as the default on Interactive Interface panels for VSE/ICCF functions.

You do not need to specify any other VSE/ICCF information for the user. You can use the VSE/SP defaults instead. In many cases, these defaults should be satisfactory.

If you wish, however, you can change the defaults. The one that you probably will change most often is the default for *alternate* VSE/ICCF libraries. When changing this default, you can specify up to 8 additional private libraries for a user. The default is no alternate libraries.

In addition, you can also change the following defaults. Before doing so, you should carefully consider these changes to ensure that the Interactive Interface operates correctly for the user. For detailed information about VSE/ICCF options, refer to the manual *VSE/ICCF Installation and Operations Reference*.

- Option byte settings – The default settings for OPTA, OPTB, and OPTC are based on the VSE/SP user type. The defaults should be satisfactory. The manual *IBM VSE/SP Administration* describes the changes you can make to these settings.
- VSE/ICCF security keys – You can specify up to 32 VSE/ICCF security keys.
- MAXSTATE (a value greater than 100 and less than 9999).
- CLASS (default interactive partition).
- LINESIZE (value from 1 to 80).
- MAXPRINT (cannot be greater than 9999).
- MAXPUNCH (cannot be greater than 32,767).
- TIMELIM (cannot be greater than 32,767).

- TIMEMAXEX (cannot be greater than 65,535).

Do not change the default values of the following options. If you do, the Interactive Interface may not operate correctly:

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

Note: Figure 113 on page 237 lists the VSE/ICCF libraries that VSE/SP defines. As shown, you can only allocate libraries 3 to 7, 11 to 49, and 70 to 99 to users. Also note that access to public libraries 50 to 69 is read only for type 2 users.

TCT OPERSEC Option

If you currently use the TCT OPERSEC option which allows some one 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.

Creating 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 panels. You can also create HELP panels for your selection panels.

Each selection panel is represented by a selection panel record. The record is maintained in the VSE/SP control file.

When you create a selection panel, you must specify a unique name for it. This name *cannot* begin with the characters IES, INW, or INF.

A selection panel can have up to nine selections. For each selection, you must specify its:

- **SEQ Number** – A number in the range from 1 to 9. With it, you define how each selection fits into the sequence of selections on the panel.
- **NAME** – A 1 to 8 character name of either another selection panel or an application profile record. This is what the system invokes when a user chooses this selection.

A selection can invoke a 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.
 4. An additional VSE/SP application that is not included in the Interactive Interface.
 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 as described under “Defining Applications to VSE/SP” on page 43.
- **TYPE** – Specifies what you entered for NAME.
 - 1 = Application profile
 - 2 = Selection panel
 - **SELECTION TEXT** – Up to 60 characters of explanatory text that is displayed next to the sequence number on the panel.

As stated in the description for **NAME**, you can invoke the dialogs of the Interactive Interface from selection panels that you create.

Appendix A, “Dialogs of the Interactive Interface” on page 205 lists the dialogs included in the Interactive Interface.

VSE/SP also provides additional application profiles that are not included in the Interactive Interface. You can invoke these applications, which are listed in Appendix C, “Additional VSE/SP Applications” on page 221, from your selection panels.

Both appendixes show the:

- Name of the application profile that you would specify when creating a selection panel.
- VSE/ICCF interactive partition class and size requirements, if necessary.
- Number of users who can concurrently execute the dialog or application.

Notes:

1. *Figure 12 on page 41 shows the characteristics of the default VSE/ICCF interactive partitions. VSE/ICCF interactive partition requirements and eligibility for concurrent execution are important considerations when you create your own panel hierarchy.*

As shown in Figure 12 on page 41, the interactive partitions occupy 4352K of storage. If you increase the size of the existing partitions or add class A and B partitions, you also should make a corresponding increase to the size of the F2 partition.

Note that 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.*
 - *Decrease the size of any partition.*
 - *Remove all class A and B partitions. The Interactive Interface requires at least one partition of each class.*
2. *To improve Interactive Interface performance, you may have to increase the number of VSE/ICCF interactive partitions.*

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

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	768K	Interactive Interface

Figure 12. Default VSE/ICCF Interactive Partition Characteristics

Creating HELP Panels

You can create HELP panels for your selection panels. By writing your own HELP text, you can use expressions suited to your environment. You can also use a language other than the one that you selected when ordering VSE/SP.

In general, to create HELP panels you have to:

1. Create a VSE/ICCF library member to contain the HELP text. This library member must have the same name as the selection panel associated with the HELP.
2. Edit the member and enter lines of HELP text. Do not enter lines longer than 68 characters, because the system will truncate them. You can have blank lines in the text, but trailing blanks will be suppressed.

Your HELP text can have a maximum of 4000 characters, not including blank lines or suppressed blanks. This is approximately 6 to 8 panels (pages) of HELP text.

3. Use the *Maintain Selection Panels* dialog to incorporate your HELP text into the system. When the system processes the the VSE/ICCF library member, it will divide the text into panels (pages) of 16 lines, including blank lines.

Note that you do not need to define how the system should manage panel display of HELP text or forward and backward paging. The system does this automatically for you.

The manual *IBM VSE/SP Administration* has additional information about creating HELP panels.

Defining Applications to VSE/SP

With the *Maintain Application Profiles* dialog, you can define, modify, or delete application profile records. Defining application records for your CICS/DOS/VS applications allows you to include them in the Interactive Interface. You then can automatically invoke the application when a user signs on or define it as an option on a selection panel.

Contents of an Application Profile Record

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

- **NAME** – A unique 1 to 8 character name for the application. This is the name which you would specify either in a user profile or a selection panel record.
- **CODE** – Defines how the application is initiated.
 - **1** = Initiate transaction via CICS START.
 - **2** = LINK to a program. A CICS LINK is performed to a CICS/DOS/VS 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.

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

1. You can add a line of code to your last transaction program so that it transfers control back to the Interactive Interface. (See Figure 13 on page 45.)
 2. The user can press **PF3** to return to the Interactive Interface.
- **4** = ATTACH a conversational transaction. The transaction begins as if a transaction code had been entered from the terminal.

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

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

Note: VSE/SP uses additional codes for its dialogs. You can only use the four codes shown above.

- **ACTIVATE** – The name that activates the application. This is either a CICS/DOS/VS transaction code or a CICS/DOS/VS program name, depending on the CODE value.

- CASE – How terminal input is passed to the application:
 - 1 = Uppercase (CICS/DOS/VS performs Upper Case Translation – UCTRAN.)
 - 2 = Upper- and lowercase (CICS/DOS/VS does not perform UCTRAN.)

- DATA – 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. Note that “Examples of Application Coding for the Interactive Interface” has coding examples for retrieving data.

- SHOW – 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 displayed on user’s terminal.
 - 2 = data not displayed on user’s terminal.

Function Selection Within an 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 how end users work with these applications by creating a selection panel that replaces the application menu. The panel’s selections can be the different subfunctions of the application. In this way, you have:

- Uniform types of selection panels throughout your system.
- The ability to create your own HELPs for an application.
- A way for users to access new subfunctions. Additional selections on the panel can be used for new subfunctions.

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. The correct application subfunction is thus 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

Figure 13 is an example of command level coding for Code 1.

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

Figure 13. CICS/DOS/VS Command 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.

Chapter 4. Tailoring Other System Resources

The previous two chapters dealt with the major tasks of tailoring your system's startup and the Interactive Interface. This chapter outlines a number of other "tailoring" tasks that you may choose to do. These include:

- Tailoring compile skeletons.
- Redefining IDs for system transactions.
- Modifying the *VSE/SP Online* panel for signing on to the system.
- Creating standard labels for non-VSAM user files.
- Installing CICS/DOS/VS in more than one partition.

Notes:

1. *For information about working with VSE user libraries, see Chapter 5, "Managing VSE User Libraries" on page 61.*
2. *Some of this chapter's tasks are done using VSE/SP skeletons. The manual **IBM VSE/SP Administration** lists skeleton contents in its instructions for performing these tasks.*

Whenever you use a skeleton, you should copy it from its original library to your primary VSE/ICCF library. Make your changes to the copy, not the original.

3. *Appendix F, "VSE/ICCF and VSE/POWER Generation Parameters" on page 235 shows the generation parameters that VSE/SP 3.1 uses for VSE/ICCF and VSE/POWER. **IBM VSE/SP Administration** describes how you can change these parameters, if you wish.*

Tailoring Compile Skeletons

The *Program Development Library* dialog has a **COMPILE** option that is used to submit a VSE/ICCF library member for assembly or compilation. Before users can submit members, however, one or more compile skeletons in VSE/ICCF library 2 must be tailored to your installation standards.

Figure 14 lists the name and function of each compile skeleton provided by VSE/SP.

Member Name	Function
C\$\$COONL	COBOL online program.
C\$\$COBAT	COBOL batch program.
C\$\$COSUB	COBOL batch subroutine.
C\$\$COMAP	COBOL BMS map definition.
C\$\$PLONL	PL/I online program.
C\$\$PLBAT	PL/I batch program.
C\$\$PLSUB	PL/I batch subroutine.
C\$\$PLMAP	PL/I BMS map definition.
C\$\$ASONL	Assembler online program.
C\$\$ASBAT	Assembler batch program.
C\$\$ASSUB	Assembler batch subroutine.
C\$\$ASMAP	Assembler BMS map definition.
C\$\$RPONL	RPG-II online program.
C\$\$RPBAT	RPG-II batch program.
C\$\$RPSUB	RPG-II batch subroutine.
C\$\$RPMAP	RPG-II BMS map definition.
C\$\$FOBAT	FORTTRAN batch program.
C\$\$FOSUB	FORTTRAN batch subroutine.

Figure 14. Compile Skeletons in VSE/ICCF Library 2

The system administrator should plan who will use the compile skeletons and how they will use them. The administrator can do one of two things:

1. Give some or all application programmers the skeletons and have them tailor them for their own needs. In this case, the administrator would copy skeletons from library 2 into a library which programmers can access.
2. Leave the skeletons in library 2 and tailor them for the entire system. This allows the administrator to set standards for compile jobs and have every programmer use them.

When the COMPILE option is selected, the system searches for the correct compile skeleton in the following order:

1. User's primary library.
2. User's secondary library.
3. VSE/ICCF library 2.

The chapter "Supporting Program Development" in *IBM VSE/SP Administration* has examples of compile skeletons and describes the changes that should be made.

Redefining IDs for System Transactions

VSE/SP provides several transaction IDs that may conflict with your own transaction ID names. If you want to use your own transaction IDs, you can override the following VSE/SP IDs:

- OLPD
- USER
- HELP
- PF1
- PF3
- PF13
- PF15

OLPD activates the Online Problem Determination function. USER displays active users. The HELP and PF key transactions return a user from native CICS/DOS/VS mode to the Interactive Interface.

To use any of these IDs for your own transactions, you can do one of the following:

1. Select the *Invoke CEDA* dialog from the *CICS Supplied Transactions* panel, and redefine the VSE/SP definition of the transaction ID.
2. If you use DFHPCT to define transaction IDs:
 - Copy the skeleton *DFHPCTSP* in VSE/ICCF library 59. Do not change the name of the copy.
 - Edit the copy, and insert your transaction ID definitions *before* the COPY statement for IESZPCT.
 - Submit your version of DFHPCTSP for processing.
 - Shut down and restart CICS/DOS/VS.

Note: Do *not* redefine all PF and HELP transaction IDs to ensure that you can always use the Interactive Interface correctly.

“Program Control Table” on page 290 shows the transaction IDs defined by VSE/SP. This includes the seven transaction IDs listed above. Do *not*, however, override any of the other IDs defined by VSE/SP. If you do, the Interactive Interface may not work correctly, and functions that you use could have unpredictable results.

In addition, do *not* override transaction IDs that are reserved by CICS/DOS/VS. These IDs are listed in the *CICS/DOS/VS Installation and Operations Guide*.

Modifying the Online Panel

If you wish, you can modify the *VSE/SP Online* panel for signing on to the system. To help you do this, VSE/SP provides the skeleton *IESELOGO*, a member of VSE/ICCF library 59. With the skeleton, you can:

- Change the *logo* that is displayed on the panel.

The default is *VSE/SP*, but you can create your own design.

- Allow CICS/DOS/VS users to *escape* to CICS/DOS/VS from the panel without signing on to the Interactive Interface.

Note, however, that if a user escapes to native CICS/DOS/VS without signing on to the Interactive Interface, security values for VSE/SP and CICS/DOS/VS are *not* established.

IBM VSE/SP Administration describes how to use the skeleton.

Creating Standard Labels for Non-VSAM User Files

The Interactive Interface provides the *Define a New File* dialog for creating VSE/VSAM files. Running the job produced by the dialog automatically adds a standard label for a VSE/VSAM file to the procedure STDLABUP.

You can use the skeleton *STDLABUS* to create standard labels for *non-VSAM* user files. The skeleton has VSE/POWER JECL and JCL statements to catalog the procedure in IJSYSRS.SYSLIB.

STDLABUS is a member of VSE/ICCF library 59. To create standard labels for non-VSAM user files, first copy the skeleton to your primary VSE/ICCF library. The name of the copied member *must* be STDLABUS. At IPL, the system standard label procedure STDLABEL calls STDLABUS to load its labels.

As shown in *IBM VSE/SP Administration*, STDLABUS contains *DLBL* and *EXTENT* statements for defining labels for direct access, sequential, and indexed sequential files. It also has samples for each of these file types.

In the DLBL statements, you specify a file's:

- Name (1 to 7 characters).
- ID (1 to 44 characters).
- Retention period.

In the EXTENT statements, you specify the:

- System number of the file.
- Volume number of the disk where the file resides.
- Extent type code. This value depends on the type of file:
 - For direct access files, you must specify 1.
 - For sequential files, specify 1 for Prime data or 8 for Prime data with split cylinder (not FBA)
 - For indexed sequential files, specify 1 for Prime data, 2 for Overflow, and 4 for Index.
- Extent sequence number. This value starts with 0.
- Starting track or block for the extent.
- Number of tracks or blocks allocated to it.
- The split cylinder start track (only for sequential files on split cylinders).

Note: *STDLABUS* also has *OPTION* statements for adding partition labels. If you wish, you can add standard labels after each statement.

Installing CICS/DOS/VS in Several Partitions

If you wish, you can have several CICS/DOS/VS subsystems active in your VSE/SP system. Your main CICS/DOS/VS subsystem is the one that runs in the same partition as VSE/ICCF. It provides the full functions of the Interactive Interface, including resource definition.

From additional CICS/DOS/VS subsystems (without VSE/ICCF), you can use:

- The Interactive Interface to sign on and off from the system (control system access).
- The Interactive Interface 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.
- Online Problem Determination (OLPD).
- Intelligent Work Station (IWS) support.

Note: In this environment, the Host Transfer File must be defined with SHAREOPTION 4. This can be specified using the *SKIWSTF* skeleton.

- Most functions of the *Manage Batch Queues* dialog.
- The *Inspect Message Log* dialog.
- The *Display Channel and Device Activity* dialog.
- The *Display System Activity* dialog.
- The *Display Storage Layout* dialog.
- The *Display Active Users/Send Message* dialog.

The CICS/DOS/VS table entries for the PPT and the PCT can be the same for the main and additional subsystems. The table entries are provided as members of VSE/ICCF library 59.

Note: VSE/SP 3.1 defines a virtual I/O (VIO) area of 512K for MODE=E and MODE=370 supervisors. Of this 512K, CICS/DOS/VS uses 64K; VSE/POWER uses 192K. If your system runs more than one CICS/DOS/VS subsystem, you may want to increase the size of the VIO area by 64K for each additional subsystem.

CICS/DOS/VS Tables for a Second Partition

VSE/SP ships two FCTs so that you can establish a second CICS/DOS/VS partition with read only access to the files:

- IESTRFL – message file for CICS/DOS/VS programs.
- IESCNTL – control file for VSE/SP system records.

The name of the FCT for a second CICS/DOS/VS partition is *DFHFCTSO*. Its contents are shown in Appendix I, “CICS/DOS/VS Tables” on page 269.

You must also copy and change the following tables for a second partition. All of these tables are members in VSE/ICCF library 59:

- DFHDCTSP
- DFHPPTSP
- DFHPCTSP
- DFHSITSP

Use the same CICS/DOS/VS *suffix* for the last two characters of each copy's name. For example, if you are going to have a second CICS/DOS/VS subsystem in partition F5, the copied members could have the names:

- DFHDCTF5
- DFHPPTF5
- DFHPCTF5
- DFHSITF5

In DFHSITF5, you would need to change the suffixes for the DCT, FCT, PCT, and PPT from **SP** to **F5**. The suffix for the TCT would also need to be changed. **P1**, for example, could be used as in the *Hardware Configuration* dialog.

Files Required for a Second CICS/DOS/VS Subsystem

Figure 15 summarizes the files needed and to be created for a second CICS/DOS/VS subsystem.

File Name (see Note 1)	File Identification (see Note 2)	File Type	File Definition (see Note 3)	Further Action (see Note 4)
DFHRSD	CICSF5.RSD	VSAM KSDS	Yes	Yes
DFHNTRA	CICSF5.TD.INTRA	VSAM ESDS	Yes	No
DFHTEMP	CICSF5.DFHTEMP	VSAM ESDS	Yes	No
DFHSTM	CICSF5.AUTO.STATS.A	VSAM SAM ESDS	Yes	No
DFHSTN	CICSF5.AUTO.STATS.B	VSAM SAM ESDS	Yes	No
DFHDMPA	CICSF5.DUMPA	VSAM SAM ESDS	No	No
DFHDMPB	CICSF5.DUMPB	VSAM SAM ESDS	No	No
DFHAUXT	CICSF5.AUXTRACE	VSAM SAM ESDS	No	No
DFHJ01A	CICSF5.SYSTEM.LOG.A	SAM	No	Yes
DFHJ01B	CICSF5.SYSTEM.LOG.B	SAM	No	Yes
DFHJ02A	CICSF5.USER.JOURNAL.A	SAM	No	Yes
DFHJ02B	CICSF5.USER.JOURNAL.B	SAM	No	Yes
MSGUSR	CICSF5.MSGUSR	SAM	No	No
IESPRB ¹	VSEF5.ONLINE.PROB.DET.FILE	VSAM KSDS	Yes	No
IESTRFL ²	VSEF5.TEXT.REPSTORY.FILE	VSAM KSDS	Yes	Yes
IESROUT	VSEF5.MESSAGE.ROUTING.FILE	VSAM KSDS	Yes	No

Figure 15. Files for a Second CICS/DOS/VS

¹ A second IESPRB file is only needed if the second CICS/DOS/VS requires the Online Problem Determination (OLPD) function.

² The IESTRFL file is only needed if the second CICS/DOS/VS is running on another CPU (in a DASD sharing environment).

Notes:

1. The file names are the same for both CICS/DOS/VS subsystems. They cannot be changed. The file IDs are used to distinguish the files for both CICS/DOS/VS subsystems.
2. File IDs must be unique. In the example, partition ID F5 is used to identify the files for the second CICS/DOS/VS subsystem. The label (file ID) for each file must be stored in the partition's label area.

3. **YES** means:

*This file should be defined with the **File and Catalog Management** dialog. "Creating Non-Shared VSE/VSAM Files for CPU2" on page 195 describes how to define such files for a DASD sharing environment. You can follow the steps described there. However, do **not** change the label procedure name **STDLABUP** in the job stream created by the dialog. Instead, copy the labels from **STDLABUP** to **STDLABUS** and change the file IDs accordingly (**F5**). See also the following paragraphs.*

NO means:

*The file needs not to be defined. It is sufficient to copy old label information for the new file. The copied label information must be stored in procedure **STDLABUS** for the partition of the second CICS/DOS/VS subsystem. In the example, this is partition **F5**. VSE/SP provides skeleton **STDLABUS** to add partition standard labels to your system. The manual **IBM VSE/SP Administration** describes the skeleton in detail.*

*For VSAM SAM ESDS files, copy the label information of the old file from procedure **STDLABUP** to procedure **STDLABUS** and change the **DLBL** information accordingly. Catalog **STDLABUS** with
|| **OPTION PARSTD = F5**.*

*For SAM files, copy the label information of the old file from procedure **STDLABEL** to procedure **STDLABUS** and change the **DLBL** and **EXTENT** information accordingly. Catalog **STDLABUS** with
|| **OPTION PARSTD = F5**.*

4. *Before you can use the files **CICSF5.RSD** and **VSEF5.TEXT.REPSTORY.FILE**, data must be loaded into them. Refer to "Loading Non-Shared Files" on page 197 for a description of this task and the job streams required.*

SAM files for the CICS/DOS/VS system log and user journal must be formatted before they can be used. Refer to "Formatting Non-Shared Files" on page 198 for the job streams required.

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. The same basic resources can be used in both environments.

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 16 on page 57.

	With ACF/VTAM	With BTAM-ES
Log on?	VTAM application ID	CICS/DOS/VS User ID
Switch to the other?	PF4 from VSE/SP Online panel or dedicated terminals	Dedicated terminals or hardware switch

Figure 16. 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 that corresponds to the APPLID in CICS/DOS/VS (for example, CICS1 and CICS2). The manual *IBM VSE/SP Administration* explains how to define ACF/VTAM application names using the *Maintain VTAM Application Names* dialog.

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 VSE/ICCF library 59.

Figure 17 on page 58 shows a system with ACF/VTAM and two CICS/DOS/VS partitions. Note that in this environment, F3 (ACF/VTAM) requires an allocation larger than 2560K, the default for VSE/SP. The additional storage required depends on the number of terminals attached to the system.

Figure 18 on page 59 shows a system with BTAM-ES and two CICS/DOS/VS partitions.

In both environments, CICS1 provides a full-function Interactive Interface; CICS2 a limited-function Interactive Interface.

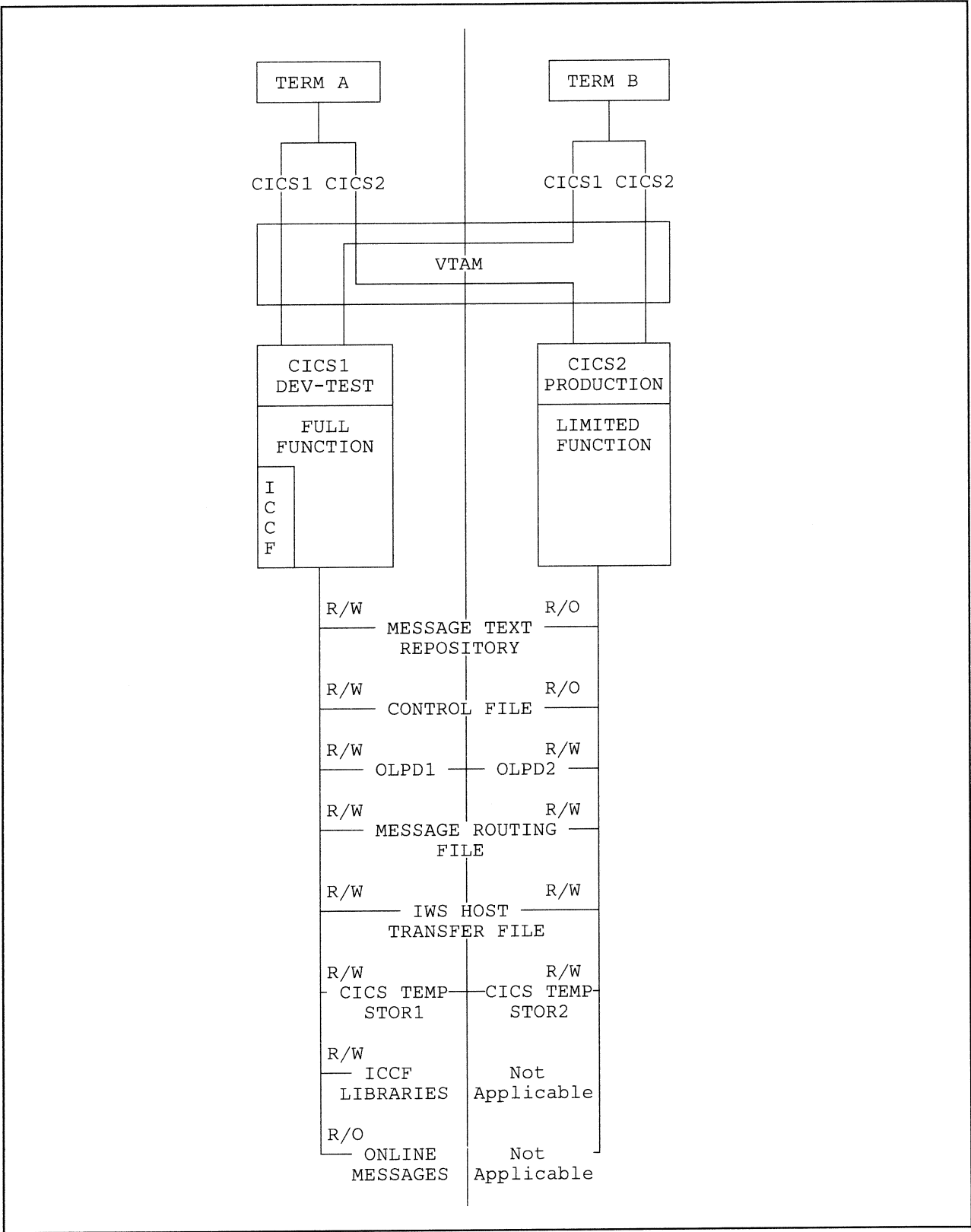


Figure 17. Two CICS/DOS/VS Partitions with ACF/VTAM

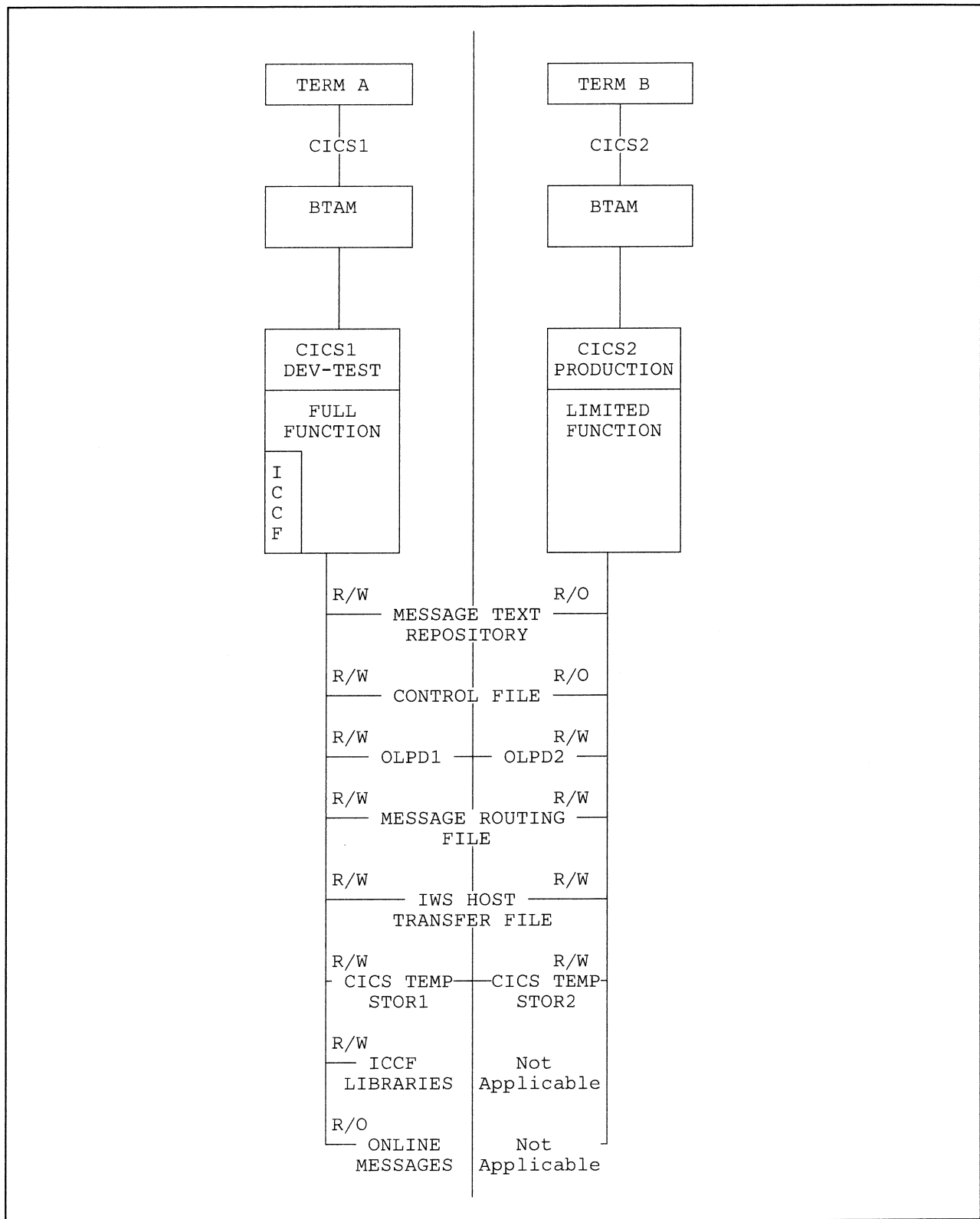


Figure 18. Two CICS/DOS/VS Partitions with BTAM-ES

Chapter 5. Managing VSE User Libraries

Chapter 2 of the manual *IBM VSE/SP Installation Planning* describes the different libraries provided by VSE/SP. This chapter has information about VSE *user* libraries that you create for your own applications.

It is recommended that you create separate user libraries and sublibraries for your applications instead of using PRD2. This keeps those libraries independent of any future changes that IBM service may make to PRD2. In addition, separate libraries offer you more flexibility with regard to size and organization.

General Planning Considerations

You can define VSE user libraries either in VSAM-managed space or in space that is not managed by VSAM. In either case, you must define at least one *sublibrary* before a new library can be used. This is a requirement of the VSE/Advanced Functions librarian, which controls all VSE libraries in your system.

With the *File and Catalog Management* dialog, you can define user libraries in VSAM-managed space. These libraries have the following characteristics:

- The space for the library is defined as a VSE/VSAM cluster.
- A secondary allocation allows for dynamic extension of the library.
- Secondary extents are *not* dynamically reclaimed when they are empty.

The manual *IBM VSE/SP Administration* explains how to use the *File and Catalog Management* dialog.

You can also use skeletons provided by VSE/SP to create and manage libraries in space that is not managed by VSAM. These skeletons are described in:

- “Defining VSE User Libraries in Space Not Managed by VSE/VSAM” on page 63.
- “Extending VSE User Libraries in Space Not Managed by VSE/VSAM” on page 64.

- “Deleting VSE User Libraries in Space Not Managed by VSE/VSAM” on page 65.

You can allocate both multi-extent and multi-volume user libraries. When you define a multi-volume library, you must use the same DASD device type.

After defining a library, you must add its name to the library definition chain using a *LIBDEF* command. The skeleton *SKLIBCHN* in VSE/ICCF library 59 can be used to do this.

Note: The manual *VSE/Advanced Functions System Control Statements* describes the *LIBDEF* command in detail.

Defining VSE User Libraries in Space Not Managed by VSE/VSAM

With the *SKLIBDEF* skeleton, you can define a VSE user library in space that is not managed by VSE/VSAM. The skeleton has two major steps that:

- Add a standard label for the new library.
- Create the library.

The skeleton is shipped in VSE/ICCF library 59. In the skeleton's DLBL, EXTENT, and DEFINE LIB statements, you must specify the:

- File name for the library (1 to 7 characters).
- File ID (1 to 44 characters).
- Volume number (6 characters) where the library will reside.
- Sequence number of the disk extent defined for the library. This value can be in the range 0 through 15. Extents can be defined on several disks of the same type.
- Start location of the extent in tracks or blocks.
- Number of tracks or blocks to be allocated for the extent on the first volume.

If you wish, add sublibrary definitions to the skeleton after the **DEFINE LIB** statement. At least one sublibrary must be defined before the library can be used. The VSE/Advanced Functions command for defining a sublibrary is:

```
DEFINE SUBLIB=lib.sublib
```

where **lib** = the name you entered in the DEFINE LIB command. **sublib** = the name of the sublibrary.

After you define the library, add a label for it to your copy of the standard label skeleton STDLABUS. Refer to "Creating Standard Labels for Non-VSAM User Files" on page 52 for information about STDLABUS.

Extending VSE User Libraries in Space Not Managed by VSE/VSAM

You can use the *SKLIBEXT* skeleton to extend a VSE user library in space that is not managed by VSE/VSAM. The job that you create using the skeleton:

1. Backs up the library on tape.
2. Deletes the library.
3. Deletes the existing standard label for the library.
4. Adds a new standard label.
5. Restores the library from tape.

The skeleton is shipped in VSE/ICCF library 59. In the job statements for backing up and restoring the library, you need to specify the following variables:

- File name for the library (1 to 7 characters).
- Address (cuu) of the tape unit to be used for the backup/restore.

In the job statements that add a new standard label and extend the library, you need to specify variables for the:

- File name for the library (1 to 7 characters).
- File ID (1 to 44 characters).
- Volume number (6 characters) of the extent.
- Sequence number of the extent. This value can be in the range 0 through 15. Extents can be defined on several disks of the same type.
- Start location of the extent in tracks or blocks.
- Number of tracks or blocks to be allocated for the extent on the first volume.

After you extend the library, change the existing label for it in your copy of the standard label skeleton STDLABUS. Refer to “Creating Standard Labels for Non-VSAM User Files” on page 52 for information about STDLABUS.

Deleting VSE User Libraries in Space Not Managed by VSE/VSAM

You can use the *SKLIBDEL* skeleton to delete a VSE user library in space that is not managed by VSE/VSAM. The job that you create using the skeleton deletes both the library and its standard label.

The skeleton is shipped in library 59. The only variable that you need to specify is for the library's file name (1 to 7 characters).

After you delete the library, also delete the label for it in your copy of the standard label skeleton STDLABUS. Refer to "Creating Standard Labels for Non-VSAM User Files" on page 52 for information about STDLABUS.

Chapter 6. Problem Solving

You should plan how your installation will manage problems that may occur. This involves:

- Defining who should be responsible for handling problems from the time they are reported until they are solved. For many systems, the logical choice is the administrator.
- Establishing a standard procedure for reporting and managing problems.
- Recording problems and their solutions in a *Problem Log*.

To better support your system's users, you may also want to create a telephone "hot line." They can call this number either to get help in performing their work or to report problems that they cannot solve.

Steps in Problem Solving

This section outlines the basic procedure that should be followed when a problem occurs in your VSE/SP system. This includes any problems that you may have with National Language Support (NLS). The procedure assumes that the administrator has the key role in problem solving.

Establishing a similar procedure for your own system should help to minimize "down time." In addition, it should clarify how and when IBM becomes involved with specific problems.

When a problem occurs that a user does not understand or cannot handle, the user should contact the administrator and describe what happened. After getting a complete description, the administrator should:

1. Make a record of the problem. If severe, it should have an entry in the system's Problem Log. The manual *IBM VSE/SP Guide for Solving Problems* has an example of such an entry.
2. Gather all information relating to the problem.

The manual *IBM VSE/SP Guide for Solving Problems* explains how to use specific utilities, procedures, and dialogs for collecting error information. This includes VSE/SP's *Online Problem Determination (OLPD)* function. With it, the administrator can review information about CICS/DOS/VS applications that have abended.

In addition, the administrator can do one or more of the following:

- a. Use a terminal printer to copy what appears on the user's screen.
 - b. If applicable, print the contents of a job that was submitted by the user. Jobs that are stored in VSE/ICCF members can be printed to review the Job Control Language (JCL) used.
 - c. Print the output of a job.
 - d. Review the messages that appeared at the system console. This can be done either at the console or from a terminal via the VSE/SP system console function.
 - e. Use a VSE/SP dialog to print and analyze dumps.
 - f. Use a VSE/SP dialog to inspect the contents of the VSE/SP *message log* file.
3. Try to analyze the problem using the information.
 4. Try to recreate the problem *if*:
 - It appears to have been caused by a user error, or
 - Not enough information was gathered the first time.
 5. Determine the likely cause of the problem (hardware, software, or user).
 6. If possible, solve the problem and return to normal operation. If not, report it to the appropriate support group. This can include:
 - Programmers responsible for user programs running on your system.
 - Network support personnel (if your system is part of a network).
 - Vendor (if using purchased software).
 - IBM service representative (if the problem seems to be with hardware).
 - IBM Support Center (if the problem seems to be with VSE/SP or another licensed program supported by IBM).
 7. Record the solution to the problem in the Problem Log. This information will be valuable for solving future problems that may occur.

Note: The documentation for applications that you install should include problem recovery procedures.

VSE/SP Dialogs for Problem Solving

The system's *Problem Handling* panel provides access to several dialogs that aid in problem diagnosis and solution. Some of these dialogs can be used to analyze CICS/DOS/VS transaction abends that may occur. Others support interactive viewing and analysis of batch program and standalone storage dumps.

This section summarizes the major functions of the dialogs for problem handling. Note that an additional selection, *Retrace History File*, also appears on the *Problem Handling* panel. With it, users can collect and analyze information from the System History File.

Online Problem Determination (OLPD)

The *Online Problem Determination* dialog makes CICS/DOS/VS transaction abend information available at a terminal. When a CICS/DOS/VS transaction abends, the OLPD function:

- Creates an *incident report* for the abend. This report has information such as a summary of the problem and its possible cause.
- Saves the screen in use at the time of the abend.
- Displays an *abend notification* panel.
- Redisplays the original user screen.

The *Online Problem Determination* dialog then can be used to access incident data. The dialog has options for listing, displaying, and deleting incident reports.

Notes:

1. *When a transaction abends, CICS/DOS/VS also writes a transaction dump to the CICS/DOS/VS dump file.*
2. *In some cases, the system cannot collect error data. If possible, however, it displays a message to the user and writes a message to the VSE/SP message log file that describes the error.*
3. *For detailed information about handling transaction abends, see "Diagnosing Transaction Abends" in **IBM VSE/SP Guide for Solving Problems**.*

Inspect Message Log

With the *Inspect Message Log* dialog, users can display the message log file. In VSE/SP, the messages of the online part of your system are saved in this file. Most of these messages are issued by CICS/DOS/VS and have a prefix of *DFH*.

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 log:

- CADL
- CPLD
- CPLI
- CSCS
- CSDL
- CSML
- CSMT
- CSTL

The messages are written to an extra partition destination IESN (SYSLST). This design has several implications:

1. Messages written by your applications to these destinations will also be intercepted and written to the log.
2. If you delete a message from the 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.

Dump Management and Viewing

The following dialogs for creating dumps or analyzing dump output can be accessed from the *Problem Handling* panel:

- With the *Storage Dump Management* dialog, a user can print dump information, offload dumps to tape, or unload dumps from tape.
- The *Inspect Dump Management Output* dialog allows a user to display dump information at the terminal or print it.
- The *Create Standalone Dump Program* dialog writes the standalone dump program on tape.

- The *Print SDAID Tape* dialog creates a job stream for printing trace and dump information that was written to tape by the SDAID program of VSE/Advanced Functions.
- The *Format ICCF Dump Data* dialog creates a job stream that scans a dump tape for VSE/ICCF control blocks, formats them, and prints them.

For detailed information about managing dumps, see “Using Dumps for Error Diagnosis” in *IBM VSE/SP Guide for Solving Problems*.

Program Error Program (DFHPEP)

VSE/SP provides a DFHPEP program for CICS/DOS/VS error information. It is available as the phase DFHPEP in library IJSYSRS.SYSLIB and as a skeleton in VSE/ICCF library 59. Figure 19 on page 73 shows the contents of the library skeleton.

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 TCA of the failing transaction. However, because VSE/SP uses CICS/DOS/VS facilities, it writes entries in the trace table and in the storage chain. *If you execute DFHPEP 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.

Note: The DFHPEP phase provided by CICS/DOS/VS is called DFHPEPDY. It resides in library PRD1.BASE.

```

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'
          PUNCH ' CATALOG DFHPEP.OBJ REP=YES'
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 = 1.7.0
*
*-----*
*      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 19 (Part 1 of 2). CICS/DOS/VS Program Error Program

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    OH      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
*-----*
*          SPACE 3
*          DFHPC TYPE=RETURN          ISSUE CICS RETURN MACRO
*          LTORG *
DFHPEPEA DS    OH          MODULE END ADDRESS
         END    DFHPEPNA
```

Figure 19 (Part 2 of 2). CICS/DOS/VS Program Error Program

Chapter 7. Using Intelligent Work Station Support

In this chapter, the terms IBM Personal Computer, Personal Computer, and PC all refer to the IBM Personal Computers listed in "Supported Personal Computers" on page 80.

The manual IBM VSE/SP Administration has detailed descriptions of the resource definition tasks discussed in this chapter. This includes creating the Host Transfer File or Data Conversion Descriptor Files.

If you are migrating from an earlier version of VSE/SP and have used IWS functions, IBM VSE/SP Administration also has information about what you need to do to migrate to the IWS functions provided by VSE/SP 3.1. Those tasks are summarized on page 94.

The manual IBM VSE/SP Using IBM 3270 Display Stations and Personal Computers shows users how to work with different IWS functions. This includes transferring data to/from the Host Transfer File or CICS/DOS/VS temporary storage.

Overview

Besides using IBM Personal Computers in your VSE/SP system as standalone devices, you can also use them as display stations and as “intelligent” work stations.

IBM Personal Computers can be defined to VSE/SP as IBM 3278/3279 terminals. Users can then work interactively with the system as they would from an IBM 317x or 327x display station. This includes accessing installed applications or VSE/SP dialogs.

VSE/SP's *Intelligent Work Station (IWS)* support enables data to be exchanged between Personal Computers and the VSE/SP (host) system. Data can be stored at the host system, and other users can access it. Users at Personal Computers also can store data on a disk or diskette and work with it independent of the VSE/SP system.

Main IWS Functions

The main functions that VSE/SP provides for using IBM Personal Computers as intelligent work stations are:

- File transfer to and from the *Host Transfer File*.

The Host Transfer File is a VSE/VSAM file. It serves as a “holding area” for files that are sent to and from IBM Personal Computers. The Host Transfer File can contain more than one file at a time, and more than one user can access it at the same time.

When users at display stations want to send VSE/VSAM files or VSE/ICCF members to a Personal Computer, they use the *Personal Computer Move Utilities* dialog to move that data to the Host Transfer File. Users at Personal Computers then can download the data from the Host Transfer File.

Similarly, when users at Personal Computers want to send VSE/VSAM files and VSE/ICCF members to the host system, they can upload it to the Host Transfer File. The *Personal Computer Move Utilities* dialog then can be used to work with the data and/or store it.

Note: Because the Host Transfer File serves as an intermediate holding area, it can be used to exchange (share) data.

- Support for user-written *application programs* to read data from or write data to the Host Transfer File.

VSE/SP provides an interface for CICS/DOS/VS applications to read records from a file or write records to a file stored in Host Transfer File. In addition, files stored in the Host Transfer File may be deleted or shared with other users. In VSE/ICCF library 59, VSE/SP provides a sample application program (INWAPIA) written in Assembler language.

The manual *IBM VSE/SP Administration* has detailed information about the interface and how to use it.

- Support for user-written *exit routines* and *descriptor records* for the *Personal Computer Move Utilities* dialog.

An exit routine is a CICS/DOS/VS application program. It converts or selects specified data records or fields when users transfer data between disk storage and the Host Transfer File.

A descriptor record is an entry in the Host Transfer File that serves as a model for an exit routine. It indicates how the exit routine should perform data conversion.

To help you create exit routines and descriptor records, VSE/SP ships COBOL and Assembler samples in VSE/ICCF library 59. These samples contain comments. In addition, the manual *IBM VSE/SP Administration* has specific information about how to create exit routines and descriptor records.

- File transfer to and from *CICS/DOS/VS Temporary Storage*.

Personal Computer users can also send data to or receive data from CICS/DOS/VS temporary storage at the host. Temporary storage is located on disk. A *queue* is created for each file to be stored in temporary storage. Each temporary storage queue can contain only one file at a time.

Data can be transferred between a Personal Computer and temporary storage without further processing. Two PC users, for example, can exchange data using temporary storage.

You may also want to process data that is sent from a Personal Computer to temporary storage or move data to temporary storage from the host environment. A typical application of the latter would be the retrieval of records from an SQL or DL/I data base and storing these records in a temporary storage queue. PC users could then retrieve this data from temporary storage.

For such applications, you must provide CICS/DOS/VS programs that can retrieve data from temporary storage or store it there. Such programs can be:

- A transaction that is started as a separate task in the host.
- A *user exit* program that the PC user specifies when sending data to or receiving data from temporary storage. The program must be written according to the specific conventions described in the manual *IBM VSE/SP Administration*. VSE/ICCF library 59 has COBOL, PL/I, and Assembler samples of user exit programs.

- *Data Conversion*

In VSE/SP 2.1, IWS users could only convert whole files as character strings from EBCDIC to ASCII and vice versa. With VSE/SP 3.1, however, they can convert individual records or record fields using IBM-supplied conversion routines.

Conversion is controlled by *Data Conversion Descriptor Files (DCDF)* prepared by the user. A DCDF defines the record layout (fields) of a host or PC data file that is to be converted to another format. When the file is transferred between the host system and a Personal Computer, a DCDF can be specified for data conversion.

“Data Conversion” on page 87 is an overview of this function for VSE/SP 3.1. For detailed information on how to create a DCDF, refer to the manual *IBM VSE/SP Administration*.

Note: Conversion of DBCS (double-byte character set) data is not supported by the IWS data conversion function.

- The *IWS PC* dialog.

Users at a Personal Computer can work with this dialog to:

- Send data to the Host Transfer File or CICS/DOS/VS temporary storage.
- Receive data from the Host Transfer File or CICS/DOS/VS temporary storage.
- Create and maintain Data Conversion Descriptor Files.

The manual *IBM VSE/SP Using IBM 3270 Display Stations and Personal Computers* has detailed information about how to exchange data using the *IWS PC* dialog. Note, however, that use of the dialog is not required to transfer data between a PC and the host. Experienced users may want to enter *SEND* and *RECEIVE* commands directly from their PC, instead of working with the selections of the *IWS PC* dialog. These commands also are described in *IBM VSE/SP Using IBM 3270 Display Stations and Personal Computers*.

Major Data Paths

Figure 20 shows the major data paths that are available to users of IWS support.

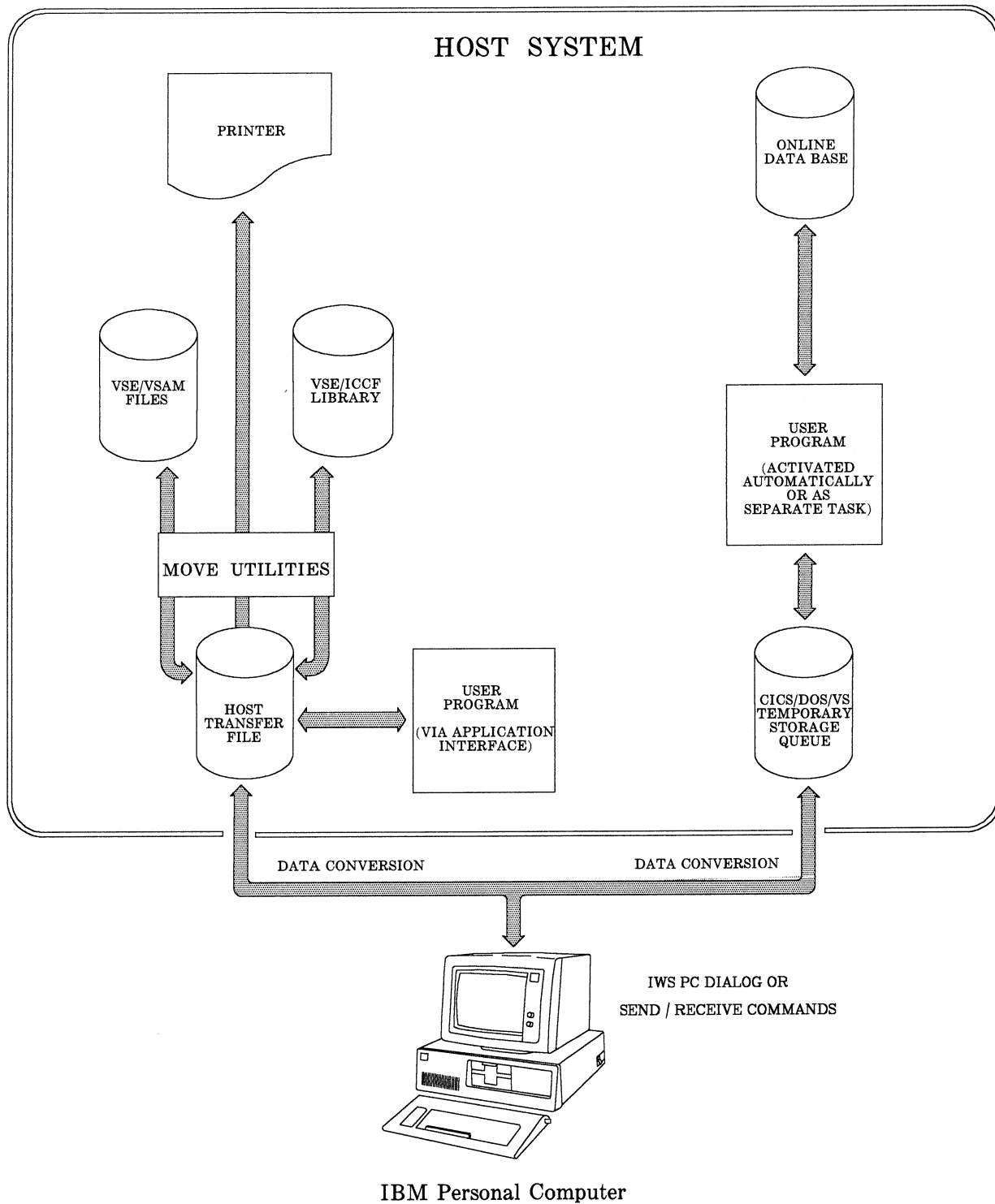


Figure 20. Major Data Paths for IWS Support

Configuring Personal Computers

Supported Personal Computers

VSE/SP 3.1 provides IWS support for a wide range of IBM Personal Computers. Figure 21 on page 81 lists supported PCs and the communication adapters, control programs, and host connections that can be used. In the figure:

Communications Adapter

- 1 = IBM PC 3278/79 Emulation Adapter
- 2 = IBM 3270 System Adapter (integrated in IBM 3270 and 5550 PC)
- 3 = IBM PC SDLC Communication Adapter
- 4 = IBM PC Asynchronous Communication Adapter
- 5 = IBM Token Ring Network PC Adapter

Control Program

- 1 = IBM PC 3270 Emulation Program, Entry Level
- 2 = IBM PC 3270 Emulation Program
- 3 = IBM 3270-PC Control Program
- 4 = IBM 3270-PC Graphics Control Program
- 5 = IBM PC/Host File Transfer and Terminal Emulator Program
- 6 = IBM Japanese/Korean/PRC 3270 Personal Computer
(Graphics System) - TCA/SNA and TCA/non-SNA
- 7 = IBM Japanese/Korean/PRC 3270 Personal Computer
(Graphics System) - Single Station

Host Connections

- 1 = IBM 3174/3274 Control Unit - CUT
- 2 = IBM 3174/3274 Control Unit - DFT
- 3 = IBM 4300 Display Printer Adapter - CUT
- 4 = IBM 9370 Work Station Subsystem Controller or
IBM 4361 Work Station Adapter - CUT or DFT
- 5 = IBM 9370 Telecommunications Subsystem Controller,
IBM 4300 Integrated Communication Adapter, or
IBM 37xx Communication Controller - DFT
- 6 = IBM 3708 Network Conversion Unit or IBM 3710
Network Controller - CUT
- 7 = IBM 3174-01L Control Unit with IBM Token Ring Network
3270 Gateway Feature (3025) - DFT

Note that the two sections following the figure explain CUT and DFT attachment.

When reading Figure 21, move from left to right. For example, IWS supports an IBM Personal Computer XT that has an IBM 3279/79 Emulation Adapter and an IBM PC 3270 Emulation Program, Entry Level. The PC can be attached to the host in one of four possible ways.

PC	Communication Adapter					Control Program							Possible Host Connections						
	1	2	3	4	5	1	2	3	4	5	6	7	1	2	3	4	5	6	7
IBM PC XT/AT	X					X							X		X	X			
	X					X								X					
					X*	X*													X*
			X			X											X		
				X						X								X	
IBM 6150 PC RT	X					X							X	X	X	X			
IBM 3270 PC XT/AT		X						X					X	X	X	X			
IBM 3270 PC G/GX		X							X					X		X			
IBM 5550 Multistations		X									X			X		X			
			X									X					X		

Figure 21. IWS Support for IBM Personal Computers

* If such a PC is connected to a 3174-01L control unit and the IBM Token Ring Network, Version 3 of the IBM 3270 Emulation Program is required. For information about defining PCs in such an environment, refer to the manual *IBM VSE/SP Communications and Networking*.

Control Unit Terminal (CUT) Attachment

IBM Personal Computers operating in CUT mode are defined to the VSE/SP system like a 3278-2 or 3279-2A display station. No special features are required for the CICS/DOS/VS Terminal Control Table (DFHTCT).

In CUT mode, Personal Computers can be attached to:

- The Display/Printer Adapter (DPA) or the Work Station Adapter (WSA) available with IBM 4300 series processors.
- The Work Station Subsystem Controller available with IBM 9370 series processors.
- An IBM 3708 Network Conversion Unit or IBM 3710 Network Controller.
- Any model of an IBM 3174/3274 control unit.

No special configuration support is required for the control unit.

Distributed Function Terminal (DFT) Attachment

Personal Computers operating in DFT mode use the 3270 Extended Data Stream structured field support. For these devices, the *EXTDS* feature must be defined in DFHTCT.

In DFT mode, the IBM 3270 and 5550 Personal Computers can be attached to:

- The WSA of the IBM 4361 processor.
- The Work Station Subsystem Controller available with IBM 9370 series processors.
- Any model of an IBM 3174/3274 control unit that supports extended data streams.

For the control unit, special configuration support is required. For information about this support, refer to the component description of the Personal Computer.

Personal Computers with the IBM PC SDLC Communication Adapter can be attached to:

- The Integrated Communications Adapter (ICA) of IBM 4300 series processors.
- The Telecommunications Subsystem Controller available with IBM 9370 series processors.
- An IBM 37xx Communications Controller.

They are defined to VSE/SP like an IBM 3274-51C or 3274-61C control unit with one 3278-2 display station.

Note: IBM Personal Computers that have an SDLC Communication Adapter, SNA 3270 Emulation, and the RJE Support Program installed can be used in an VSE/SP system as Remote Job Entry

(RJE) work stations. These devices are attached via a remote line like a 3274-51C control unit.

*The manual **IBM VSE/SP Using IBM 3270 Display Stations and Personal Computers** describes how to use the function that is available for these Personal Computers.*

Activating IWS Support

Basic Tasks

After installing VSE/SP, you have to perform a number of tasks to activate IWS support. The manual *IBM VSE/SP Administration* describes how to do the first three tasks listed below. *IBM VSE/SP Using IBM 3270 Display Stations and Personal Computers* shows how to do the last one.

Note that the first two tasks are *not* necessary if you only use CICS/DOS/VS temporary storage for exchanging files.

- Creating the Host Transfer File.

During initial installation, VSE/SP does not automatically define the Host Transfer File or allocate space for it. To define the file, you can use the skeleton *SKIWSTF*. This skeleton is shipped in VSE/ICCF library 59.

- Generating an entry for IWS in the CICS/DOS/VS File Control Table.

To activate IWS support, you must change a single entry in the CICS/DOS/VS table *DFHFCTSP* and then assemble the table. *DFHFCTSP* also is stored as a member in VSE/ICCF library 59. If you want review its contents, see Appendix I, “CICS/DOS/VS Tables” on page 269.

- Testing the SEND and RECEIVE functions.

You should check whether users can properly exchange data between their PC and:

- The Host Transfer File.
- CICS/DOS/VS temporary storage.

- Installing the *IWS PC* dialog on PCs.

The *IWS PC* dialog is shipped with VSE/SP. Before the dialog can be used from a PC, it must be installed via a *RECEIVE* command. Details about this task are given in the manual *IBM VSE/SP Using IBM 3270 Display Stations and Personal Computers*.

Additional Tasks

Depending on your use of IWS support, you may also need to perform one or more of the following tasks. These include how to:

- Create exit routines and descriptor records for the *Personal Computer Move Utilities*.
- Create application programs that write files to or read files from the Host Transfer File.
- Create exit programs that process data in CICS/DOS/VS temporary storage queues.
- Modify ASCII and EBCDIC translation tables.
- Activate resource security level checking for CICS/DOS/VS temporary storage queues.
- Create Data Conversion Descriptor Files.

The manual *IBM VSE/SP Administration* has specific information about these additional, optional tasks. For an introduction to the last two, read “Resource Security Level Checking” on page 86 and “Data Conversion” on page 87.

Resource Security Level Checking

As described earlier, PC users can transfer data between their PC and CICS/DOS/VS temporary storage queues in the host. *Resource security level checking*, a function of CICS/DOS/VS, allows you to protect host programs and temporary storage queues against unauthorized access and destruction.

Protecting User Exit Programs

A PC user can specify the name of a user exit program when transferring data to/from CICS/DOS/VS temporary storage. If this is done, the file transfer function will invoke the program, which then can process the data stored in the queue.

Resource security level checking enables you to prevent unauthorized access to host programs. As shipped with VSE/SP 3.1, the CICS/DOS/VS Program Control Table specifies RSCL(YES) for the file transfer transaction *IND\$*.

Because resource security level checking is specified for the file transfer transaction, user exit programs and any resources that they access can be protected. They must be defined to CICS/DOS/VS with either:

- RSL(PUBLIC) if all users are allowed access or
- An appropriate security level to authorize only selected users.

Note: The file transfer transaction for IBM 5550 PCs is *APVU*.

Protecting Temporary Storage Queues

The CICS/DOS/VS Temporary Storage Table shipped with VSE/SP 3.1, DFHTSTSP, specifies DATAID = CFTR and RSL = 10. This means that:

- The name of a temporary storage queue must start with the characters CFTR. (This helps avoid accidental destruction of queues.)
- Only users with a resource security level of 10 can access temporary storage queues.

To activate resource security level checking for temporary storage queues, you must specify **TST=SP** in DFHSITSP. As shown on page 302, that operand originally specifies **NO**.

Data Conversion

This section is only meant to be a brief introduction to data conversion, a new function for VSE/SP 3.1. For detailed information about the topics mentioned here, refer to the manual IBM VSE/SP Administration.

When PC users transfer data to/from the Host Transfer File or CICS/DOS/VS temporary storage, they can request data conversion by specifying the name of a Data Conversion Descriptor File (DCDF). During data transfer, the system will use the DCDF to convert the *fields* of each file record.

A DCDF defines the record layout of a data file for both the PC and the host environment. Each DCDF has:

- A *header record* that defines general conversion rules for the data file to be converted.
- One or more *field descriptor records* that define how the fields of a data file record are to be converted.

VSE/SP provides dialogs for creating a DCDF at a Personal Computer. Once a DCDF is defined, it must be stored as a permanent member of the Host Transfer File.

Notes:

1. *As shown below, VSE/SP 3.1 supports various data formats and field types for conversion. It is important to remember that all the records of a file to be converted must have the same layout.*
2. *If you wish, you can use a PC or host environment editor to create and maintain a DCDF. It is easier, however, to perform this task with the IWS PC dialog. When using an editor, you must do your own syntax and format checking.*

Supported Data Formats and Field Types

Host Data Formats

For the host environment, VSE/SP 3.1 supports the following data formats:

- **FORM/370**

This is the standard host data format. It can be used for both SEND and RECEIVE operations.

The FORM/370 data format has fixed-length records and fixed-length fields. All of the host field types shown in Figure 22 on page 89 are allowed.

During a SEND or RECEIVE operation, no record, field, or end-of-file delimiters are inserted.

- **SQLINPUT**

This is the data format that the optional licensed program SQL/DS expects as input for an SQL/DS data base. A DCDF created for SQLINPUT can only be used for upload (SEND) operations.

For this data format:

- Fixed-length records are not required.
- The fields within a record are separated by commas. In addition, character fields are enclosed in quotes.

Of the host field types shown in Figure 22 on page 89, only **HEC** (EBCDIC character string) or **HEN** (EBCDIC numeric data) can be used.

Host Field Types

Figure 22 on page 89 shows the field types and related lengths supported for the host environment.

HOST FIELD TYPE	LENGTH	DESCRIPTION
HBN	1-4	Binary Number
HDF	8	Hexadecimal Float Data (double precision)
HEC	1-255	EBCDIC Character String
HEN	1-255	EBCDIC Numeric Data
HHC	1-255 or *	Hexadecimal Character String (* = multiple flags in one host field)
HPD	1-16	Packed Decimal Data
HSF	4	Hexadecimal Float Data (single precision)
HVC	3-255	EBCDIC Varying-Length Character String
HZD	1-16	Zoned Decimal Data

Figure 22. Host Field Types

PC Data Formats

VSE/SP 3.1 supports the following data formats for the PC environment:

- ASCII-TX ASCII Text File
- DOS-RAN DOS Random File
- BAS-SEQ BASIC Sequential File
- BAS-RAN BASIC Random File
- DIF ¹ File in DIF Format
- PASC-ASC PASCAL ASCII Sequential File
- FORT-FOR FORTRAN Formatted File
- COB-LSEQ COBOL Line Sequential File
- User defined data format

¹ DIF is a trademark of Software Arts, Inc.

PC Field Types

Figure 23 shows the field types and related lengths supported for the PC environment.

PC FIELD TYPE	LENGTH	DESCRIPTION
PAC	1-255	ASCII character string.
PAN	1-255	ASCII numeric data. Up to 16 significant decimal digits in character format with the optional characters + - . E and D are allowed. Leading and trailing blanks may be used.
PBI	2	BASIC integer. Represents a 2 byte signed PC binary number.
PBN	1-4	Signed PC binary number.
PCI	2	COBOL integer. Represents a 2 byte signed EBCDIC binary number.
PDF	8	BASIC floating point format (double precision).
PHC	1-255	Hexadecimal character string.
PI2	1-255	Integer represented by decimal digits in character format. Its value is limited by -32768 and +32767. The sign of - or + is optional. Leading and trailing blanks are allowed.
PI4	1-255	Integer represented by decimal digits in character format. Its value is limited by -2,147,483,648 and +2,147,483,647. The sign of - or + is optional. Leading and trailing blanks are allowed.
PPD	1-16	Packed decimal data. The sign depends on the data format.
PPW	1-255	Integer represented by decimal digits in character format. Its value is limited by 0 and 65535. Leading and trailing blanks are allowed.
PSF	4	BASIC floating point format (single precision).
PZD	1-16	Zoned decimal data. Low order byte depends on data format.

Figure 23. PC Field Types

Figure 24 on page 91 shows which PC field types can be specified for which PC data format.

DATA FORMAT:	FIELD TYPES ALLOWED:
ASCII Text	PAC, PAN
BASIC Sequential	PAC, PAN
BASIC Random	PAC, PBI, PSF, PDF
COBOL Line Sequential	PAC, PCI, PPD, PZD
DIF	PAC, PAN
DOS Random	PAC, PBN, PHC, PPD, PZD
FORTTRAN Formatted	PAC, PAN, PI2, PI4
PASCAL ASCII	PAC, PAN, PI2, PI4, PPW

Figure 24. PC Data Format and Related Field Types

Conversion Matrix

Figure 25 on page 92 shows if a PC field type can be converted into a host field type and vice versa. The figure groups the PC field types as follows:

- Binary (lines 1 through 3)
- Decimal (lines 4 and 5)
- Formatted decimal (lines 6 through 9)
- Floating point (lines A and B)
- String (lines C and D)

		Host Field Type:								
		HBN	HZD	HPD	HSF	HDF	HEN	HEC	HHC	HVC
	PC Field Type									
1	PBN	yes	yes	yes	yes	yes	yes	no	no	no
2	PBI	yes	yes	yes	yes	yes	yes	no	no	no
3	PCI	yes	yes	yes	yes	yes	yes	no	no	no
4	PZD	yes	yes	yes	yes	yes	yes	no	no	no
5	PPD	yes	yes	yes	yes	yes	yes	no	no	no
6	PAN	yes	yes	yes	yes	yes	yes	no	Note 1	no
7	PI2	yes	yes	yes	yes	yes	yes	no	no	no
8	PI4	yes	yes	yes	yes	yes	yes	no	no	no
9	PPW	yes	yes	yes	yes	yes	yes	no	no	no
A	PSF	yes	yes	yes	yes	yes	yes	no	no	no
B	PDF	yes	yes	yes	yes	yes	yes	no	no	no
C	PAC	no	no	no	no	no	no	yes	Note 2	yes
D	PHC	no	no	no	no	no	no	no	yes	no

Figure 25. Possible Field Type Conversions

Notes:

1. No real conversion is performed. A bit in the host hexadecimal field (addressed via the "displacement" specification in the DCDF) is mapped into a PC ASCII numeric field and vice versa.

If the bit is on for a RECEIVE operation, the PC field is set to -1. If it is off, the PC field is set to 0.

2. No real conversion is performed. A bit in the host hexadecimal field (addressed via the "displacement" specification in the DCDF) is mapped into a PC ASCII character field and vice versa.

If the bit is on for a RECEIVE operation, the PC field is set to TRUE. If it is off, the PC field is set to FALSE.

Using IWS in Several CICS/DOS/VS Partitions

It is possible to use the IWS support concurrently in more than one CICS/DOS/VS partition (in one CPU). This requires a change in skeleton SKIWSTF for the Host Transfer File. Change SHAREOPTIONS (2) to SHAREOPTIONS (4).

You should not access the Host Transfer File from two CICS/DOS/VS partitions concurrently with the *same user ID*.

If you have two partitions with CICS/DOS/VS, the notification messages issued by the IWS function will also appear in the partition without VSE/ICCF. An example of a notification message is:

```
03/06 - 08:48  MSG FROM SYSA
USER SYSA HAS RECEIVED YOUR SHARED FILE TESTDATA
```

Migrating IWS Users

As explained on page 84, you have to perform a number of tasks to activate IWS support. These include:

1. Creating the Host Transfer File.
2. Generating an entry for IWS in the CICS/DOS/VS File Control Table.
3. Testing the SEND and RECEIVE functions.

Figure 26 shows what you need to do if you are migrating from an earlier release of VSE/SP and have used its IWS functions. For details, refer to the manual *IBM VSE/SP Administration*.

TASK TO BE PERFORMED	NEW USER	MIGRATING USER
Create Host Transfer File	YES	YES
Edit and Assemble CICS/DOS/VS Tables:		
DFHFCTSP	YES	YES
DFHSITSP DFHTSTSP	YES * NO	YES * YES **
Test SEND/RECEIVE Functions	YES	YES

* Only if resource security level checking for CICS/DOS/VS temporary storage is used.

** Only if resource security level checking for CICS/DOS/VS temporary storage is used and you want to use previous DFHTST definitions

Figure 26. Migrating IWS Users

Chapter 8. Tuning the System

This chapter provides general performance information for your VSE/SP system. You also should review the documentation for the licensed programs of VSE/SP for specific performance information.

For performance considerations regarding use of VSE/SP under VM/SP, refer to Chapter 6 of the manual *IBM VSE/SP Installation Planning*.

Startup Parameters

Supervisor Generation

Figure 27 shows the specifications for the pregenerated supervisors that are shipped with VSE/SP 3.1. Most supervisor generation options which impacted performance in previous VSE releases no longer exist. The corresponding functions can be activated during IPL or JCL.

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
	TRKHLDD	12	12	12
	TTIME	NO	NO	NO
IOTAB	IODEV	254	254	254
	NPGR	3060	3060	3060

Figure 27. VSE/Advanced Functions Supervisor Generation Parameters

The only supervisor parameters that still might impact performance are:

- DASDSHR (multiple CPU support)
- FASTTR (fast CCW translate)
- MODE (370, E, or VM)
- RPS (rotational position sensing)
- TRKHLD (track hold)
- NPARTS (number of partitions)

IPL Commands

The following IPL commands can affect performance:

- ADD
 - (S) (DASD alternate path support)
 - SHR (DASD shared by multiple CPUs)
- DPD (location/split of the page data set)
- SYS
 - JA (job accounting)
 - DASDFP (DASD file protection)
 - CHANQ
 - SDSIZE
 - SUBLIB (size of system GETVIS used for LCT table)
- DLA (define location of label area)

Notes:

1. *Do not define a disk device as shared (SHR) unless you use DASD sharing.*
2. *Specifying **TYPE=NORMAL** in the ASI master procedure avoids the overhead of device sensing during IPL. For information about how to specify this parameter, refer to the manual **VSE/Advanced Functions System Management Guide**.*

JCL Statements and AR Commands

You should consider the following in terms of performance:

- ALLOC
- SIZE
- PRTY (set partition priorities)
- MSEC (partition balancing time)
- SIZE (parameter on EXEC card)
- Use of conditional JCL
- LIBDEF

Additional Startup Considerations

- 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.
- Reduce the size of the VTOC on DASD devices.

VSE sequentially searches the VTOC when it processes a non-VSAM data set entry. The number of entries which the Common VTOC Handler scans can be reduced by limiting the size of the VTOC area.

– CKD Devices.

The default size of the VTOC is one cylinder for CKD devices. If you reduce the default size, make sure that the last track of the VTOC is the last track on the cylinder.

You reduce the size of the VTOC by decreasing the number of tracks for the VTOC when initializing your DASD device. You specify the number of tracks in the **INIT** command of the *Device Support Facilities* program. The following tables show the number of tracks and the related number of VTOC entries for three types of CKD devices: 3350, 3375, and 3380. The first table shows the values for the VSE/SP system as shipped. The second table shows reduced sample values:

Values as shipped:

DASD:	Tracks:	Entries:
3350	30	1410
3375	12	612
3380	15	795

Values reduced:

DASD: Tracks: Entries:

3350	3	141
3375	2	102
3380	3	159

– FBA Devices.

You reduce the size of the VTOC by decreasing the number of blocks for the VTOC when initializing your DASD device. You specify the number of blocks in the **INIT** command of the *Device Support Facilities* program.

When shipped, the VTOC for a 3370 FBA device, for example, can hold 217 entries and has a control interval size (CISIZE) of 1024. To improve performance, you can increase the CISIZE from 1024 to 8192. This reduces the number of accesses (SIO's) from 31 to 4 for searching the VTOC area. A CISIZE of 1024 holds 7, a CISIZE of 8192 holds 58 entries.

- Review your ACF/VTAM buffer sizes. You can use the command **D NET,BFRUSE** to display the status of the ACF/VTAM buffers after a typical online period. For details on performance considerations, refer to the ACF/VTAM documentation.

File Placement

The following recommendations regard file placement:

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 data file away from the system disks. Place it on different actuators.

You should also define the data file with more than one extent. Locate each extent on a different actuator.

3. A lock file is needed *only* for disk sharing. It should be on a disk device that has low use and contains no other system files.
4. Concurrently active data sets should be placed adjacent to one another.

PRT1 Support

Support for PRT1 printers and the non-buffered IBM 3800 printer uses the logic module IJDPRT, which resides in the SVA. Use of IJDPRT means that only one SVC0 is needed per print line if ASA control characters are used. This reduces spooling overhead for a batch partition with spooled LST output.

You may also use IJDPRT for non-spooled batch partitions and execution in a VSE/ICCF interactive partition. To do this, you must:

1. ADD the printer (real or dummy) as PRT1.
2. 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.

For MODE=370, 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 16M), you should try to split your page data set across several extents on separate disk devices.

VSE Libraries

You should consider the following for performance reasons:

1. Periodically backing up and restoring VSE libraries improves search performance. Note that reorganization of search chains is only done when *entire* libraries are restored. A MINI startup can be used for this task.
2. The Restore and Copy/Move functions of the librarian are faster if the target library is uniquely assigned.

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 the VSE/POWER fixable area, but are in the VSE/POWER partition GETVIS area. If there is insufficient real storage, paging is used.

The default value of DBLK ranges from approximately 2008 to 2016 bytes, depending on the device type used. You can specify another value using the DBLK operand of the *POWER* macro for generating VSE/POWER.

Chapter 9. Adding a User-Written Application to Your System

This chapter summarizes the subtasks that are part of adding a user-written, online application to your VSE/SP system. Note that both the system administrator and the programmer each perform several of the subtasks. *To ensure system integrity, a programmer should not be allowed to do all of them.*

In the following list:

- The subtasks which the programmer performs are based on the default programmer profile (PROG) that is shipped with VSE/SP.
- It is assumed that the source code for the application resides in a VSE/ICCF library.

Adding a user-written application to your VSE/SP system normally involves:

1. Defining a new VSE sublibrary for the program and maps. [Administrator]

This subtask is optional. An existing sublibrary can also be used. If so, the next two steps can be skipped.

2. Copying the skeleton for the compiler in the Interactive Interface from VSE/ICCF library 2. [Administrator or Programmer]
3. Tailoring the compiler skeleton to include the name of the new sublibrary for the program and maps. [Administrator or Programmer]
4. Compiling/assembling the program and maps using the Interactive Interface. [Programmer]
5. Reviewing the LST queue to see if the compile/assemble was successful. [Programmer]
6. Defining any required VSE/VSAM data files. [Administrator]
7. If necessary, loading the new files. [Programmer]

8. Defining the programs, transactions, and any maps to CICS/DOS/VS using Resource Definition Online commands. The transaction ID for RDO is CEDA. [Administrator]

Note that for program testing, the administrator can activate the PCT and PPT using the command:

```
CEDA INSTALL GROUP(name)
```

Once the program has been tested, the administrator can modify the system startup to include the application by entering the command:

```
CEDA ADD GROUP(name) LIST(VSELIST)
```

VSELIST is the name of the group list shipped by VSE/SP. To use RDO (transaction CEDA) in your system, you need to add the following to DFHSITSP:

```
GRPLIST=VSELIST
```

9. Defining the data files to CICS/DOS/VS by modifying the FCT in VSE/ICCF library 59. [Administrator]
 10. Assembling the new FCT. [Administrator]
 11. Changing the CICS/DOS/VS startup job stream to include the new user sublibrary that was defined in Step 3. [Administrator] This can be done by:
 - a. Copying the skeleton *SKCICS* from VSE/ICCF library 59,
 - b. Making the change, and
 - c. Submitting the skeleton for processing.
 12. Activating the FCT by shutting down and then restarting CICS/DOS/VS. [Administrator]
 13. Using CEMT to check that the data files are open and available. [Administrator]
 14. Defining the program to the Interactive Interface using the application profile function. [Administrator]
 15. Creating a selection panel that includes the program as a selection. [Administrator]
- Note that at this time any HELP panels for the program could be added via the Interactive Interface.
16. Defining a profile for a user who works with the new program. [Administrator]
 17. Signing on as the new user to test the user and application profiles and the new selection panel. [Administrator or Programmer]

Chapter 10. Protecting Resources

VSE/SP and its components offer various functions for protecting resources such as libraries and files from unauthorized access. This chapter gives an overview and shows what needs to be considered.

VSE/SP Interactive Interface Considerations

User Profiles

Since the Interactive Interface is the gateway to your VSE/SP system you should carefully plan how the user profile for each user and user group should look like. Each user profile determines which VSE/SP functions can be accessed by that particular user. When tailoring user profiles, limit the functions accessible to the minimum required by a particular user. This reduces a possible security exposure of your system.

The information maintained in a user profile is divided into three parts:

- VSE/SP information (user ID and password, for example).
- CICS/DOS/VS information (resource security classes, for example).
- VSE/ICCF information (alternate VSE/ICCF libraries, for example).

Refer to “Defining User Profiles” on page 35 for a detailed description of the information maintained in user profiles.

Chapter 3, “Tailoring the Interactive Interface” on page 25 describes the overall planning aspects for the Interactive Interface.

The manual *IBM VSE/SP Administration* describes how to create and maintain user profiles.

Selection Panels

You may modify the default selection panels provided by VSE/SP (for administrator, programmer and operator) according to your security needs. You may also use the default selection panels as models for creating your own selection panels. By doing so, you can further restrict the access to

sensitive functions at your installation. Refer to “Creating Selection Panels” on page 39 for additional information.

To change selection panels, use the *Maintain Selection Panels* dialog. The dialog is described in detail in the manual *IBM VSE/SP Administration*.

Using the Access Control Function of VSE/SP

VSE/SP provides an access control function that helps you protect resources from unauthorized access. This section gives an overview and helps you evaluate the function and explains how it works. If you plan to make use of the function, consult the manual *VSE/Advanced Functions, System Management Guide*. It provides the necessary details required for implementing the function.

Resources you want to protect must have an entry in the access control table DTSECTAB. The following resources can be protected:

- VSE Libraries.
- Files.

VSE Libraries

You can control the access to VSE libraries on different levels:

1. Libraries.
2. Sublibraries.
3. Members.

A library may be located in space managed by VSE/VSAM or in non-VSE/VSAM space.

The system library IJSYSRS and the system sublibrary IJSYSRS.SYSLIB are protected by default. That is, no entry is required in the access control table DTSECTAB. By default, library IJSYSRS has the universal access right connect (UACC=CON), and sublibrary IJSYSRS.SYSLIB the universal access right read (UACC=READ). This ensures that the library members can be read by any user and is required during startup.

For an explanation of the access rights refer to “Access Control Table DTSECTAB” on page 106.

Files

You can protect the following types of files:

- Disk files and labeled tape files.

They must be defined with a file description macro (DTFxx), or with file definition statements of IBM compilers.

- SAM files in space managed by VSE/VSAM.

The VSE/VSAM master and user catalogs and VSE/VSAM files cannot be protected satisfactorily by entries in DTSECTAB. Use the security functions provided by VSE/VSAM. Refer to “Protecting VSE/VSAM Files” on page 109 for details. A good solution is to protect catalogs with VSE/VSAM passwords and the Access Method Services program IDCAMS with entries in DTSECTAB.

Diskette files cannot be protected by entries in DTSECTAB.

Implementing the Access Control Function

Three steps are required to implement the access control function:

1. Modify the **IPL** procedure.

To activate access control, you must modify your IPL procedure. Use the *Tailor IPL Procedure* dialog and specify **SEC=YES** in the IPL parameter SYS. The dialog is described in detail in the manual *IBM VSE/SP Administration*.

2. Create the access control table **DTSECTAB**.

To perform access control, VSE/SP uses an access control table. VSE/SP provides macro DTSECTAB for defining the access control table. Refer to “Access Control Table DTSECTAB” on page 106 for details about the entries to be defined.

3. Introduce the **// ID** job control statement.

A job must have a **// ID** statement if it accesses protected resources which do not have an universal access right sufficient for the access requested.

VSE/SP performs access control in two steps:

- a. A job is allowed to run if the user name and password supplied in the **// ID** statement match the related user profile in DTSECTAB.
- b. Access to a resource is granted if the values in the user and resource profile correspond. That is, the access control class must match and the access right is sufficient, or the UACC is sufficient.

It is possible to run jobs without an // ID statement, but a job is canceled as soon as an access to a protected resource is attempted. It is recommended, however, to introduce the // ID statement for all users if the access control function is active. This avoids possible security exposures.

Note: If access control is active (SEC = YES) and if a job stream created by the Interactive Interface is submitted for processing, an // ID statement is added. It contains the user ID and password of the VSE/SP user profile.

Access Control Table DTSECTAB

The access control table includes *user profile entries* and *resource profile entries*. They contain the following information:

User Profile Entry:

- The user's name.
- The user's password.
- The access control classes the user is authorized to use. There are 32 access control classes available.
- The access right the user has for these classes:
 - CON (connect)
 - READ (read)
 - UPD (update)
 - ALT (alternate)

Refer to Figure 28 on page 108 for a description of the access rights.

- Special access rights:

AUTH = YES

Gives unlimited access to all resources. This access right can only be specified once. Preferably, this should be the system administrator.

RIGHT = BTRANS

This is a specific right to catalog, rename, and delete phases whose names start with \$\$B (B-transients).

Resource Profile Entry:

- The resource name.
- The access control class(es) associated with the resource.

- For libraries, sublibraries, and members the universal access right UACC. UACC may be CON, READ, UPD, or ALT.

If a resource has a universal access right, the individual access right of a user is meaningful only if it is higher than the universal access right.

- The logging option(s). They define which of the accesses and access attempts to the resource are to be recorded.

Note: For recording the accesses performed and attempted, you must install the IBM licensed program *VSE/Access Control - Logging and Reporting*. For this program, the following publications are available:

General Information Manual, GH12-5130.

Program Reference and Operations Manual, SH12-5336.

Access to a protected resource is allowed if:

- The universal access right (for a library, sublibrary, or a member) is sufficient for the requested access.
- At least one of the access classes of the user's profile matches an access class of the resource profile, and the access right assigned to this class in the user's profile is sufficient for the requested access.

Figure 28 on page 108 shows the access rights and the access allowed for a particular resource.

Access Right	Library	Sublibrary	Member	File
ALT	Create, delete and rename.	Create, delete and rename.	Create, delete and rename.	Same as UPD.
UPD	Update contents. Create, delete and rename (ALT) sublibraries in it.	Update contents. Catalog, delete and rename (ALT) members in it.	Update contents. Add, delete and replace lines.	Create, delete and rename. Add, delete and change records.
READ	Read only for library and all sublibraries in it.	Read only for sublibrary and all members in it.	Read only.	Read only. (See Note)
CON	Access to sublibraries in it, if user has access right for these sublibraries individually.	Access to members in it, if user has access right for these members individually.	Not applicable.	Not applicable.

Figure 28. Access Allowed by Access Rights

Note: The access right READ does not allow you to read SAM files. For all accesses to such files, the access right UPD is required.

Protecting VSE/VSAM Files

VSE/VSAM allows you to define passwords for accessing VSE/VSAM objects like:

- Clusters
- Alternate Indexes
- Components (Data and Index)
- Paths
- Catalogs

To gain access to a protected object, a program or the operator must provide the password defined for it.

You define passwords with the Access Method Services DEFINE command. Passwords can be defined for different levels of access:

1. Read access.
2. Update access.
3. Control-interval access.
4. Full access.

Moreover, you can supply a user security-verification routine to double-check the authority of a program accessing a file.

Note: The job streams created by the Interactive Interface of VSE/SP (for File and Catalog Management) do not include VSE/VSAM data protection parameters. If you want to define passwords, for example, you must edit the job streams and add the required password parameter yourself.

For a detailed description of VSE/VSAM data protection, refer to the manual *VSE/VSAM Programmer's Reference*. For a description of the DEFINE command refer to the manual *VSE/VSAM Using Commands and Macros*.

In a VSE/SP user profile you can assign the default catalog a user is allowed to access. In addition, you can assign authority for managing VSE/VSAM files or catalogs or both. Refer to the manual *IBM VSE/SP Administration* for details about maintaining user profiles.

Protecting VSE/ICCF Resources

Access to VSE/ICCF libraries can be controlled by defining a library as **public** or as **private**. In addition to a VSE/SP user's primary library, up to 8 alternate (private) libraries can be specified in the user profile.

VSE/ICCF provides tables to control the access to resources such as files and programs in VSE libraries. The tables provided are:

- System Program Table.
- Load Protection Table.

- System File Table.

Refer to the manual *VSE/ICCF Installation and Operations Reference* for details about VSE/ICCF libraries and protection tables.

Note: If the access control function of VSE/SP is active, the above tables are ignored for access control. For that reason, all resources to be protected must be defined in the access control table DTSECTAB.

If you plan to introduce access control for VSE/ICCF, use the access control function of VSE/SP. It provides for a wider range of protection and makes the task of access control administration easier. Refer to “Using the Access Control Function of VSE/SP” on page 104 for further details.

Protecting CICS/DOS/VS Resources

In a VSE/SP user profile you can specify 1 to 24 **resource security classes** for controlling the access to CICS/DOS/VS resources. You specify the corresponding value for the resources with the **RSL** (resource security level) operand in the following CICS/DOS/VS macros:

DFHDCT Generates the Destination Control Table.

DFHFCT Generates the File Control Table.

DFHJCT Generates the Journal Control Table.

DFHPCT Generates the Program Control Table.

DFHPPT Generates the Processing Program Table.

DFHTST Generates the Temporary Storage Table.

Access to a CICS/DOS/VS resource, like a file, is granted if the resource security class of the user's profile and the resource security level of the resource match.

Refer to the manual *CICS/DOS/VS Resource Definition (Macro)* for details about the CICS/DOS/VS macros listed above.

The manual *IBM VSE/SP Administration* describes how to create and maintain user profiles. Besides the resource security classes, the manual has details about other user profile parameters related to CICS/DOS/VS security.

Chapter 11. DASD Sharing and CICS/DOS/VS Intersystem Communication

The main purpose of this chapter is to help skilled users plan for DASD-sharing and Intersystem Communication (ISC) and see the range of tasks that this involves. Although the sample environment shown here is for two guest machines under VM, much of the information is also valid for two native VSE/SP systems on two separate processors.

When sharing DASDs in a VM environment, also refer to the manual Virtual Machine Running Guest Operating Systems.

In this chapter:

- “DASD-Sharing Environments Under VM” on page 112 has basic information about possible DASD-sharing environments for VSE/SP guest machines.
- “Environment Used for Coding Examples” on page 115 describes the sample environment that is used for illustrations in this chapter. DASD-sharing between that environment’s two VSE/SP guest machines is done without hardware switches. Creating the sample environment involved changes to system startups for the two guest systems, plus modifications to the operation of ACF/VTAM, CICS/DOS/VS, and VSE/POWER.

Note that implementation of the sample environment is dependent upon use of the procedures and dialogs shown in this chapter. You should use these aids in creating your own environment, which may have any of the DASD types supported for initial installation of VSE/SP.

DASD-Sharing Environments Under VM

Multiple VSE/SP Systems on One CPU

DASD Sharing Without Hardware Switches

To share DASDs between several VSE/SP guest systems, it is *not* necessary that the hardware have channel switches or string switches. VM can allow multiple access to the same DASD without these switches.

To make VM definitions that ensure the integrity of the VM environment, you should remember how VSE/SP tests and handles the shared environment:

- The VSE/SP IPL routines issue a **RELEASE CCW** to all DASDs with the SHR option.
- If the hardware is switchable, VSE/SP allows DASDs to be shared. The lock file will be used to control access to them and protect their contents.
- If the hardware is not switchable, an error code is returned to VSE/SP.

VSE/SP will reset DASDs with the error code to **NONSHAREABLE**. Lock requests for resources on these DASDs are not written to the lock file.

The integrity of the VSE/SP system thus is *lost*, since other virtual machines are not notified about the lock.

When, however, access mode MWV is specified (MDISK statement) for a DASD that is not switchable, VM modifies the RESERVE and RELEASE CCW to a SENSE CCW. The SENSE CCW will never return an error code, and thus VSE/SP will accept the SHR definition for these devices.

Note: With MWV, VM provides *virtual* RESERVE/RELEASE support.

DASD Sharing With Hardware Switches

If switchable hardware is available, you should make use of the additional access paths. This involves creating *ALTCHAN* or *ALTCU* definitions in the VM DMKRIO.

When a virtual machine tries to access a DASD, the primary path specified by the DMKRIO definitions and the MDISK and LINK definitions in the machine's directory entry are used first. If this path is busy, alternative paths then are tried.

Virtual VSE/SP Systems Sharing DASDs with a Native System

VSE/SP uses the lock file to protect resources against parallel updates by different VSE systems. If separate access paths are available, this protection must be supported by hardware to ensure that only one system can write to the lock file at a time.

RESERVE CCW and RELEASE CCW provide the required hardware assistance. The RELEASE CCW only is accepted by the hardware if it comes via the same physical path as the RESERVE CCW.

VM never uses RESERVE CCW and RELEASE CCW. It passes these commands unmodified to devices defined with **ADD cuu,SHR**. The only exception to this is when these devices are defined in the VM DMKRIO with:

- **ALTCH** in RCTLUNIT or
- **ALTCU** in RDEVICE

When ALTCH or ALTCU are used, VM modifies the RESERVE/RELEASE CCWs to SENSE CCWs. These devices then will never be locked for exclusive use. The data integrity provided by RELEASE/RESERVE CCW is lost, however.

VSE uses RELEASE CCWs for all DASDs that are defined as shareable. RESERVE CCWs are only used for the device where the lock file resides. To ensure integrity of this device, *do not create ALTCH and ALTCU definitions for it.*

Notes:

1. *When you use MDISK and LINK to define an access path for VSE/SP virtual machines, you must define the access mode MWV for all shared minidisks.*
2. *The information in this section also applies to DASD-sharing among multiple VSE/SP virtual systems on several CPUs. Full integrity is provided if:*
 - *Any RESERVE/RELEASE CCW is passed to the hardware and*
 - *VM can serialize the RESERVE/RELEASE CCW for the virtual machines on one CPU (MWV access).*

Considerations for VSE/SP Startup Modes

In general, VSE/SP guest machines installed under VM can use the VSE/SP startup modes as any VSE/SP standalone system. However, you should not perform a BASIC or a MINI startup on two VSE/SP guest machines at the same time. The results are unpredictable.

Avoiding a IJSYSRS.SYSLIB Full Condition

From time to time, perform a MINI startup and issue a librarian RELEASE command for the system library IJSYSRS.SYSLIB. This is necessary to avoid a library full condition. In a DASD-sharing environment, VSE/SP saves system control information in IJSYSRS.SYSLIB during startup. The members created by VSE/SP are deleted but the space occupied is not released. This causes eventually a full condition.

The RELEASE command is described in the manual *VSE/Advanced Functions System Control Statements*.

Environment Used for Coding Examples

The coding examples shown in this chapter are for two VSE/SP guest systems running under VM/SP. Figure 29 on page 116 illustrates the sample environment:

VM/SP Host System

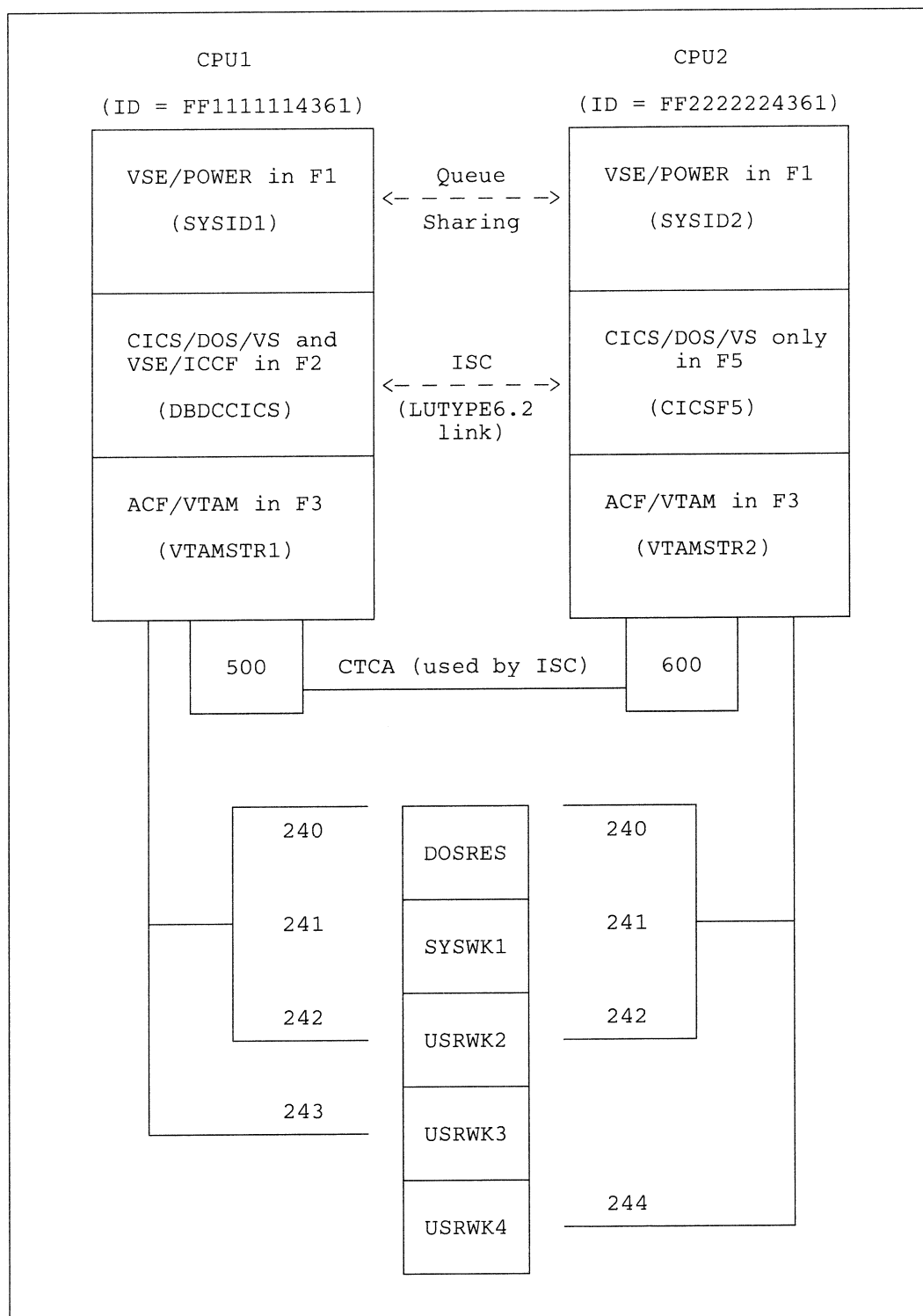


Figure 29. Environment for Coding Examples

In the sample environment, the following system layout is assumed:

- CPU1 is a development system. Both, CICS/DOS/VS and VSE/ICCF are installed in F2. A full-function Interactive Interface is thus available.
- CPU2 is a production system. CICS/DOS/VS is installed in F5, but not VSE/ICCF. The Interactive Interface is used only as a selection mechanism. Resource definition is not possible.

Note: You may decide to create another full-function Interactive Interface. For information about how to do this, refer to "Defining A Second Full-Function Interactive Interface" on page 201.

- The two systems are installed on IBM 3370-2 disk devices.
- MDISK statements in the directory entry for CPU1 define the three minidisks shared by the two systems. LINK statements in the directory entry for CPU2 perform a link to those minidisks. CPU1 has a minidisk for its own use at address 243; CPU2 at address 244.

The following naming convention is used:

VM/SP Name: VSE/SP Name:

VSERES	DOSRES
VSEWK1	SYSWK1
VSEWK2	USRWK2
VSEWK3	USRWK3
VSEWK4	USRWK4

Refer also to "Defining Shared Minidisks" in the manual *IBM VSE/SP Installation Planning*.

- The terminal definitions for ACF/VTAM are for non-SNA terminals.
- The CTCA (Channel-to-Channel Attachment) function of ACF/VTAM is used to create a communications link between CPU1 and CPU2. Note that use of CTCA between VM guest systems does not require installation of additional hardware.
- The two CICS/DOS/VS subsystems communicate using the ISC (Intersystem Communication) facility of CICS/DOS/VS. APPC (Advanced Program to Program Communication) protocols create an LUTYPE6.2 intersystem communication link.
- Resource Definition Online (RDO) is used to create the definitions used for ISC connections and sessions. In addition, some terminals have been defined for transaction routing. The CICS/DOS/VS subsystems share the same CSD file.
- The VSE/VSAM master catalog (VSAM.MASTER.CATALOG) and user catalog (VSESP.USER.CATALOG) are shared.

- VSE/POWER queues are shared. The same VSE/POWER spooling subsystem is used by both CPU1 and CPU2.
- **The two VSE/SP guest systems run with supervisors of MODE = VM.**

To help you more easily compare long examples, definitions for CPU1 are on the left-hand page and definitions for CPU2 are on the right-hand page.

Key statements in the procedures are highlighted. In most cases, basic information about these statements that is available in other manuals is not repeated here.

Note: For clarity's sake, the procedures and jobs created for CPU1 were stored in VSE/ICCF library 33. Those for CPU2 were stored in VSE/ICCF library 34.

Implementation of the Sample Environment

Note: When you implement DASD-sharing, follow exactly the sequence of steps listed below. Otherwise, you may run into problems and DASD-sharing may not work at all or not correctly.

All of the jobs and procedures used to define the sample environment (including the job for generating VSE/POWER with shared spooling) can be submitted for execution in any order, *except for the jobs that define the non-shared VSE/VSAM files required by CICS/DOS/VS in CPU2*. These jobs, which are described in “Creating Non-Shared VSE/VSAM Files for CPU2” on page 195, should only be executed after CPU2 is running and VSE/POWER has started the partitions.

To implement a DASD-sharing environment like the one described in this chapter, proceed as follows:

1. Submit and execute all jobs for the environment, except for those that define non-shared VSE/VSAM files.

All jobs required for the sample environment are shown and described on the following pages (Figure 30 through Figure 100).

2. Once the jobs for the environment are processed, offload the VSE/POWER queues. Use the POFFLOAD BACKUP command.
3. IPL the first CPU.
4. When you are asked if you want to interrupt system startup (message **IESI0221I**) enter:

```
MSG BG
```

5. Respond to the BG message by entering:

```
0 COLD
```

VSE/POWER with shared spooling will be started.

6. In response to the message:

```
1QB2D IS ANY OTHER VSE/POWER SYSTEM ALREADY INITIALIZED?
```

```
enter:
```

```
1 NO
```

The VSE/POWER queues and data files will then be formatted.

7. After VSE/POWER startup completes:
 - a. Reload the queues and
 - b. Start up CICS/DOS/VS (CICSSTR1) and ACF/VTAM (VTAMSTR1)

8. Once CPU1 is fully operational, IPL the second CPU. *At this time, do not start CICS/DOS/VS (CICSSTR2) and ACF/VTAM (VTAMSTR2) for CPU2.*
9. From CPU1, submit the jobs for defining the VSE/VSAM files required by CICS/DOS/VS in CPU2.
10. When these jobs have been processed successfully, start up CICS/DOS/VS and ACF/VTAM in the second CPU.

ACF/VTAM will activate a CTCA link between CPU2 and CPU1. CICS/DOS/VS in CPU2 will initiate an ISC link between the two CICS/DOS/VS subsystems.

PLEASE TURN TO THE NEXT PAGE

VM Directory and PROFILE EXEC Entries

In a DASD-sharing environment, VSE uses the unique ID of each real CPU to ensure environment integrity. If you want to share DASDs among two or more VSE/SP guest machines on the same CPU, you also must define unique CPU IDs for them to VM. This can be done either in directory entries or with the **CP SET** command. *Without user definition, VM will reflect the real CPU ID to all virtual machines running under it.*

CPU1 – VM Entries

```

USER VSECPU1 VSECPU1 16M 16M GB 30
OPTION ECMODE BMX REALTIMER 370E CPUID 111111
.
.
.
MDISK 240 FB-512 000744 712736 VSERES MWV
MDISK 241 FB-512 000744 712736 VSEWK1 MWV
MDISK 242 FB-512 000000 126016 VSEWK2 MWV
.
.
.

```

Figure 30. CPU1 – Directory Entry

The PROFILE EXEC for VSECPU1 contains the following commands for activating the CTCA link to VSECPU2:

```

CP DEF CTC 500
CP COUPLE 500 VSECPU2 600

```

CPU2 – VM Entries

```
USER VSECPU2 VSECPU2 16M 16M GB 30
OPTION ECMODE BMX REALTIMER 370E CPUID 222222
.
.
.
LINK VSECPU1 240 240 MW
LINK VSECPU1 241 241 MW
LINK VSECPU1 242 242 MW
.
.
.
```

Figure 31. CPU2 – Directory Entry

The PROFILE EXEC for VSECPU2 contains the following command for activating the CTCA link to VSECPU1:

```
CP DEF CTC 600
```

Master ASI Procedure

The manual *VSE/Advanced Functions System Management Guide* describes the master ASI procedure and its use. If two or more VSE systems share one SYSRES file, you can define this procedure in order to perform automated system initialization.

The name for the master ASI procedure must be `$ASIPROC`. As shown below, its records define which set of ASI procedures is to be used for a specific CPU.

VSE/SP 3.1 does not provide a skeleton in an VSE/ICCF library for `$ASIPROC`.

```
* $$ JOB JNM=MASIPROC,DISP=D,CLASS=0
// JOB CATALOG $ASIPROC
// EXEC LIBR,PARM='MSHP'
ACC S=IJSYSRS.SYSLIB
CATALOG $ASIPROC.PROC          DATA=YES REPLACE=YES
CPU=FF1111114361,IPL=$IPLCP1,JCL=$$JCLCP1
CPU=FF2222224361,IPL=$IPLCP2,JCL=$$JCLCP2
/+
CONNECT S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY $ASIPROC.PROC  REPLACE=YES
/*
/&
* $$ EOJ
```

Figure 32. Master ASI Procedure for CPU1 and CPU2

IPL Procedures

When you create the IPL procedures for the two VM guest machines, the *Tailor IPL Procedure* dialog creates the statements shown on the next two pages. The supervisor used in the example is `MODE=VM`. As a result, no DPD statements for defining page data sets are created by the dialog. In case of a `MODE=VM` supervisor, paging is done by VM.

The manual *VSE/Advanced Functions System Control Statements* has detailed information about these statements.

CPU1 – IPL Procedure

There is no skeleton in a VSE/ICCF library for creating IPL procedures. To do this task for your DASD-sharing environment:

1. Access the *Tailor IPL Procedure* dialog, and define the IPL procedures to be used for the two CPUs.

The dialog stores your definitions in member IPLPROC in VSE/ICCF library 51. It also creates the job CATALIPL.

2. Submit CATALIPL for processing.

```
/* CATALOGING IPL PROCEDURE      $IPLCP1.PROC      */
DELETE SIPLCP1.PROC
RENAME $IPLCP1.PROC:SIPLCP1.PROC
CATALOG $IPLCP1.PROC REPLACE=YES
O1F,$$A$SUPV,VPOOL=320K,P,LOG
ADD OOC,3505
.
.
.
ADD 240,FBA,SHR
ADD 241,FBA,SHR
ADD 242,FBA,SHR
ADD 243,FBA
.
.
.
ADD 500,CTCA
.
.
.
DLF VOLID=USRWK2,BLK=2,NBLK=60,DSF=N,NCPU=2
.
.
.
DEF SYSREC=SYSWK1
.
.
.
DLA NAME=AREAL,VOLID=DOSRES,BLK=55118,NBLK=744,DSF=N
.
.
.
```

Figure 33. CPU1 – IPL Procedure

Note that the statement ADD 600.CTCA has been deleted in above IPL procedure.

CPU2 – IPL Procedure

```

/* CATALOGING IPL PROCEDURE      $IPLCP2.PROC      */
DELETE SIPLCP2.PROC
RENAME $IPLCP2.PROC:SIPLCP2.PROC
CATALOG $IPLCP2.PROC REPLACE=YES
01F,$$A$$SUPV,VPOOL=320K,P,LOG
ADD 00C,3505
.
.
.
ADD 240,FBA,SHR
ADD 241,FBA,SHR
ADD 242,FBA,SHR
ADD 244,FBA
.
.
.
ADD 600,CTCA
.
.
.
DLF VOLID=USRWK2
.
.
.
DEF SYSREC=USRWK2
.
.
.
DLA NAME=AREA2,VOLID=USRWK2,BLK=62,NBLK=744,DSF=N
.
.
.

```

Figure 34. CPU2 – IPL Procedure

Note that the statement ADD 500.CTCA has been deleted in above IPL procedure.

PLEASE TURN TO THE NEXT PAGE

System Startup Procedures

Notes:

1. *The procedures shown in this section (pages 130 to 146) are cataloged using the skeleton SKENVSEL, a member of VSE/ICCF library 59. Figure 52 and Figure 53 on page 147 show the modifications made to this skeleton for each CPU in the sample environment.*
2. *On pages 148 through 169, the VSE/SP sublibraries PRD2.COMM and PRD2.PROD are used to catalog ACF/VTAM and CICS/DOS/VS definitions. PRD2.COMM is used for CPU1 definitions, PRD2.PROD for CPU2 definitions. They were chosen to reduce the definition effort for the DASD-sharing example. For a real user environment, however, it is recommended to catalog these procedures in user-defined sublibraries. You may define two sublibraries, PRD2.CPU1 and PRD2.CPU2, for example. This requires that you change the LIBDEF statements in procedures LIBDEFC1 and LIBDEFC2 on page 146 accordingly.*

CPU1 – Procedure \$0JCLCP1

Once IPL completes, the JCL ASI procedure for the BG partition is called. The default system procedure is called \$0JCL370. For the sample DASD-sharing environment, procedures \$0JCLCP1 and \$0JCLCP2 were created using the skeleton SKJCL0 in VSE/ICCF library 59.

```
CATALOG $0JCLCP1.PROC    DATA=YES    REPLACE=YES
STDOP ACANCEL=NO,DECK=NO,DUMP=PART,SYSDMP=YES,SXREF=YES
// EXEC PROC=STDLABEL    LOAD LABEL AREA FOR CPU1
// EXEC PROC=SETSDL      SET SDL
PRTY BG,FB,FA,F9,F8,F7,F6,F5,F4,F2,F3,F1    CICS/ICCF in F2
ASSGN SYSLST,IGN
// JOB BGINIT
// SETPARM XNCPU=' '
// EXEC PROC=$COMVAR,XNCPU
// EXEC DTRISTR,SIZE=AUTO,PARM='CPUVAR&XNCPU;$$JCLBSX;$$JCLMIN'
.
.
.
/. ALLCVM
// EXEC PROC=ALLOCCP1    PARTITION ALLOCS. FOR CPU1 GUEST
// GOTO PWRSTRT
.
.
.
/. PWRSTRT
.
.
.
// EXEC PROC=LOADINST
// EXEC DTRSETP,PARM='CPUVAR1;;'
.
.
.
/. USER
// EXEC PROC=USERCP1     NORMAL BG STARTUP FOR CPU1 GUEST
/. EXIT
/&
/+
CONN S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY $0JCLCP1.PROC      REPLACE=YES
```

Figure 35. CPU1 – Procedure \$0JCLCP1

CPU2 – Procedure \$0JCLCP2

```

CATALOG $0JCLCP2.PROC      DATA=YES      REPLACE=YES
STDOPT ACANCEL=NO,DECK=NO,DUMP=PART,SYSDMP=YES,SXREF=YES
// EXEC PROC=STD LAB2      LOAD LABEL AREA FOR CPU2
// EXEC PROC=SETSDL        SET SDL
PRTY BG,FB,FA,F9,F8,F7,F6,F2,F4,F5,F3,F1      CICS in F5
ASSGN SYSLST,IGN
// JOB BGINIT
// SETPARM XNCPU=' '
// EXEC PROC=$COMVAR,XNCPU
// EXEC DTRISTR,SIZE=AUTO,PARM='CPUVAR&XNCPU;$$JCLBSX;$$JCLMIN'
.
.
.
/. ALLCVM
// EXEC PROC=ALLOCCP2      PARTITION ALLOCS. FOR CPU2 GUEST
// GOTO PWRSTRT
.
.
.
/. PWRSTRT
.
.
.
// EXEC PROC=LOADINST
// EXEC DTRSETP,PARM='CPUVAR2;;'
.
.
.
/. USER
// EXEC PROC=USERCP2      NORMAL BG STARTUP FOR CPU2 GUEST
/. EXIT
/&
/+
CONN S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY $0JCLCP2.PROC      REPLACE=YES

```

Figure 36. CPU2 – Procedure \$0JCLCP2

\$COMVAR

Procedure \$COMVAR uses the 12 character CPU ID to identify the currently active CPU (parameter XNCPU). The example below was created by using skeleton SKCOMVAR stored in VSE/ICCF library 59. In the example, parameter XNCPU is set to 1 if the CPU ID is FF1111114361 and to 2 if the CPU ID is FF2222224361.

```
CATALOG $COMVAR.PROC  DATA=YES R=Y
SETPARM XNCPU=1
// EXEC DTRISCPU,SIZE=AUTO,PARM='FF2222224361'
IF $RC = 0 THEN
SETPARM XNCPU=2
/+
CONNECT S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY $COMVAR.PROC  REPL=YES
```

Figure 37. \$COMVAR Procedure for Determining Active CPU

PLEASE TURN TO THE NEXT PAGE

CPU1 – Procedure CPUVAR1

Each CPU in your DASD-sharing environment must have its own CPUVAR procedure. There is no skeleton, however, for creating this procedure. To create it, you can:

1. Enter VSE/ICCF command mode from the Interactive Interface. This is option 6 from the first selection panel for a user with administrative authority.
2. Switch to the VSE/ICCF library where you want to store procedures and jobs for the first CPU in the DASD-sharing environment. For example:

```
/SW 33
```

3. Enter a LIBRP command to punch the procedure CPUVAR1 from IJSYSRS.SYSLIB into the VSE/ICCF library. For example:

```
LIBRP IJSYSRS.SYSLIB CPUVAR1.PROC CPUVAR1
```

4. Change the VSE/ICCF library member as required.
5. Copy the member into library 34 for the second CPU, and make the necessary changes.

```
CATALOG CPUVAR1.PROC                                DATA=YES REPLACE=YES
SETPARM CPUMODE='V'
SETPARM DASD='3372'
.
.
.
SETPARM XPARTB0='BG' * PARTITION PROGRAM IS RUNNING IN *
SETPARM XPARTB4='F4'
SETPARM XPARTB5='F5'
SETPARM XPARTCI='F2' * CICS/DOS/VS *
SETPARM XPARTPW='F1'
SETPARM XPARTVT='F3'
.
.
.
SETPARM XUSEBG='B0' * PROGRAM RUNNING IN PARTITION *
SETPARM XUSEFA='NONE'
SETPARM XUSEFB='NONE'
SETPARM XUSEF1='PW'
SETPARM XUSEF2='CI' * CICS/DOS/VS *
SETPARM XUSEF3='VT'
SETPARM XUSEF4='B4'
SETPARM XUSEF5='B5'
SETPARM XUSEF6='NONE'
SETPARM XUSEF7='NONE'
SETPARM XUSEF8='NONE'
SETPARM XUSEF9='NONE'
/+
CONNECT S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY CPUVAR1.PROC REPLACE=YES
```

Figure 38. CPU1 – Procedure CPUVAR1

CPU2 – Procedure CPUVAR2

```
CATALOG CPUVAR2.PROC                      DATA=YES REPLACE=YES
SETPARM CPUMODE='V'
SETPARM DASD='3372'
.
.
.
SETPARM XPARTB0='BG' * PARTITION PROGRAM IS RUNNING IN *
SETPARM XPARTSQ='F4'
SETPARM XPARTCI='F5' * CICS/DOS/VS *
SETPARM XPARTPW='F1'
SETPARM XPARTVT='F3'
.
.
.
SETPARM XUSEBG='B0' * PROGRAM RUNNING IN PARTITION *
SETPARM XUSEFA='NONE'
SETPARM XUSEFB='NONE'
SETPARM XUSEF1='PW'
SETPARM XUSEF2='B2'
SETPARM XUSEF3='VT'
SETPARM XUSEF4='B4'
SETPARM XUSEF5='CI' * CICS/DOS/VS *
SETPARM XUSEF6='NONE'
SETPARM XUSEF7='NONE'
SETPARM XUSEF8='NONE'
SETPARM XUSEF9='NONE'
/+
CONNECT S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY CPUVAR2.PROC REPLACE=YES
```

Figure 39. CPU2 – Procedure CPUVAR2

CPU1 – Procedure ALLOCCP1

Procedures ALLOCCP1 and ALLOCCP2 define the partition allocations for each guest machine. They were created using the skeleton SKALLC1 in VSE/ICCF library 59.

```
CATALOG ALLOCCP1.PROC    DATA=YES          REPLACE=YES
ALLOC  BG=1536K,F1=768K,F2=5888K,F3=2560K
ALLOC  F4=1024K,F5=0K
ALLOC  R,BG=0K,F1=64K,F2=144K,F3=296K
ALLOC  R,F4=0K,F5=0K
SIZE   BG=1280K,F1=580K,F2=5120K,F3=200K
SIZE   F4=768K,F5=768K
NPGR   BG=100,F2=255,F3=100,F4=100,F5=50
/+
CONN  S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY  ALLOCCP1.PROC      REPLACE=YES
```

Figure 40. CPU1 – Procedure ALLOCCP1

CPU2 – Procedure ALLOCCP2

```
CATALOG ALLOCCP2.PROC    DATA=YES          REPLACE=YES
ALLOC  BG=1536K,F1=768K,F2=0K,F3=2560K
ALLOC  F4=1024K,F5=5888K
ALLOC  R,BG=0K,F1=64K,F2=0K,F3=296K
ALLOC  R,F4=0K,F5=144K
SIZE   BG=1280K,F1=580K,F3=200K
SIZE   F4=768K,F5=5120K
NPGR   BG=100,F2=50,F3=100,F4=100,F5=255
/+
CONN  S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY  ALLOCCP2.PROC      REPLACE=YES
```

Figure 41. CPU2 – Procedure ALLOCCP2

PLEASE TURN TO THE NEXT PAGE

CPU1 – Procedure USERCP1

Procedures USERCP1 and USERCP2 were created using the skeleton SKUSERBG in VSE/ICCF library 59.

```
CATALOG USERCP1.PROC DATA=YES REPLACE=YES
* START MODE FOR BG-PARTITION IS NORMAL
* *****
*          YOUR SYSTEM IS          *
// EXEC PROC=SPLEVEL
* *****
STDOPT DATE=MDY                CHANGE STANDARD OPTIONS IF WANTED
SET SDL
/*
// EXEC PROC=LIBDEFCL          LIBDEFS FOR CPU1
// LIBDEF DUMP,CATALOG=SYSDUMP.BG,PERM
// SETPARM XNCPU=''
// EXEC PROC=$COMVAR,XNCPU      GET CPU NUMBER
// SETPARM TPMODE=''           GET INFORMATION OUT OF CPUVAR1
// EXEC PROC=CPUVAR&XNCPU,TPMODE
// IF TPMODE=B THEN
// GOTO NOVTAM
// PWR PRELEASE RDR,VTAMSTR1    START VTAM FOR CPU1
// EXEC IESWAIT,PARM='03'
/. NOVTAM
// PWR PRELEASE RDR,CICSSTR1    START CICS FOR CPU1
/+
CONN S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY USERCP1.PROC             REPLACE=YES
```

Figure 42. CPU1 – Procedure USERCP1

CPU2 – Procedure USERCP2

```
CATALOG USERCP2.PROC DATA=YES REPLACE=YES
* START MODE FOR BG-PARTITION IS NORMAL
* *****
*          YOUR SYSTEM IS          *
// EXEC PROC=SPLEVEL
* *****
STDOPT DATE=MDY                CHANGE STANDARD OPTIONS IF WANTED
SET SDL
/*
// EXEC PROC=LIBDEFC2           LIBDEFS FOR CPU2
// LIBDEF DUMP,CATALOG=SYSDUMP.BG,PERM
// SETPARM XNCPU=''
// EXEC PROC=$COMVAR,XNCPU      GET CPU NUMBER
// SETPARM TPMODE=''
// EXEC PROC=CPUVAR&XNCPU,TPMODE GET INFORMATION OUT OF CPUVAR2
// IF TPMODE=B THEN
// GOTO NOVTAM
// PWR PRELEASE RDR,VTAMSTR2    START VTAM FOR CPU2
// EXEC IESWAIT,PARM='03'
/. NOVTAM
// PWR PRELEASE RDR,CICSSTR2    START CICS FOR CPU2
/+
CONN S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY USERCP2.PROC             REPLACE=YES
```

Figure 43. CPU2 – Procedure USERCP2

CPU1 – Procedure \$1JCLCP1

The default system procedure for beginning VSE/POWER startup is called \$1JCL370. For the sample DASD-sharing environment, procedures \$1JCLCP1 and \$1JCLCP2 were created using the skeleton SKJCL1 in VSE/ICCF library 59.

```
CATALOG $1JCLCP1.PROC DATA=YES REPL=YES
// JOB POWSTART
// EXEC PROC=DTRICCF
// EXEC PROC=DTRPOWER
// SETPARM DASD=''
// SETPARM XNCPU=''
// SETPARM XENVNR=''
// SETPARM XPWMODE=''
// SETPARM XPARTPW=''
// EXEC PROC=$COMVAR,XNCPU
// EXEC PROC=CPUVAR&XNCPU,DASD,XENVNR,XPWMODE,XPARTPW
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTAT&XPARTPW=ACTIVE'
/*
// EXEC PROC=LIBDEFCL
// EXEC PROC=PWSTCP1&XENVNR
/*
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTAT&XPARTPW=INACTIVE'
/*
/+
CONN S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY $1JCLCP1.PROC          REPLACE=YES
```

Figure 44. CPU1 – Procedure \$1JCLCP1

CPU2 – Procedure \$1JCLCP2

```
CATALOG $1JCLCP2.PROC DATA=YES REPL=YES
// JOB POWSTART
// EXEC PROC=DTRICCF
// EXEC PROC=DTRPOWR
// SETPARM DASD=''
// SETPARM XNCPU=''
// SETPARM XENVNR=''
// SETPARM XPWMODE=''
// SETPARM XPARTPW=''
// EXEC PROC=$COMVAR,XNCPU
// EXEC PROC=CPUVAR&XNCPU,DASD,XENVNR,XPWMODE,XPARTPW
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTAT&XPARTPW=ACTIVE'
/*
// EXEC PROC=LIBDEFC2
// EXEC PROC=PWSTCP2&XENVNR,XPWMODE
/*
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTAT&XPARTPW=INACTIVE'
/*
/+
CONN S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY $1JCLCP2.PROC          REPLACE=YES
```

Figure 45. CPU2 – Procedure \$1JCLCP2

CPU1 – Procedure PWSTCP11

Procedures PWSTCP11 and PWSTCP21 were created using the skeleton SKPWSTRT in VSE/ICCF library 59. In the procedure names, the last 1 refers to Environment 1. As shown in Figure 44 on page 140 and Figure 45 on page 141, *you only enter the first seven characters of the startup names in skeleton SKJCL1*. The system will add the final environment number (1, for our examples).

```
CATALOG PWSTCP11.PROC      REPL=YES  DATA=YES
.
.
// IF XPWMODE ->= COLD THEN
// GOTO WARM
// ASSGN SYSLST,UA
// EXEC IPWPOWER          POWER WITH SHARED SPOOLING
SET SYSID=1
DEFINE L,CICSDATA,3F00,1,255,*
FORMAT=D,A
PSTART BG,AOI
.
.
PSTART F2,L2
READER=FEC
PRINTERS=FEE,FEF
.
.
PSTART F5,H2
READER=FEC
PRINTERS=FEE
.
.
/. WARM                POWER WARM START
// EXEC IPWPOWER        POWER WITH SHARED SPOOLING
SET SYSID=1
DEFINE L,CICSDATA,3F00,1,255,*
FORMAT=NO
PSTART BG,AOI
.
.
PSTART F2,L2
READER=FEC
PRINTERS=FEE,FEF
.
.
PSTART F5,H2
READER=FEC
PRINTERS=FEE
.
.
/*
/. EXIT
/+
CONN S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY PWSTCP11.PROC          REPLACE=YES
```

Figure 46. CPU1 – Procedure PWSTCP11

CPU2 – Procedure PWSTCP21

```

CATALOG PWSTCP21.PROC      REPL=YES  DATA=YES
.
.
// IF XPWMODE ^= COLD THEN
// GOTO WARM
// ASSGN SYSLST,UA
// EXEC IPWPOWER          POWER WITH SHARED SPOOLING
SET SYSID=2
DEFINE L,CICSDATA,3F00,1,255,*
FORMAT=D,A
PSTART BG,AOI
.
.
PSTART F2,L2
READER=FEC
PRINTERS=FEE
.
.
PSTART F5,H2
READER=FEC
PRINTERS=FEE,FEF
.
.
/. WARM                POWER WARM START
// EXEC IPWPOWER        POWER WITH SHARED SPOOLING
SET SYSID=2
DEFINE L,CICSDATA,3F00,1,255,*
FORMAT=NO
PSTART BG,AOI
.
.
PSTART F2,L2
READER=FEC
PRINTERS=FEE
.
.
PSTART F5,H2
READER=FEC
PRINTERS=FEE,FEF
.
.
/. EXIT
/+
CONN S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY PWSTCP21.PROC          REPLACE=YES

```

Figure 47. CPU2 – Procedure PWSTCP21

Note: In the sample environment, VSE/POWER is generated only once. The **SET SYSID=2** statement is required for correct use of shared spooling.

CPU1 – Procedure \$2JCLCP1

The default procedure for starting all partitions under the control of VSE/POWER is called \$nJCL370. n is the number of a particular partition (3 through B). For the sample DASD-sharing environment, procedures \$2JCLCP1 and \$2JCLCP2 were created using the skeleton SKINITNN in VSE/ICCF library 59.

```
CATALOG $2JCLCP1.PROC DATA=YES REPLACE=YES
// JOB F2INIT
// LIBDEF DUMP,CATALOG=SYSDUMP.F2,PERM  ASSIGN SYSDUMP FOR F2
// EXEC PROC=LIBDEFCL
ASSGN SYSIN,FEC
ASSGN SYSPCH,FED
ASSGN SYSLST,FEE
/&
/+
CATALOG $3JCLCP1.PROC DATA=YES REPLACE=YES
// JOB F3INIT
// LIBDEF DUMP,CATALOG=SYSDUMP.F3,PERM  ASSIGN SYSDUMP FOR F3
// EXEC PROC=LIBDEFCL
ASSGN SYSIN,FEC
ASSGN SYSPCH,FED
ASSGN SYSLST,FEE
/&
/+
CATALOG $4JCLCP1.PROC DATA=YES REPLACE=YES
// JOB F4INIT
// LIBDEF DUMP,CATALOG=SYSDUMP.F4,PERM  ASSIGN SYSDUMP FOR F4
// EXEC PROC=LIBDEFCL
ASSGN SYSIN,FEC
ASSGN SYSPCH,FED
ASSGN SYSLST,FEE
/&
/+
CATALOG $5JCLCP1.PROC DATA=YES REPLACE=YES
// JOB F5INIT
// LIBDEF DUMP,CATALOG=SYSDUMP.F5,PERM  ASSIGN SYSDUMP FOR F5
// EXEC PROC=LIBDEFCL
ASSGN SYSIN,FEC
ASSGN SYSPCH,FED
ASSGN SYSLST,FEE
/&
/+
CONNECT S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY $2JCLCP1.PROC REPLACE=YES
COPY $3JCLCP1.PROC REPLACE=YES
COPY $4JCLCP1.PROC REPLACE=YES
COPY $5JCLCP1.PROC REPLACE=YES
```

Figure 48. CPU1 – Startups for Partitions Controlled by VSE/POWER

CPU2 – Procedure \$2JCLCP2

```
CATALOG $2JCLCP2.PROC DATA=YES REPLACE=YES
// JOB F2INIT
// LIBDEF DUMP,CATALOG=SYSDUMP.F2,PERM    ASSIGN SYSDUMP FOR F2
// EXEC PROC=LIBDEFC2
ASSGN SYSIN,FEC
ASSGN SYSPCH,FED
ASSGN SYSLST,FEE
/&
/+
CATALOG $3JCLCP2.PROC DATA=YES REPLACE=YES
// JOB F3INIT
// LIBDEF DUMP,CATALOG=SYSDUMP.F3,PERM    ASSIGN SYSDUMP FOR F3
// EXEC PROC=LIBDEFC2
ASSGN SYSIN,FEC
ASSGN SYSPCH,FED
ASSGN SYSLST,FEE
/&
/+
CATALOG $4JCLCP2.PROC DATA=YES REPLACE=YES
// JOB F4INIT
// LIBDEF DUMP,CATALOG=SYSDUMP.F4,PERM    ASSIGN SYSDUMP FOR F4
// EXEC PROC=LIBDEFC2
ASSGN SYSIN,FEC
ASSGN SYSPCH,FED
ASSGN SYSLST,FEE
/&
/+
CATALOG $5JCLCP2.PROC DATA=YES REPLACE=YES
// JOB F5INIT
// LIBDEF DUMP,CATALOG=SYSDUMP.F5,PERM    ASSIGN SYSDUMP FOR F5
// EXEC PROC=LIBDEFC2
ASSGN SYSIN,FEC
ASSGN SYSPCH,FED
ASSGN SYSLST,FEE
/&
/+
CONNECT S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY $2JCLCP2.PROC REPLACE=YES
COPY $3JCLCP2.PROC REPLACE=YES
COPY $4JCLCP2.PROC REPLACE=YES
COPY $5JCLCP2.PROC REPLACE=YES
```

Figure 49. CPU2 – Startups for Partitions Controlled by VSE/POWER

CPU1 – Procedure LIBDEFC1

The default system procedure for defining library search chains is called LIBDEF. For the sample DASD-sharing environment, procedures LIBDEFC1 and LIBDEFC2 were created using the skeleton SKLIBCHN in VSE/ICCF library 59.

```
CATALOG LIBDEFC1.PROC DATA=YES REPLACE=YES
LIBDEF PHASE,SEARCH=( PRD2.COMM,PRD2.CONFIG,PRD2.PROD,PRD2.DBASE,      X
                     PRD1.BASE)
LIBDEF OBJ,SEARCH=( PRD2.COMM,PRD2.CONFIG,PRD2.PROD,PRD2.DBASE,      X
                     PRD1.BASE),PERM
LIBDEF SOURCE,SEARCH=( PRD2.COMM,PRD2.CONFIG,PRD2.PROD,PRD2.DBASE,    X
                     PRD1.BASE),PERM
ASSGN SYSLST,FEE
ASSGN SYSPCH,FED
ASSGN SYSIN,FEC
/*
/+
CONN S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY LIBDEFC1.PROC          REPLACE=YES
```

Figure 50. CPU1 – Procedure LIBDEFC1

CPU2 – Procedure LIBDEFC2

```
CATALOG LIBDEFC2.PROC DATA=YES REPLACE=YES
LIBDEF PHASE,SEARCH=( PRD2.PROD,PRD2.CONFIG,PRD2.DBASE,PRD1.BASE,      X
                     PRD2.COMM)
LIBDEF OBJ,SEARCH=( PRD2.PROD,PRD2.CONFIG,PRD2.DBASE,PRD1.BASE,      X
                     PRD2.COMM),PERM
LIBDEF SOURCE,SEARCH=( PRD2.PROD,PRD2.CONFIG,PRD2.DBASE,PRD1.BASE,    X
                     PRD2.COMM),PERM
ASSGN SYSLST,FEE
ASSGN SYSPCH,FED
ASSGN SYSIN,FEC
/*
/+
CONN S=IJSYSRS.SYSLIB:PRD2.SAVE
COPY LIBDEFC2.PROC          REPLACE=YES
```

Figure 51. CPU2 – Procedure LIBDEFC2

Cataloging Startup Members

You can use the skeleton SKENVSEL to catalog the procedures that you created from pages 126 to 146.

As shown in the following two figures, procedures for CPU1 were members of VSE/ICCF library 33. Those for CPU2 were in library 34.

```
* $$ JOB JNM=ENVCAT,DISP=D,CLASS=0
// JOB ENVCAT
// EXEC LIBR,PARM='MSHP'
ACCESS S=IJSYSRS.SYSLIB
* $$ SLI ICCF=(COMVAR),LIB=(33)
* $$ SLI ICCF=(CPUVAR1),LIB=(33)
* $$ SLI ICCF=(SKALLC1),LIB=(33)
* $$ SLI ICCF=(SKJCLO),LIB=(33)
* $$ SLI ICCF=(SKJCL1),LIB=(33)
* $$ SLI ICCF=(SKINITNN),LIB=(33)
* $$ SLI ICCF=(SKUSERBG),LIB=(33)
* $$ SLI ICCF=(SKPWSTRT),LIB=(33)
* $$ SLI ICCF=(SKLIBCHN),LIB=(33)
/*
/&
* $$ EOJ
```

Figure 52. Cataloging Startup Procedures for CPU1

```
* $$ JOB JNM=ENVCAT,DISP=D,CLASS=0
// JOB ENVCAT
// EXEC LIBR,PARM='MSHP'
ACCESS S=IJSYSRS.SYSLIB
* $$ SLI ICCF=(CPUVAR2),LIB=(34)
* $$ SLI ICCF=(SKALLC1),LIB=(34)
* $$ SLI ICCF=(SKJCLO),LIB=(34)
* $$ SLI ICCF=(SKJCL1),LIB=(34)
* $$ SLI ICCF=(SKINITNN),LIB=(34)
* $$ SLI ICCF=(SKUSERBG),LIB=(34)
* $$ SLI ICCF=(SKPWSTRT),LIB=(34)
* $$ SLI ICCF=(SKLIBCHN),LIB=(34)
/*
/&
* $$ EOJ
```

Figure 53. Cataloging Startup Procedures for CPU2

ACF/VTAM Modifications

CPU1 – ACF/VTAM Startup

Jobs VTAMSTR1 and VTAMSTR2 were created using the skeleton SKVTAM in VSE/ICCF library 59.

```
* $$ JOB JNM=VTAMSTR1,CLASS=3,DISP=L,SYSID=1
* $$ LST CLASS=A,DISP=D,SYSID=1
// JOB VTAMSTR1          START UP VTAM CPU1 PRD2.COMM FIRST CHAIN
// SETPARM XNCPU=''
// EXEC PROC=$COMVAR,XNCPU
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTATF3=ACTIVE '
/*
// ASSGN SYS000,UA
// ASSGN SYS001,DISK,VOL=SYSWK1,SHR          TRACE FILE ASSIGNMENT
// ASSGN SYS004,DISK,VOL=SYSWK1,SHR          TRACE FILE ASSIGNMENT
// LIBDEF *,SEARCH=(PRD2.COMM,PRD2.PROD,PRD2.CONFIG,PRD1.BASE),PERM
// LIBDEF DUMP,CATALOG=SYSDUMP.F3,PERM
// EXEC ISTINCVT,SIZE=AUTO
/*
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTATF3=INACTIVE '
/*
/&
* $$ EOJ
```

Figure 54. CPU1 – ACF/VTAM Startup

CPU2 – ACF/VTAM Startup

```
* $$ JOB JNM=VTAMSTR2,CLASS=3,DISP=L,SYSID=2
* $$ LST CLASS=A,DISP=D,SYSID=2
// JOB VTAMSTR2          START UP VTAM CPU2 PRD2.PROD FIRST CHAIN
// SETPARM XNCPU=''
// EXEC PROC=$COMVAR,XNCPU
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTATF3=ACTIVE'
/*
// ASSGN SYS000,UA
// ASSGN SYS001,DISK,VOL=SYSWK1,SHR      TRACE FILE ASSIGNMENT
// ASSGN SYS004,DISK,VOL=SYSWK1,SHR      TRACE FILE ASSIGNMENT
// LIBDEF *,SEARCH=(PRD2.PROD,PRD2.COMM,PRD2.CONFIG,PRD1.BASE),PERM
// LIBDEF DUMP,CATALOG=SYSDUMP.F3,PERM
// EXEC ISTINCVT,SIZE=AUTO
/*
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTATF3=INACTIVE'
/*
/&
* $$ EOJ
```

Figure 55. CPU2 – ACF/VTAM Startup

CPU1 – Start Option List in ATCSTR00

To create the start option list used by ACF/VTAM, you can copy ATCSTR00 from VSE/ICCF library 51 and modify it for your DASD-sharing environment. Note that:

1. ACF/VTAM requires a start option list with the name ATCSTR00.
2. The member in VSE/ICCF library 51 does not have the job control statements shown below.

```
* $$ JOB JNM=ATCSTR00,CLASS=0,DISP=D
* $$ LST CLASS=Q,DEST=*
// JOB ATCSTR00          CATALOG VTAM ATCSTR00  DBDCCICS CPU1
// EXEC LIBR,PARM='MSHP'
ACCESS S=PRD2.COMM
DELETE ATCSTR00.SAVE
RENAME ATCSTR00.B:ATCSTR00.SAVE
CATALOG ATCSTR00.B REPLACE=YES
SSCPID=11,
HOSTSA=11,
MAXSUBA=15,
CONFIG=00,
LIST=00,
NOPROMPT,
ITLIM=25,
IOINT=0,
LFBUF=(70,288,,6),
LPBUF=(54,,,6),
SFBUF=(153,,,20),
SPBUF=(210,,,20),
VFBUF=104000,
VPBUF=400000,
WPBUF=(100,,,10)
/+
/*
/&
* $$ EOJ
```

*
*
*
*
*
*
*
*
*
*
*
*
*
*
*

Figure 56. CPU1 – Start Option List for ACF/VTAM

CPU2 – Start Option List in ATCSTR00

```
* $$ JOB JNM=ATCSTR00,CLASS=0,DISP=D
* $$ LST CLASS=Q,DEST=*
// JOB ATCSTR00          CATALOG VTAM ATCSTR00  CICSF5 CPU2
// EXEC LIBR,PARM='MSHP'
ACCESS S=PRD2.PROD
DELETE ATCSTR00.SAVE
RENAME ATCSTR00.B:ATCSTR00.SAVE
CATALOG ATCSTR00.B REPLACE=YES
SSCPID=12,
HOSTSA=12,
MAXSUBA=15,
CONFIG=00,
LIST=00,
NOPROMPT,
ITLIM=25,
IOINT=0,
LFBUF=(70,288,,6,,),
LPBUF=(54,,,6),
SFBUF=(153,,,20),
SPBUF=(210,,,20),
VFBUF=104000,
VPBUF=400000,
WPBUF=(100,,,10)
/+
/*
/&
* $$ EOJ
```

Figure 57. CPU2 – Start Option List for ACF/VTAM

1. Enter VSE/ICCF command mode from the Interactive Interface. This is option 6 from the first selection panel for a user with administrative authority.
2. Switch to the VSE/ICCF library where you want to store procedures and jobs for the first CPU in the DASD-sharing environment. For example:

3. Enter a LIBRP command to punch the ACF/VTAM book ATCCON00 from IJSYSRS.SYSLIB into the VSE/ICCF library. For example:

4. Change the VSE/ICCF library member as required.

- Copy the member into library 34 for the second CPU, and make the necessary changes.

```
* $$$ JOB JNM=ATCCON00,CLASS=0,DISP=D
* $$$ LST CLASS=Q,DEST=*
// JOB ATCCON00          CATALOG VTAM ATCCON00  DBDCCICS CPU1
// EXEC LIBR,PARM='MSHP'
ACCESS S=PRD2.COMM
DELETE ATCCON00.SAVE
RENAME ATCCON00.B:ATCCON00.SAVE
CATALOG ATCCON00.B REPLACE=YES
        VTMAPPL,
        VTMSNA,
        VTMNSNA,
        VTMPATH,
        VTMC1,
        VTMC2,
        VTMC3,
        VTMCCTA,
        VTMCDDRM,
        VTMCDDRS,
        VTMSW1
/+
/*
/&
* $$$ EOJ
```

Figure 58. CPU1 – Configuration List for ACF/VTAM

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```

* $$ JOB JNM=ATCCON00,CLASS=0,DISP=D
* $$ LST CLASS=Q,DEST=*
// JOB ATCCON00          CATALOG VTAM ATCCON00  CICSf5 CPU2
// EXEC LIBR,PARM='MSHP'
ACCESS S=PRD2.PROD
DELETE ATCCON00.SAVE
RENAME ATCCON00.B:ATCCON00.SAVE
CATALOG ATCCON00.B REPLACE=YES
        VTMAPPL,
        VTMSNA,
        VTMNSNA,
        VTMPATH,
        VTMCA1,
        VTMCA2,
        VTMCA3,
        VTMCTCA,
        VTMCDRM,
        VTMCDRS,
        VTMSW1
/+
/*
/&
* $$ EOJ

```

Figure 59. CPU2 – Configuration List for ACF/VTAM

CPU1 – Cross-Domain Resource Definitions

Jobs VTAMCDR1 and VTAMCDR2 were created using the skeleton SKVTMCDR in VSE/ICCF library 59.

```
* $$ JOB JNM=VTAMCDR1,CLASS=0,DISP=D
// JOB VTAMCDR1          CATALOG VTAMCDR1    FOR DBDCCICS CPU1
// EXEC LIBR,PARM='MSHP'
ACCESS SUBLIB=PRD2.COMM
CATALOG VTMCDRM.B REPLACE=YES
VTMCDRM  VBUILD      TYPE=CDRM
CPU1SA11  CDRM SUBAREA=11,CDRDYN=YES,          *
          ISTATUS=ACTIVE,VPACING=2
CPU2SA12  CDRM SUBAREA=12,CDRSC=OPT,          *
          ISTATUS=ACTIVE,VPACING=2

/+
CATALOG VTMCDRS.B REPLACE=YES
VTMCDRS  VBUILD      TYPE=CDRSC
CICSF5   CDRSC        CDRM=CPU2SA12
/+
CATALOG VTMADJS.B REPLACE=YES
VTMADJS  VBUILD      TYPE=ADJSSCP
CPU2SA12 ADJCDRM

/+
/*
/&
* $$ EOJ
```

Figure 60. CPU1 – Cross-Domain Resource Definitions for ACF/VTAM

Note: The statements for cataloging VTMADJS.B have been added to the skeleton.

CPU2 – Cross-Domain Resource Definitions

```

* $$ JOB JNM=VTAMCDR2,CLASS=0,DISP=D
// JOB VTAMCDR2          CATALOG VTAMCDR2    FOR CICSF5 CPU2
// EXEC LIBR,PARM='MSHP'
ACCESS SUBLIB=PRD2.PROD
CATALOG VTMCDRM.B REPLACE=YES
VTMCDRM  VBUILD      TYPE=CDRM
CPU2SA12  CDRM SUBAREA=12,CDRDYN=YES,          *
          ISTATUS=ACTIVE,VPACING=2             *
CPU1SA11  CDRM SUBAREA=11,CDRSC=OPT,
          ISTATUS=ACTIVE,VPACING=2
/+
CATALOG VTMCDRS.B REPLACE=YES
VTMCDRS  VBUILD      TYPE=CDRSC
DBDCCICS CDRSC       CDRM=CPU1SA11
/+
CATALOG VTMAJJS.B REPLACE=YES
VTMAJJS  VBUILD      TYPE=ADJSSCP
CPU1SA11 ADJCDRM
/+
/*
/&
* $$ EOJ

```

Figure 61. CPU2 – Cross-Domain Resource Definitions for ACF/VTAM

Note: The statements for cataloging VTMAJJS.B have been added to the skeleton.

CPU1 – Path Definitions

Jobs VTAMPAT1 and VTAMPAT2 were created using the skeleton SKVTMPAT in VSE/ICCF library 59.

```
* $$ JOB JNM=VTAMPAT1,CLASS=0,DISP=D
// JOB VTAMPAT1      CATALOG VTAMPAT1    FOR DBDCCICS CPU1
// EXEC LIBR,PARM='MSHP'
ACCESS SUBLIB=PRD2.COMM
CATALOG VTMPATH.B REPLACE=YES
VTMPATH  PATH DESTSA=12,ER0=(12,1),VR0=0
/+
/*
/&
* $$ EOJ
```

Figure 62. CPU1 – Path Definitions for ACF/VTAM

CPU2 – Path Definitions

```
* $$ JOB JNM=VTAMPAT2,CLASS=0,DISP=D
// JOB VTAMPAT2      CATALOG VTAMPAT2    FOR CICSF5 CPU2
// EXEC LIBR,PARM='MSHP'
ACCESS SUBLIB=PRD2.PROD
CATALOG VTMPATH.B REPLACE=YES
VTMPATH  PATH DESTSA=11,ER0=(11,1),VR0=0
/+
/*
/&
* $$ EOJ
```

Figure 63. CPU2 – Path Definitions for ACF/VTAM

PLEASE TURN TO THE NEXT PAGE

CPU1 – Definitions for Channel-to-Channel Attachment

The following two figures show the CTCA definitions used by ACF/VTAM for CPU1 and CPU2. There is no skeleton to create the definitions, however; and IJSYSRS.SYSLIB has only a dummy member with the name VTMCTCA.

To create the definitions, you could copy an existing VSE/ICCF library member for a ACF/VTAM book and edit it. For example, you could copy the member ATCSTR00 that you have defined for each CPU in the DASD-sharing environment.

```
* $$ JOB JNM=VTMCTCA,CLASS=0,DISP=D
* $$ LST CLASS=Q,DEST=*
// JOB VTMCTCA          CATALOG VTMCTCA    FOR DBDCCICS CPU1
// EXEC LIBR,PARM='MSHP'
/* CATALOGING THE VTMCTCA.B    CONNECTION    BOOK          */
ACCESS S=PRD2.COMM
DELETE VTMCTCA.SAVE
RENAME VTMCTCA.B:VTMCTCA.SAVE
CATALOG VTMCTCA.B REPLACE=YES
CP1CTCA  VBUILD TYPE=CA
CP1G500  GROUP LNCTL=CTCA
CP1L500  LINE  ADDRESS=500
CP1PU01  PU    PUTYPE=4
/+
/*
/&
* $$ EOJ
```

Figure 64. CPU1 – CTCA Definitions for ACF/VTAM

CPU2 – Definitions for Channel-to-Channel Attachment

```
* $$ JOB JNM=VTMCTCA,CLASS=0,DISP=D
* $$ LST CLASS=Q,DEST=*
// JOB VTMCTCA          CATALOG VTMCTCA    FOR CICSF5 CPU2
// EXEC LIBR,PARM='MSHP'
/* CATALOGING THE VTMCTCA.B  CONNECTION  BOOK          */
ACCESS S=PRD2.PROD
DELETE VTMCTCA.SAVE
RENAME VTMCTCA.B:VTMCTCA.SAVE
CATALOG VTMCTCA.B REPLACE=YES
CP2CTCB  VBUILD TYPE=CA
CP2G600  GROUP LNCTL=CTCA
CP2L600  LINE  ADDRESS=600
CP2PU02  PU    PUTYPE=4
/+
/*
/&
* $$ EOJ
```

Figure 65. CPU2 – CTCA Definitions for ACF/VTAM

CPU1 – Application Definitions

To create the necessary application definitions for both systems, access the *Maintain VTAM Application Names* dialog. In the dialog, press PF5 (PROCESS) to create a job stream with the default name of *CATAPPL*.

Do **not** submit the job for processing. Store it in the VSE/ICCF library used for the first CPU instead, and make changes to it like those shown in Figure 66. Copy the member into the library for the second CPU, and again make the necessary changes.

Note: No additional modifications for Intersystem Communication (ISC) are required. The applications DBDCCIS (job VTAMAPP1) and CICSF5 (job VTAMAPP2) contain all entries for ISC. The LOGMODE table IESINCLM includes the entry for the LU services manager modeset (SNASVCMG).

```
* $$ JOB JNM=VTAMAPP1,CLASS=0,DISP=D
* $$ LST CLASS=Q,DEST=*
// JOB VTAMAPP1          CATALOG VTAM APPL. FOR DBDCCIS CPU1
// EXEC LIBR,PARM='MSHP'
/* CATALOGING THE VTAM SYSTEM APPLICATION STARTUP BOOK          */
ACCESS S=PRD2.COMM
  DELETE VTMAPP1.SAVE
  RENAME VTMAPP1.B:VTMAPP1.SAVE
  CATALOG VTMAPP1.B REPLACE=YES
VTMAPP1  VBUILD TYPE=APPL
DBDCCIS  APPL  AUTH=(PASS,ACQ,VPACE),VPACING=3,EAS=5,PARSESS=YES,      *
          SONSCIP=YES,                                                *
          MODETAB=IESINCLM
POWER    APPL  AUTH=(ACQ)
PNET     APPL  AUTH=(PASS,ACQ),VPACING=3,MODETAB=VTMLOGTB,DLOGMOD=PNET
IESWAITT APPL  AUTH=(NOACQ)
/+
/*
/&
* $$ EOJ
```

Figure 66. CPU1 – Application Definitions for ACF/VTAM

CPU2 – Application Definitions

```
* $$ JOB JNM=VTAMAPP2,CLASS=0,DISP=D
* $$ LST CLASS=Q,DEST=*
// JOB VTAMAPP2          CATALOG VTAM APPL. FOR CICSF5 CPU2
// EXEC LIBR,PARM='MSHP'
/* CATALOGING THE VTAM SYSTEM APPLICATION STARTUP BOOK          */
ACCESS S=PRD2.PROD
  DELETE VTMAPP2.SAVE
  RENAME VTMAPPL.B:VTMAPP2.SAVE
  CATALOG VTMAPPL.B REPLACE=YES
VTMAPP2  VBUILD TYPE=APPL
CICSF5   APPL  AUTH=(PASS,ACQ,VPACE),VPACING=3,EAS=5,PARSESS=YES,
          SONSCIP=YES,
          MODETAB=IESINCLM
POWER    APPL  AUTH=(ACQ)
PNET     APPL  AUTH=(PASS,ACQ),VPACING=3,MODETAB=VTMLOGTB,DLOGMOD=PNET
IESWAITT APPL  AUTH=(NOACQ)
/+
/*
/&
* $$ EOJ
```

Figure 67. CPU2 – Application Definitions for ACF/VTAM

ACF/VTAM USS Table Definitions

The *VSE/SP Online* panel enables users to access applications on other systems via **PF4** (REMOTE APPLICATIONS). Pressing this key displays the *VTAM Application Selection Menu*. Through it, users can enter the selection for the CICS/DOS/VS subsystem that controls the application they want to use.

As shipped by VSE/SP, the menu only has a selection for DBDCCICS. This is the ACF/VTAM application ID for the CICS/DOS/VS subsystem defined by VSE/SP in the USS (Unformatted Systems Service) table. Using the skeleton SKVTMUSS, however, you can tailor the menu to include selections for other CICS/DOS/VS subsystems in your particular environment. The skeleton is a member of VSE/ICCF library 59.

The next two figures (pages 163 to 166) show the ACF/VTAM definitions that were made for each CICS/DOS/VS subsystem using SKVTMUSS. Note that the menus do *not* have a selection for accessing applications controlled by the CICS/DOS/VS subsystem at the other CPU. There is only one selection for the “local” CICS/DOS/VS subsystem. This selection is necessary for users who sign on from autoinstall terminals.

CPU1 – USS Table Definitions

```

* $$ JOB JNM=VTAMDEF1,CLASS=0,DISP=D
* $$ LST CLASS=Q,DEST=*
// JOB VTAMDEF1          CATALOG VTAM DEFINITIONS FOR DBDCCICS
// EXEC LIBR,PARM='MSHP'
ACCESS SUBLIB=PRD2.COMM
CATALOG  VTMUSSCD.A      REPLACE=YES
*
A          USSCMD  CMD=A,REP=LOGON,FORMAT=BAL
          USSPARM  PARM=P1,REP=APPLID,DEFAULT=DBDCCICS
          USSPARM  PARM=P2,REP=DATA
*
*B          USSCMD  CMD=B,REP=LOGON,FORMAT=BAL
*          USSPARM  PARM=P1,REP=APPLID,DEFAULT=-----
*          USSPARM  PARM=P2,REP=DATA
.
.
.
CATALOG  VTMUSSSTZ.A      REPLACE=YES
*
* THE FOLLOWING MENU WILL BE DISPLAYED ON SNA TERMINALS ONLY
*
          DC      X'15'                      NEW LINE (ROW 5)
          DC      CL9' '
          DC      CL2'A '
          DC      CL8'DBDCCICS'
*
*          DC      X'15'                      NEW LINE (ROW 6)
*          DC      CL9' '
*          DC      CL2'B '
*          DC      CL8'-----'
.
.
.

```

Figure 68 (Part 1 of 2). CPU1 – ACF/VTAM Definitions for DBDCCICS

ACF/VTAM Modifications

CATALOG VT MUSSTX.A REPLACE=YES

*
* THE FOLLOWING MENU WILL BE DISPLAYED ON NON-SNA TERMINALS ONLY
*
*

DC	X'11'	SET BUFFER ADDRESS ORDER
DC	X'C5C9'	ROW 5 COLUMN 10
DC	X'1D'	START FIELD ORDER
DC	X'F8'	PROTECT SKIP INTENSIFIED ATTRIBUTE
DC	CL2'A '	
DC	X'1D'	START FIELD
DC	X'F0'	PROTECT SKIP NORMAL
DC	CL8'DBDCCICS'	

*			
*	DC	X'11'	SET BUFFER ADDRESS ORDER
*	DC	X'C6D9'	ROW 6 COLUMN 10
*	DC	X'1D'	START FIELD ORDER
*	DC	X'F8'	PROTECT SKIP INTENSIFIED ATTRIBUTE
*	DC	CL2'B '	
*	DC	X'1D'	START FIELD
*	DC	X'F0'	PROTECT SKIP NORMAL
*	DC	CL8'-----'	

.
.
.
/*
// LIBDEF *,SEARCH=(PRD2.COMM,PRD1.BASE,PRD2.CONFIG),TEMP
// LIBDEF PHASE,CATALOG=PRD2.COMM
// OPTION CATAL
PHASE VT MUSSTR,*
// EXEC ASSEMBLY
PRINT NOGEN
VT MUSSTR USSTAB TABLE=STDTRANS
*
COPY VT MUSSCD
.
.
.
/*
// EXEC LNKEDT
/*
/&
* \$\$ EOJ

Figure 68 (Part 2 of 2). CPU1 - ACF/VTAM Definitions for DBDCCICS

CPU2 – USS Table Definitions

```

* $$ JOB JNM=VTAMDEF2,CLASS=0,DISP=D
* $$ LST CLASS=Q,DEST=*
// JOB VTAMDEF2          CATALOG VTAM DEFINITIONS FOR CICSF5
// EXEC LIBR,PARM='MSHP'
ACCESS SUBLIB=PRD2.PROD
CATALOG  VTMUSSCD.A      REPLACE=YES
*
A          USSCMD  CMD=A,REP=LOGON,FORMAT=BAL
          USSPARM  PARM=P1,REP=APPLID,DEFAULT=CICSF5
          USSPARM  PARM=P2,REP=DATA
*
*B          USSCMD  CMD=B,REP=LOGON,FORMAT=BAL
*          USSPARM  PARM=P1,REP=APPLID,DEFAULT=-----
*          USSPARM  PARM=P2,REP=DATA
.
.
.
CATALOG  VTMUSSTZ.A      REPLACE=YES
*
* THE FOLLOWING MENU WILL BE DISPLAYED ON SNA TERMINALS ONLY
*
          DC      X'15'                      NEW LINE (ROW 5)
          DC      CL9' '
          DC      CL2'A '
          DC      CL8'CICSF5'
*
*          DC      X'15'                      NEW LINE (ROW 6)
*          DC      CL9' '
*          DC      CL2'B '
*          DC      CL8'-----'
.
.
.

```

Figure 69 (Part 1 of 2). CPU2 – ACF/VTAM Definitions for CICSF5

ACF/VTAM Modifications

CATALOG VT MUSSTX.A REPLACE=YES

```
*
* THE FOLLOWING MENU WILL BE DISPLAYED ON NON-SNA TERMINALS ONLY
*
*
      DC      X'11'          SET BUFFER ADDRESS ORDER
      DC      X'C5C9'       ROW 5 COLUMN 10
      DC      X'1D'         START FIELD ORDER
      DC      X'F8'         PROTECT SKIP INTENSIFIED ATTRIBUTE
      DC      CL2'A '
      DC      X'1D'         START FIELD
      DC      X'F0'         PROTECT SKIP NORMAL
      DC      CL8'CICSF5'

*
*      DC      X'11'          SET BUFFER ADDRESS ORDER
*      DC      X'C6D9'       ROW 6 COLUMN 10
*      DC      X'1D'         START FIELD ORDER
*      DC      X'F8'         PROTECT SKIP INTENSIFIED ATTRIBUTE
*      DC      CL2'B '
*      DC      X'1D'         START FIELD
*      DC      X'F0'         PROTECT SKIP NORMAL
*      DC      CL8'-----'
.
.
.
/*
// LIBDEF *,SEARCH=(PRD2.PROD,PRD1.BASE,PRD2.CONFIG),TEMP
// LIBDEF PHASE,CATALOG=PRD2.PROD
// OPTION CATAL
   PHASE VT MUSSTR,*
// EXEC ASSEMBLY
      PRINT    NOGEN
VT MUSSTR USSTAB  TABLE=STDTRANS
*
      COPY     VT MUSSCD
.
.
.
/*
// EXEC LNKEDT
/*
/&
* $$ EOJ
```

Figure 69 (Part 2 of 2). CPU2 – ACF/VTAM Definitions for CICSF5

Non-SNA Terminal Definitions

To create ACF/VTAM definitions for non-SNA terminals:

1. Access the *Hardware Configuration* dialog.
2. In the *Non-SNA Terminal List*, define terminals as shown in Figure 70. Do *not* place an **X** in any Terminal Control Table column. Entries with a LOGAPPL name can be used for RDO definitions. Entries with **no** LOGAPPL name are for autoinstall terminals.
3. Process the definitions to create the member VTMNSNA in library 51. *Do not submit the job.*
4. Copy VTMNSNA into a VSE/ICCF library belonging to you, and split it into two parts, one for CPU1 and CPU2.
5. Edit the two members. *Be sure to delete the entries for CICSF5 from the member for CPU1 and the entries for DBDCCICS from the member for CPU2.* Doing this ensures that different netnames are used for the two CPUs. This is a requirement of ACF/VTAM.

Figure 71 on page 168 and Figure 72 on page 169 show the definitions for the sample environment.

6. Submit the two jobs for processing.

```

ADM$TRL2      HARDWARE CONFIGURATION:  NON-SNA TERMINAL LIST
PART 2 OF 3
OPTIONS: 2 = ALTER A DEVICE      5 = DELETE A DEVICE

      OPT      ADDR      LOGAPPL      TCTSP      TCTP1      TCTP2
      -      -      -      -      -      -
      -      38A      DBDCCICS      -      -      -
      -      38B      DBDCCICS      -      -      -
      -      38C      DBDCCICS      -      -      -
      -      38D      DBDCCICS      -      -      -
      -      38E      DBDCCICS      -      -      -
      -      38F      DBDCCICS      -      -      -
      -      390      CICSF5        -      -      -
      -      391      CICSF5        -      -      -
      -      392      CICSF5        -      -      -
      -      393      CICSF5        -      -      -
PF1=HELP      2=REDISPLAY  3=END      10=PART 3      5=PROCESS
                        9=PART 1

```

Figure 70. Creating ACF/VTAM Definitions for Non-SNA Terminals

ACF/VTAM Modifications

CPU1 – Non-SNA Terminal Definitions

```
* $$ JOB JNM=VTMNSNA,CLASS=0,DISP=D
* $$ LST CLASS=Q,DEST=*
// JOB VTMNSNA          CATALOG VTMNSNA  DBDCCICS CPU1
// EXEC LIBR,PARM='MSHP'
ACCESS S=PRD2.COMM
DELETE VTMNSNA.SAVE
RENAME VTMNSNA.B:VTMNSNA.SAVE
CATALOG VTMNSNA.B REPLACE=YES
VTMNSNA  LBUILD
D38A0B   LOCAL CUADDR=38A,TERM=3277,          *
          USSTAB=VTMUSSTB,                    *
          DLOGMOD=SP32702N,                    *
          LOGAPPL=DBDCCICS,                    *
          MODETAB=IESINCLM,                    *
          FEATUR2=(MODEL2)
.
.
.
D38E0B   LOCAL CUADDR=381,TERM=3277,          *
          USSTAB=VTMUSSTB,                    *
          DLOGMOD=SP32702N,                    *
          MODETAB=IESINCLM,                    *
          FEATUR2=(MODEL2)
.
.
.
P38F0B   LOCAL CUADDR=38F,TERM=3286,          *
          LOGAPPL=DBDCCICS,                    *
          FEATUR2=(MODEL2)
/+
/*
/&
* $$ EOJ
```

Figure 71. CPU1 – Non-SNA Terminal Definitions for ACF/VTAM

CPU2 – Non-SNA Terminal Definitions

```

* $$ JOB JNM=VTMNSNA,CLASS=0,DISP=D
* $$ LST CLASS=Q,DEST=*
// JOB VTMNSNA          CATALOG VTMNSNA  CICSF5 CPU2
// EXEC LIBR,PARM='MSHP'
ACCESS S=PRD2.PROD
DELETE VTMNSNA.SAVE
RENAME VTMNSNA.B:VTMNSNA.SAVE
CATALOG VTMNSNA.B REPLACE=YES
VTMNSNA  LBUILD
D3900B   LOCAL CUADDR=390,TERM=3277,          *
          USSTAB=VTMUSSTB,                    *
          DLOGMOD=SP32702N,                    *
          LOGAPPL=CICSF5,                      *
          MODETAB=IESINCLM,                    *
          FEATUR2=(MODEL2)
.
.
.
D3930B   LOCAL CUADDR=391,TERM=3277,          *
          USSTAB=VTMUSSTB,                    *
          DLOGMOD=SP32702N,                    *
          MODETAB=IESINCLM,                    *
          FEATUR2=(MODEL2)
.
.
.
P39F0B   LOCAL CUADDR=393,TERM=3286,          *
          LOGAPPL=CICSF5,                      *
          FEATUR2=(MODEL2)
/+
/*
/&
* $$ EOJ

```

Figure 72. CPU2 – Non-SNA Terminal Definitions for ACF/VTAM

CICS/DOS/VS Modifications – Startup and Macro Level

CPU1 – CICS/DOS/VS and VSE/ICCF Startup

You can use the skeleton SKCICS in VSE/ICCF library 59 to define the startup of CICS/DOS/VS and VSE/ICCF in a partition.

```
* $$ JOB JNM=CICSSTR1,CLASS=2,DISP=L,SYSID=1
* $$ LST CLASS=A,DISP=D,SYSID=1
// JOB CICSSTR1 CICS/ICCF STARTUP PRD2.COMM FIRST CHAIN
// UPSI 00001000 CONSOLE RESPONSES FROM SYSIPT
// LIBDEF *,SEARCH=(PRD2.CONFIG,PRD1.BASE,PRD2.PROD,PRD2.DBASE)
// LIBDEF DUMP,CATALOG=SYSDUMP.F2
// SETPARM TPMODE=''
// SETPARM XMODEF2=''
// SETPARM XNCPU=''
// EXEC PROC=$COMVAR,XNCPU
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTATF2=ACTIVE'
/*
// EXEC PROC=CPUVAR&XNCPU,TPMODE,XMODEF2 SET TPMODE AND XMODEF2
// EXEC PROC=DTRCICST ASSGNS FOR CICS FILES
// EXEC PROC=DTRINFOA ASSGNS FOR INFO ANAL FILES
// EXEC PROC=DTRICCF ASSGN FOR DTSFILE
// ASSGN SYS019,DISK,VOL=DOSRES,SHR CICS LOG FILES
// ASSGN SYS005,UA
// ASSGN SYS006,UA
// ASSGN SYS007,UA
// ASSGN SYS008,UA
// ASSGN SYS009,SYSLOG
// ASSGN SYS013,UA
// ASSGN SYS015,FEF ASSGN PRINTER FOR IWS FUNCTION
// EXEC DTSANALS RECOVER IF DTSFILE DESTROYED
RECOVER OPT
/*
// IF TPMODE=B THEN
// GOTO BTAM
// EXEC IESWAITT WAIT FOR VTAM ACB TO OPEN
// GOTO START
/. BTAM
// ASSGN SYS023,IGN
// ASSGN SYS024,IGN
// ASSGN SYS025,IGN
// ASSGN SYS026,IGN
.
.
.
// EXEC DTSINIT,PARM='SIT=SP,$END'
/*
.
.
.
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTATF2=INACTIVE'
/*
/&
* $$ EOJ
```

Figure 73. CPU1 – CICS/DOS/VS and VSE/ICCF Startup

CPU2 – CICS/DOS/VS Startup Without VSE/ICCF

The following job was created by modifying the job shown in Figure 73 on page 170.

```

* $$ JOB JNM=CICSSTR2,CLASS=5,DISP=L,SYSID=2
* $$ LST CLASS=Q,DISP=D,SYSID=2
// JOB CICSSTR2      CICS STARTUP FOR F5 CPU2
// UPSI 00001000    CONSOLE RESPONSES FROM SYSIPT
// LIBDEF *,SEARCH=(PRD2.CONFIG,PRD1.BASE,PRD2.PROD,PRD2.DBASE)
// LIBDEF DUMP,CATALOG=SYSDUMP.F5
// SETPARM TPMODE=''
// SETPARM XMODEF5=''
// SETPARM XNCPU=''
// EXEC PROC=$COMVAR,XNCPU
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTATF5=ACTIVE'
/*
// EXEC PROC=CPUVAR&XNCPU,TPMODE,XMODEF5    SET TPMODE AND XMODEF5
// EXEC PROC=DTRINFOA                      ASSGNS FOR INFO ANAL FILES
// ASSGN SYS018,DISK,VOL=USRWK2,SHR        CICS SD FILE
// ASSGN SYS019,DISK,VOL=USRWK2,SHR        CICS LOG FILES
// ASSGN SYS005,UA
// ASSGN SYS006,UA
// ASSGN SYS007,UA
// ASSGN SYS008,UA
// ASSGN SYS009,SYSLOG
/*
// EXEC IESWAITT                          WAIT FOR VTAM ACB TO OPEN
/*
// ASSGN SYS015,FEF
// EXEC DFHSIP,PARM='SIT=F5,$END'
/*
// EXEC DTRSETP,PARM='CPUVAR&XNCPU;;SET XSTATF5=INACTIVE'
/*
/&
* $$ EOJ

```

Figure 74. CPU2 – CICS/DOS/VS Startup

Note: Procedures DTRCICST and DTRICCF have been deleted and the CICS/DOS/VS SD and LOG files have been added.

CPU1 – System Initialization Table (SIT)

DFHSITSP is supplied as a member of VSE/ICCF library 59. Because RDO is used in the sample environment, both SIT tables shown here have a GRPLIST parameter.

```

* $$ JOB JNM=DFHSITSP,CLASS=A,DISP=D,NTFY=YES
* $$ LST CLASS=Q,DISP=H
// JOB DFHSITSP ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    TITLE 'DFHSITSP -- SUPPLIED BY VSE/SP'
    PUNCH ' CATALOG DFHSITSP.OBJ REP=YES'
    DFHSIT TYPE=CSECT,
        AKPFREQ=200,          ACTIVITY KEYPOINTING FREQUENCY *
        .
        APPLID=DBDCCICS      CICS APPLICATION NAME *
        .
        DCT=SP,              SUPPLIED WITH VSE/SP *
        DIP=NO,              NO BATCH DATA INTERCHANGE *
        .
        AUTOINST=(10,IESZATDX,700), AUTOINSTALL TERMINALS *
        .
        EXITS=YES,           USER EXIT INTERFACE *
        EXTSEC=NO,           NO RACF SUPPORT *
        FCT=SP,              SUPPLIED WITH VSE/SP *
        GMTEXT='VSE/SP ONLINE', GOOD MORNING MESSAGE TEXT *
        GMTRAN=IEGM,         LOGON TRANSACTION ID *
        GRPLIST=CPU1,        ***** *
        ICP=COLD,            INTERVAL CONTROL PGM *
        .
        IRCSTRT=NO,          NO INTERREGION COMMUNICATION *
        ISC=YES,             ** INTERSYSTEM COMMUNICATION *
        JCT=SP,              JOURNALLING *
        LGNMSG=YES,          VTAM LOGON DATA *
        MCT=NO,              NO MONITOR CONTROL TABLE *
        MSGLVL=2,            MESSAGES ON BOTH SYSLST/SYSLOG *
        MXT=999,             MAX NO. OF ALL CONCURRENT TASKS *
        NLT=NO,              DEFAULT LOAD ORDER FOR NUCLEUS *
        PCT=SP,              SUPPLIED WITH VSE/SP *
        PGCHAIN=X/,          BMS CHAINING COMMAND *
        .
        PL1=YES,             ** PL/1 SUPPORT *
        PPT=SP,              SUPPLIED WITH VSE/SP *
        PRINT=PA1,           PRINT WITH PA1 AND TCP PRINT *
        PRGDLAY=100,         ONE HOUR PURGE DELAY *
        SCS=12288,           STORAGE CUSHION-MIN OF 4 PAGES *
        SPOOL=(YES,A,A),     CICS SPOOLER ACTIVE *
        SRT=1$,              DEFAULT SRT *
        START=AUTO,          LET CICS DETERMINE STARTUP *
        SUFFIX=SP,           SUPPLIED WITH VSE/SP *
        SYSIDNT=CON1,        FOR DUAL-PURPOSE DEFS. *
        SVD=YES,             STORAGE VIOLATION DUMP&RECOVERY *
        TCP=S$,              TERMINAL CONTROL PROGRAM *
        TCT=SP,              BUILT AFTER CONFIGURATION *
        TD=(3,3),            THREE BUFFERS & THREE STRINGS *
        .
END DFHSITBA

```

Figure 75. CPU1 – System Initialization Table DFHSITSP

CPU2 – System Initialization Table

```

* $$ JOB JNM=DFHSITF5,CLASS=A,DISP=D,NTFY=YES
* $$ LST CLASS=Q,DISP=H
// JOB DFHSITF5 ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
      TITLE 'DFHSITF5 -- FOR SECOND CICS IN F5'
      PUNCH ' CATALOG DFHSITF5.OBJ REP=YES'
      DFHSIT TYPE=CSECT,
        AKPFREQ=200,          ACTIVITY KEYPOINTING FREQUENCY *
        .
        .
        APPLID=CICSF5          ***** *
        .
        .
        DCT=F5,                ***** *
        DIP=NO,                NO BATCH DATA INTERCHANGE *
        .
        .
        AUTOINST=(10,IESZATDX,700), AUTOINSTALL TERMINALS *
        .
        .
        EXTSEC=NO,             NO RACF SUPPORT *
        FCT=F5,                ***** *
        GMTEXT='CICS WITHOUT ICCF', GOOD MORNING MESSAGE TEXT *
        GMTRAN=IEGM,           LOGON TRANSACTION ID *
        GRPLIST=CPU2,          ***** *
        ICP=COLD,              INTERVAL CONTROL PGM *
        .
        .
        IRCSTRT=NO,            NO INTERREGION COMMUNICATION *
        ISC=YES,               ** INTERSYSTEM COMMUNICATION *
        JCT=F5,                JOURNALLING *
        LGNMSG=YES,            VTAM LOGON DATA *
        MCT=NO,                NO MONITOR CONTROL TABLE *
        MSGLVL=2,              MESSAGES ON BOTH SYSLST/SYSLOG *
        MXT=999,               MAX NO. OF ALL CONCURRENT TASKS *
        NLT=NO,                DEFAULT LOAD ORDER FOR NUCLEUS *
        PCT=F5,                ***** *
        PGCHAIN=X/,            BMS CHAINING COMMAND *
        .
        .
        PL1=YES,               ** PL/1 SUPPORT *
        PPT=F5,                ***** *
        PRINT=PA1,             PRINT WITH PA1 AND TCP PRINT *
        PRGDLAY=100,           ONE HOUR PURGE DELAY *
        SCS=12288,             STORAGE CUSHION-MIN OF 4 PAGES *
        SPOOL=(YES,A,A),       CICS SPOOLER ACTIVE *
        SRT=1$,                DEFAULT SRT *
        START=AUTO,            LET CICS DETERMINE STARTUP *
        SUFFIX=F5,             ***** *
        SYSIDNT=CON2,          FOR DUAL-PURPOSE DEFS. *
        SVD=YES,               STORAGE VIOLATION DUMP&RECOVERY *
        TCP=SS,                TERMINAL CONTROL PROGRAM *
        TCT=P1,                P1 GENERATED BY HW DIALOG *
        TD=(3,3),              THREE BUFFERS & THREE STRINGS *
        .
      END DFHSITBA

```

Figure 76. CPU2 – System Initialization Table DFHSITF5

CPU1 – Journal Control Table (JCT)

This job was created for system and user journaling.

```
* $$ JOB JNM=DFHJCTSP, CLASS=A,DISP=D,NTFY=YES
* $$ LST CLASS=Q,DISP=H
// JOB DFHJCTSP ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    TITLE 'DFHJCTSP -- FOR DBDCCICS IN F2'
    PUNCH ' CATALOG DFHJCTSP.OBJ REP=YES '
    DFHJCT TYPE=INITIAL,SUFFIX=SP
*-----*
*          SYSTEM JOURNALS                                *
*-----*
    DFHJCT TYPE=ENTRY
           JFILEID=SYSTEM,
           JTYPE=DISK2,
           BUFSIZE=2040,
           DEVADDR=(SYS019,SYS019)
*-----*
*          USER JOURNALS                                    *
*-----*
    DFHJCT TYPE=ENTRY
           JFILEID=02,
           JTYPE=DISK2,
           BUFSIZE=2040,
           DEVADDR=(SYS019,SYS019)
*-----*
*          LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX  *
*-----*
    SPACE 3
    DFHJCT TYPE=FINAL
    END    DFHJCTBA
/*
// EXEC LNKEDT
/*
/&
* $$ EOJ
```

Figure 77. CPU1 – Journal Control Table DFHJCTSP

CPU2 – Journal Control Table (JCT)

This job was created for system and user journaling.

```

* $$ JOB JNM=DFHJCTF5, CLASS=A,DISP=D,NTFY=YES
* $$ LST CLASS=Q,DISP=H
// JOB DFHJCTF5 ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
      TITLE 'DFHJCTF5 -- FOR SECOND CICS/DOS/VS IN F5'
      PUNCH ' CATALOG DFHJCTF5.OBJ REP=YES'
      DFHJCT TYPE=INITIAL,SUFFIX=F5
*-----*
*           SYSTEM JOURNALS                               *
*-----*
      DFHJCT TYPE=ENTRY
            JFILEID=SYSTEM,
            JTYPE=DISK2,
            BUFSIZE=2040,
            DEVADDR=(SYS019,SYS019)
*-----*
*           USER JOURNALS                                 *
*-----*
      DFHJCT TYPE=ENTRY
            JFILEID=02,
            JTYPE=DISK2,
            BUFSIZE=2040,
            DEVADDR=(SYS019,SYS019)
*-----*
*           LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX *
*-----*
      SPACE 3
      DFHJCT TYPE=FINAL
      END    DFHJCTBA
/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 78. CPU2 – Journal Control Table DFHJCTF5

CPU2 – File Control Table (FCT)

DFHFCTSO is supplied as a member of VSE/ICCF library 59.

```

* $$ JOB JNM=DFHFCTSO,CLASS=A,DIST=D,NTFY=YES
* $$ LST CLASS=Q,DISP=H
// JOB DFHFCTSO ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    TITLE 'DFHFCTF5 -- FOR SECOND CICS IN F5'
    PUNCH ' CATALOG DFHFCTSO.OBJ REP=YES'
    DFHFCT TYPE=INITIAL,SUFFIX=F5
    SPACE 3
*-----*
*   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 DFH$FCT          - ENTRY FOR RDO CSD DATASET
*   SPACE 3
*   COPY IESZFCTO -- DATASET ENTRIES FOR VSE/SP -- OTHER PARTITION
*   SPACE 3
*-----*
*   IF YOU WANT TO ADD THE DATASET WHICH IS REQUIRED FOR CHANGING
*   THE PASSWORD FOR TYPE 3 USERS FROM THE NON-ICCF PARTITION,
*   THEN REMOVE THE * IN COLUMN 1 OF THE LINE FOLLOWING THIS
*   BOX. YOU SHOULD ALSO MAKE SURE THE VALUE SPECIFIED FOR
*   SYSIDNT IS THE SAME AS THE VALUE SPECIFIED IN YOUR TCT
*   TO IDENTIFY THE PARTITION WHERE THE MAIN INTERACTIVE
*   INTERFACE IS RUNNING.
*-----*
*   DFHFCT TYPE=REMOTE,DATASET=IESRCTL,RMTNAME=IESCNTL,
*   RSL=PUBLIC,SYSIDNT=CON1,
*   KEYLEN=12
*-----*
*   SPACE 3
*-----*
*   LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX
*-----*
*   SPACE 3
*-----*
*   LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX
*-----*
*   SPACE 3
*   DFHFCT TYPE=FINAL
*   END   DFHFCTBA
/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 79. CPU2 – File Control Table DFHFCTF5

Note: At the macro level you must only define the three CICS/DOS/VS tables described: DFHSIT, DFHJCT, and DFHFCT. For other CICS/DOS/VS tables like DFHPPT and DFHPCT use RDO definitions (CEDA commands DEFINE PROGRAM and DEFINE TRANSACTION).

CICS/DOS/VS Modifications for ISC – RDO Level

This section shows how to make the RDO definitions used for the sample environment. These definitions create five groups in the CSD file: **GRP1A**, **GRP1**, **GRP2A**, **GRP2**, and **GRPS**. The first two groups are for CPU1; the second two for CPU2. The two CPUs share GRPS.

GRP1A and GRP2A have the connection and session definitions required for Intersystem Communication (ISC). GRP1, GRP2, and GRPS have definitions for the terminals in each CPU's configuration. The VSE/SP *Configure Hardware* dialog was not used to create TCT entries for terminals. Following is an overview of the ISC definitions:

	CPU1:	CPU2:
APPLID:	SITSP	SITF5
SYSIDNT:	DBDCCICS	CICSF5
	CON1	CON2

Connections:

CONNECTION:	CON2	CON1
NETNAME:	CICSF5	DBDCCICS

Sessions:

SESSION:	SES2	SES1
CONNECTION:	CON2	CON1

Terminals for Transaction Routing:

Local:	D38A	----->	D777	(Remote for D38A)
Dual Purpose:	D38B	----->		
Shippable:	D38C	----->		
Remote for D390:	D888	<-----	D390	(Local)
		<-----	D391	(Dual Purpose)
		<-----	D394	(Shippable)

Before you start with CEDA DEFINE commands, issue the following CEDA commands:

1. CEDA APPEND LIST VSELIST TO CPU1

The list for CPU1 will automatically be created when you enter the APPEND LIST command. The list must correspond to the group list operand that was specified in DFHSIT for CPU1.

2. CEDA APPEND LIST VSELIST TO CPU2

The list for CPU2 will automatically be created when you enter the APPEND LIST command. The list must correspond to the group list operand that was specified in DFHSIT for CPU2.

VSELIST contains the groups VSETERM and VSETYPE.

For detailed information about RDO, refer to the manual *CICS/DOS/VS 1.7 Resource Definition (Online)*. For detailed information about ISC, refer to the manual *CICS/DOS/VS 1.7 Intercommunication Guide*.

ISC Definitions for CPU1

Definitions for Connections

To define connections for CPU1:

1. In CICS/DOS/VS native mode, enter the command:

```
CEDA DEFINE CONN
```

2. In the panel displayed by the transaction, enter the following operands:

Connection : CON2

Group : GRP1A

Netname : CICSF5

Autoconnect : YES

Use the defaults shown for all other operands.

Definitions for Sessions

To define intersystem sessions:

1. Enter the command:

```
CEDA DEFINE SESS
```

2. In the panel displayed by the transaction, enter the following operands:

Sessions : SES2

Group : GRP1A

Connection : CON2

Maximum : 00010, 00000

Autoconnect : YES

Use the defaults shown for all other operands.

Note: The internally required MODE entry is already included in the LOGMODE table IESINCLM. No modification is necessary.

ISC Definitions for CPU2

Definitions for Connections

To define connections for CPU2:

1. Enter the command:

```
CEDA DEFINE CONN
```

2. In the panel displayed by the transaction, enter:

Connection : CON1
Group : GRP2A
Netname : DBDCCICS
Autoconnect : YES

Use the defaults shown for all other operands.

Definitions for Sessions

To define sessions for CPU2:

1. Enter the command:

CEDA DEFINE SESS

2. In the panel displayed by the transaction, enter:

Sessions : SES1
Group : GRP2A
Connection : CON1
Maximum : 00010, 00000
Autoconnect : YES

Use the defaults shown for all other operands.

Note: The internally required MODE entry is already included in the LOGMODE table IESINCLM. No modification is necessary.

Definitions for Terminals – CPU1

Definitions for the following types of terminals for transaction routing were made for CPU1:

<i>Local</i>	terminals
<i>Remote</i>	terminals
<i>Dual-purpose</i>	terminals
<i>Shippable</i>	terminals

To create definitions for terminals for transaction routing:

1. Enter the command:

CEDA DEFINE TERM

2. In the panel displayed by the transaction, enter the following operands to define a local terminal for CPU1:

Terminal : D38A

Group : GRP1
Typeterm : VSE32782
Netname : D38A0B

Use the defaults shown for all other operands.

Note: The remote definition for this terminal in GRP2 for CPU2 is D777.

3. For a remote terminal used by CPU2, enter:

Terminal : D888
Group : GRP1
Typeterm : VSE32782
Netname : D888
Remote System : CON2
Remote Name : D390

Use the defaults shown for all other operands.

4. For a dual-purpose terminal used by CPU1, enter:

Terminal : D38B
Group : GRPS
Typeterm : VSE32782
Netname : D38B0B
Remote System : CON1
Remote Name : D38B

Use the defaults shown for all other operands.

5. For a shippable terminal used by CPU1, enter:

Terminal : D38C
Group : GRP1
Typeterm : VSESHIP
Netname : D38C0B

Use the defaults shown for all other operands. You can create VSESHIP by copying a TYPETERM definition provided by VSE/SP (VSE32782, for example) and then specifying YES for the Shippable operand.

Definition for a Terminal Printer

To define a terminal printer for CPU1:

1. Enter the command:

```
CEDA DEFINE TERM
```

2. In the panel displayed by the transaction, enter:

Terminal	: P38F
Group	: GRP1
Typeterm	: VSE3289
Netname	: P38F0B
OPERRsl	: 1
OPERSecurity	: 1
SPOOLDest	: TP11
SPOOLPrtrsl	: 1

Use the defaults shown for all other operands. Note that both spool operands are defined for use by the Report Controller in DBDCCICS.

CEDA ADD Commands

Once you are done creating GRP1A, GRP1, and GRPS, use the **CEDA ADD GRP** command to add these groups to the list for CPU1.

Definitions for Terminals – CPU2

This section shows examples of CPU2's definitions for local, remote, dual-purpose, and shippable terminals used for transaction routing:

In CICS/DOS/VS native mode:

1. Enter the command:

```
CEDA DEFINE TERM
```

2. In the panel displayed by the transaction, enter the following operands for a local terminal used by CPU2:

Terminal	: D390
Group	: GRP2
Typeterm	: VSE32782
Netname	: D3900B

Use the defaults shown for all other operands.

Note: The remote definition for this terminal in GRP1 for CPU1 is D888.

3. For a remote terminal used by CPU1, enter:

Terminal : **D777**
Group : **GRP2**
Typeterm : **VSE32782**
Netname : **D777**
Remote System : **CON1**
Remote Name : **D38A**

Use the defaults shown for all other operands.

4. For a dual-purpose terminal used by CPU2, enter:

Terminal : **D391**
Group : **GRPS**
Typeterm : **VSE32782**
Netname : **D3910B**
Remote System : **CON2**
Remote Name : **D391**

Use the defaults shown for all other operands.

5. For a shippable terminal used by CPU2, enter:

Terminal : **D394**
Group : **GRP2**
Typeterm : **VSESHIP**
Netname : **D3940B**

Use the defaults shown for all other operands. You can create VSESHIP by copying a TYPETERM definition provided by VSE/SP (VSE32782, for example) and then specifying **YES** for the Shippable operand.

Definition for a Terminal Printer

To define a terminal printer for CPU2:

1. Enter the command:

CEDA DEFINE TERM

2. In the panel displayed by the transaction, enter:

Terminal : **P39F**
Group : **GRP2**

Typeterm : VSE3289

Netname : P39F0B

OPERRsl : 1

OPERSecurity : 1

SPOOLDest : TP22

SPOOLPrtrsl : 1

Use the defaults shown for all other operands. Note that both spool operands are defined for use by the Report Controller in CICS/F5.

CEDA ADD Commands

Once you are done creating GRP2A, GRP2, and GRPS, use the **CEDA ADD GRP** command to add these groups to the list for CPU2.

VSE/POWER Considerations

Generating VSE/POWER with Shared Spooling

“VSE/POWER Generation Parameters” on page 239 describes the skeleton SKPWGEN, which VSE/SP supplies for generating VSE/POWER. To use shared spooling in a DASD-sharing environment, add the operands shown in Figure 80 to the skeleton, and submit the created job.

```
* $$ JOB JNM=PWRSHRSP,CLASS=0,DISP=D
* $$ LST CLASS=R,DISP=D,DEST=(*,IANH)
// JOB PWRSHRSP ASSEMBLE NEW POWER FOR SHARED ENVIRONMENT
LIBDEF PHASE,CATALOG=PRD2.CONFIG
// OPTION CATAL,NODECK
// EXEC ASSEMBLY
PWR      TITLE 'VSE/POWER - PWRSHRSP GENERATION '
IPWPOWER POWER                                C
        ACCOUNT=YES,                          C
        .
        SHARED=(Q,A),          ** SHARED SPOOLING **      C
        .
        SYSID=1,              ** SHARED SPOOLING **      C
        TIME=(5,0,20),       ** SHARED SPOOLING **      C
        END
/*
// EXEC LNKEDT,PARM='MSHP'
/&
* $$ EOJ
```

Figure 80. Generating VSE/POWER

Note: When you generate only one VSE/POWER subsystem, it uses the same time slices for *all* sharing systems. If this is not sufficient, generate different VSE/POWER subsystems. Specify different **TIME** (and optionally **SYSID**) parameters for each subsystem. Note that the second value in the **TIME** parameter (for idle time) always should have the value **0**.

Setting Up VSE/POWER Input Classes

In a DASD-sharing environment, you should establish categories for VSE/POWER input classes. Criteria can be, for example, priority and the extent that DASD-sharing is used.

You can create input categories using one of two possible operands in the VSE/POWER JOB card:

- **SYSID** – The *SYSID* parameter ensures that a job is executed on a certain CPU.
- **CLASS** – The *CLASS* parameter ensures that a job is executed in a certain partition.

If CLASS is specified but not SYSID *and* if both CPUs have partitions with that class, then VSE/POWER dispatches the job to the first idle partition.

Note: You should specify a SYSID for startup jobs. If you do not, then they will run on the first idle CPU, which may cause problems.

At that point, do not forget to offload the VSE/POWER queues. This is step 2 of "Implementation of the Sample Environment" on page 119. Use the POFFLOAD BACKUP command. Next, perform the implementation steps 3 through 7.

Other Procedures Affected by DASD Sharing

Figure 81 lists other system procedures that may be affected by your DASD-sharing environment. The first column in the table shows the default names of the procedures. The procedures are part of IJSYSRS.SYSLIB and are called during system startup. The last column shows possible names that can be used if the procedure is not shared between two CPUs.

PROCEDURE CPU1	DEFINITION	ACTION TO BE TAKEN (IF ANY)	PROCEDURE CPU2
STDLABEL	Loads system standard labels. Calls STDLABUP and STDLABUS.	Must be different because of labels for non-shared files.	STDLAB2
STDLABUP	Loads VSE/VSAM labels for files created via the Int. Interface.	Must be different. See Note 1, if defining a second full-function Interactive Interface.	STDLABP2
STDLABUS	Loads user labels for non-VSAM files and partitions.	Must be different.	STDLABS2
DTRCICST	Label and assign information for DTSANALS, plus assignments for some CICS files.	Must be different if second full-function Interactive Interface used.	DTRCICS2
DTRICCF	Makes assignments for DTSFILE.	Must be identical if a second full-function Interactive Interface used. Changes to system environment must be done using special techniques. See Note 2.	DTRICCF
DTRINFOA	Assigns work files for INFO/ANALYSIS.	May be different if DUMP library not shared.	DTRIA2
DTRPOWR	Assigns VSE/POWER files.	Same for both CPUs if VSE/POWER files shared and all partitions are the same.	DTRPOWR2
DTRSYSWK	Assigns work files SYS001 to SYS004 and SYSLNK for all partitions except F1.	May be same for both CPUs.	DTRSWK2
SETSDL	Writes phase names into the system directory list.	May be different if different phases must be made SVA resident.	SETSDL2

Figure 81. Other Procedures Affected by DASD Sharing

Notes:

1. *To ensure that the label information created by a second full-function Interactive Interface is stored correctly, you should change the VSE/ICCF member ADM\$DTAB. You must specify STDLABP2 instead of STDLABUP. Refer to “VSE/VSAM Considerations” on page 203.*
2. *Each full-functions Interactive Interface requires a separate DTSFILE. “DTSFILE Assignments” on page 201 describes how to create separate files.*

Considerations for Shareable and Non-Shareable Files

Deciding which Files to Share

When you plan for your DASD-sharing environment, you will have to consider which files:

- *Can* be shared. If shared file integrity is guaranteed, these are files such as:
 - Libraries
 - VSE/POWER spool files
 - VSE/VSAM files
- *Should not* be shared. As shown in Figure 82 on page 189, these include the:
 - VSESP.JOB.MANAGER.FILE
 - VSE.SYSTEM.HISTORY.FILE

Note: You may decide to share some of the files in this category. For example, you may find it desirable to share the System History file in order to be able to apply service from any system. If this is the case, you must carefully manage file integrity yourself.

- *Cannot* be shared. File integrity cannot be guaranteed for files such as:
 - DOS.LABEL.FILE.CPUID.AREA1
 - VSE.HARDCOPY.FILE

Recommendations for System Files

Figure 82 on page 189 shows recommendations for sharing VSE/SP system files. Please note that:

- The final decision to share these files is yours. If you choose to share files in the “Should Not” or “Cannot” lists, then you must take care to ensure their integrity.
- The decision to share or not share a file also influences which of the procedures described in “Other Procedures Affected by DASD Sharing” on page 186 can be used across all sharing systems and which have to be duplicated, perhaps modified, and then catalogued under a different name.

FILES THAT CAN BE SHARED	FILES THAT CANNOT BE SHARED
VSE.SYSRES.LIBRARY VSESP.USER.CATALOG VSE.MESSAGES.ONLINE VSE.PRDI.LIBRARY VSE.PRDI2.LIBRARY VSE.DUMP.LIBRARY CICS.CSD %DOS.WORKFILE.SYSLNK (See Note 1.) %DOS.WORKFILE.SYS001.RECOVER %DOS.WORKFILE.SYS002.RECOVER %DOS.WORKFILE.SYS001.SORT %DOS.WORKFILE.SYS001 through %DOS.WORKFILE.SYS004 %WORK.FILE.N11 through %WORK.FILE.N54 VSAM.MASTER.CATALOG VSE.POWER.QUEUE.FILE VSE.POWER.DATA.FILE VSE.POWER.ACCOUNT.FILE LIBR.DATA.SPACE.SYSWK1 VSAM.DATA.SPACE.SYSWK1	DOS.LABEL.FILE.CPUID.AREA1 CICS.AUTO.STATS.A CICS.AUTO.STATS.B CICS.TD.INTRA DFHTEMP CICS.SYSTEM.LOG.A CICS.SYSTEM.LOG.B CICS.USER.JOURNAL.A CICS.USER.JOURNAL.B CICS.DUMPA CICS.DUMPB CICS.AUXTRACE CICS.MSGUSR CICS.RSD PAGING.DATA.SET.ONE through PAGING.DATA.SET.FOUR SYS.NEW.RES WORK.HIST.FILE ICCF.LIBRARY VSE.HARDCOPY.FILE VSE.RECORDER.FILE VTAM.TRACE.FILE INFO.ANALYSIS.EXT.RTNS.FILE INFO.ANALYSIS.DUMP.MGNT.FILE
FILES THAT SHOULD NOT BE SHARED	
VSE.CONTROL.FILE (See Note 2.) VSE.TEXT.REPSTORY.FILE VSE.ONLINE.PROB.DET.FILE (See Note 4.) VSE.MESSAGE.ROUTING.FILE VSESP.JOB.MANAGER.FILE (See Note 3.) VSE.SYSTEM.HISTORY.FILE (See Note 3.) CU370X.LOAD.FILE (See Note 3.) CU370X.DIAG.FILE (See Note 3.)	

Figure 82. System Files that Can/Cannot Be Shared

Notes:

1. When work files and the SYSLNK file are shared, their file IDs must begin with %%.
2. Whether this file can be shared or not depends on the environment. One control file is required for each VSE/ICCF subsystem.
3. If this file is shared, it cannot be used concurrently.
4. One problem determination file must exist for each CICS/DOS/VS subsystem that requires the Online Problem Determination (OLPD) support.

Creating and Modifying Standard Label Procedures for a Second CPU

Copying Predefined Procedures

As shown in Figure 81 on page 186, you must have different STDLABEL, STDLABUP, and STDLABUS procedures for a second CPU. To create the procedures, proceed as follows:

1. Enter VSE/ICCF command mode from the Interactive Interface. This is option 6 from the first selection panel for a user with administrative authority.
2. Switch to the VSE/ICCF library where you want to store procedures and jobs for the second CPU in the DASD-sharing environment. For example:

```
/SW 34
```

3. Enter LIBRP commands to punch the label procedures from IJSYSRS.SYSLIB into the VSE/ICCF library. Enter:

```
LIBRP IJSYSRS.SYSLIB STDLABEL.PROC STDLAB2
LIBRP IJSYSRS.SYSLIB STDLABUP.PROC STDLABP2
LIBRP IJSYSRS.SYSLIB STDLABUS.PROC STDLABS2
```

In VSE/ICCF library 34 there are now three label procedures for CPU2:

- STDLAB2
For non-VSE/VSAM system files (system standard labels).
- STDLABP2
For VSE/VSAM files.
- STDLABS2
For non-VSE/VSAM user files and partition standard labels.

Change the label procedures as required. The following sections show the changes made to the procedures for the sample environment.

4. Catalog the procedures by submitting the VSE/ICCF members for processing.

Once you have cataloged the procedures, you must define those files for CPU2 that are not shared. For non-VSE/VSAM system files, add the required DLBL and EXTENT statements in STDLAB2. For the VSE/VSAM files in STDLABP2, use the *File and Catalog Management* dialog of the Interactive Interface. These steps are described on the following pages.

Note: The file names must be the same for both systems, CPU1 and CPU2. Files that are not shared (and exist twice) are distinguished by their file ID. In the examples below, F5 is added to the file IDs for CPU2.

STDLAB2 for CPU2

Figure 83 shows the files that were added to STDLAB2 and their equivalent in STDLABEL for CPU1.

FILES DEFINED FOR CPU2	COMPARABLE WITH ORIGINAL ON CPU1
CICSF5.SYSTEM.LOG.A	CICS.SYSTEM.LOG.A
CICSF5.SYSTEM.LOG.B	CICS.SYSTEM.LOG.B
CICSF5.USER.JOURNAL.A	CICS.USER.JOURNAL.A
CICSF5.USER.JOURNAL.B	CICS.USER.JOURNAL.B
VSEF5.HARDCOPY.FILE	VSE.HARDCOPY.FILE
VSEF5.RECORDER.FILE	VSE.RECORDER.FILE
VTAMCP2.TRACE.FILE	VTAM.TRACE.FILE
CICSF5.MSGUSR	CICS.MSGUSER

Figure 83. Files Defined for STDLAB2 and STDLABEL

In Figure 84 on page 192 the changes that were made to STDLAB2 are highlighted. Job control statements were added to the procedure.

Note: The label definitions for the VSESP.JOB.MANAGER.FILE and the VSE.SYSTEM.HISTORY.FILE have been deleted since they are not shared. These two files and their related functions are only available for CPU1.

Do not delete the label definition for the DTSFILE. The DTSFILE is required when submitting batch jobs for processing.

Creating Standard Labels

```
* $$ JOB JNM=STDLAB2,DISP=D,CLASS=0
// JOB CATALOG STDLAB2
// EXEC LIBR,PARM='MSHP'
ACC S=IJSYSRS.SYSLIB
CATALOG STDLAB2.PROC          DATA=YES REPLACE=YES
/. STANDARD LABELS FOR 3370-2
// DLBL IJSYSRS,'VSE.SYSRES.LIBRARY',1999/365,SD
// EXTENT SYSRES,DOSRES,1,0,2,55116
// DLBL IJQFILE,'VSE.POWER.QUEUE.FILE',1999/365,DA
// EXTENT SYS001,DOSRES,1,0,55862,372
// DLBL PRD1,'VSE.PRD1.LIBRARY',1999/365,SD
// EXTENT ,DOSRES,1,0,138136,63240
// DLBL DFHJ01A,'CICSF5.SYSTEM.LOG.A',0,SD
// EXTENT SYS019,USRWK2,1,0,6552,2976
// DLBL DFHJ01B,'CICSF5.SYSTEM.LOG.B',0,SD
// EXTENT SYS019,USRWK2,1,0,9528,2976
// DLBL DFHJ02A,'CICSF5.USER.JOURNAL.A',0,SD
// EXTENT SYS019,USRWK2,1,0,12504,2976
// DLBL DFHJ02B,'CICSF5.USER.JOURNAL.B',0,SD
// EXTENT SYS019,USRWK2,1,0,15480,2976
// DLBL SYSDUMP,'VSE.DUMP.LIBRARY',1999/365,SD
// EXTENT ,SYSWK1,1,0,196478,37200
// DLBL DTSEFILE,'ICCF.LIBRARY',1999/365,DA
// EXTENT SYS010,SYSWK1,1,0,304420,75144
// DLBL IJAFILE,'VSE.POWER.ACCOUNT.FILE',1999/365,DA
// EXTENT SYS000,SYSWK1,1,0,470270,2232
// DLBL IJSYSCN,'VSEF5.HARDCOPY.FILE',1999/365,SD
// EXTENT SYSREC,USRWK2,1,0,806,4994
// DLBL IJSYSRC,'VSEF5.RECORDER.FILE',1999/365,SD
// EXTENT SYSREC,USRWK2,1,0,5800,752
// DLBL BLNDMF,'INFO.ANALYSIS.DUMP.MGNT.FILE',0,SD
// EXTENT SYS016,SYSWK1,1,0,483556,186
// DLBL BLNXTRN,'INFO.ANALYSIS.EXT.RTNS.FILE',1999/365,SD
// EXTENT SYS017,SYSWK1,1,0,483742,62
// DLBL TRFILE,'VTAMCP2.TRACE.FILE',1999/365,SD
// EXTENT SYS001,USRWK2,1,0,18456,500
// DLBL PEP1PF,'CU370X.LOAD.FILE',1999/365,SD
// EXTENT SYS005,SYSWK1,1,0,484304,1600
// DLBL DIAGFLE,'CU370X.DIAG.FILE',1999/365,SD
// EXTENT SYS005,SYSWK1,1,0,485904,1000
// DLBL MSGUSR,'CICSF5.MSGUSR',0,SD
// EXTENT SYS018,USRWK2,1,0,18956,340
// DLBL IJDFILE,'VSE.POWER.DATA.FILE',1999/365,DA
// EXTENT SYS002,SYSWK1,1,0,396604,73656
// EXEC PROC=STDLABP2 - INCLUDE VSAM LABELS FOR CPU2
// EXEC PROC=STDLABS2 - INCLUDE NON-VSAM AND PARSTD LABELS FOR CPU2
// OPTION USRLABEL - TO CLEAR LABEL AREA AND RESET LOCK
/*
/+
/*
/&
* $$ EOJ
```

Figure 84. CPU2 - Procedure STDLAB2

STDLABP2 for CPU2

In Figure 85 on page 194, the job control statements that were added to STDLABP2 for CPU2 are highlighted. Also the statements for the work files that are shared. For shared work files, the file ID must begin with %%.

The following items have been deleted from STDLABP2 as shown in Figure 85:

- All VSE/ICCF work files, since VSE/ICCF is not part of the CPU2 system. These work files all begin with the letters **IKSYS**.
- The label definitions for the following files:
 - VSE.TEXT.REPSTORY.FILE
 - VSE.ONLINE.PROB.DET.FILE
 - CICS.AUTO.STATS.A
 - CICS.AUTO.STATS.B
 - CICS.DUMPA
 - CICS.DUMPB
 - CICS.TD.INTRA
 - CICS.RSD
 - DFHTEMP
 - CICS.AUXTRACE

These files are not shared and must be defined for CPU2. During file definition these labels are recreated for CPU2 and added to STDLABP2. “Creating Non-Shared VSE/VSAM Files for CPU2” on page 195 describes how to define these files for CPU2 by using the *File and Catalog Management* dialog.

```

* $$ JOB JNM=STDLABP2,DISP=D,CLASS=0
// JOB CATALOG STDLABP2
// EXEC LIBR,PARM='MSHP'
ACC S=IJSYSRS.SUBLIB
CATALOG STDLABP2.PROC DATA=YES REPLACE=YES
// DLBL IJSYSCT,'VSAM.MASTER.CATALOG',1999/365,VSAM
// DLBL IJSYSLN,'%%DOS.WORKFILE.SYSLNK',0,VSAM, X
CAT=VSESPUC,RECSIZE=322, X
RECORDS=(400,600)
// DLBL IESCNTL,'VSE.CONTROL.FILE',,VSAM, X
CAT=VSESPUC
// DLBL IESTRWF,'VSESP.USER.CATALOG',,VSAM, X
CAT=VSESPUC
// DLBL IESMSGs,'VSE.MESSAGES.ONLINE',,VSAM, X
CAT=VSESPUC
// DLBL IESROUT,'VSE.MESSAGE.ROUTING.FILE',,VSAM, X
CAT=VSESPUC
// DLBL DFHCSD,'CICS.CSD',0,VSAM, X
CAT=VSESPUC
// DLBL PRD2,'VSE.PRD2.LIBRARY',,VSAM, X
CAT=IJSYSCT, X
DISP=(OLD,KEEP)
// DLBL VSESPUC,'VSESP.USER.CATALOG',0,VSAM
// DLBL IJSYS01,'%%DOS.WORKFILE.SYS001',0,VSAM, X
CAT=VSESPUC,RECSIZE=4096, X
DISP=(NEW,DELETE),RECORDS=(50,100)
// DLBL IJSYS02,'%%DOS.WORKFILE.SYS002',0,VSAM, X
CAT=VSESPUC,RECSIZE=2000, X
DISP=(NEW,DELETE),RECORDS=(500,200)
// DLBL IJSYS03,'%%DOS.WORKFILE.SYS003',0,VSAM, X
CAT=VSESPUC,RECSIZE=4096, X
DISP=(NEW,DELETE),RECORDS=(50,100)
// DLBL IJSYS04,'%%DOS.WORKFILE.SYS004',0,VSAM, X
CAT=VSESPUC,RECSIZE=4096, X
DISP=(NEW,DELETE),RECORDS=(50,100)
// DLBL SORTWK1,'%%DOS.WORKFILE.SYS001.SORT',0,VSAM, X
CAT=VSESPUC,RECSIZE=4096, X
DISP=(,DELETE),RECORDS=2000
/*
/&
* $$ EOJ

```

Figure 85. CPU2 – Procedure STDLABP2

Creating Non-Shared VSE/VSAM Files for CPU2

Note: The following jobs must run on CPU2. Perform steps 8 and 9 described under “Implementation of the Sample Environment” on page 119.

The following figure shows the VSE/VSAM files that are defined for CPU2 of this chapter’s sample environment. These files are required by CICS/DOS/VS of CPU2 and their labels have been deleted from STDLABP2 in the previous step. Figure 86 lists the file IDs used for CPU1 and CPU2.

DEFINED FOR CPU2	COMPARABLE WITH ORIGINAL ON CPU1
VSEF5.TEXT.REPSTORY.FILE	VSE.TEXT.REPSTORY.FILE
VSEF5.ONLINE.PROB.DET.FILE	VSE.ONLINE.PROB.DET.FILE
CICSF5.AUTO.STATS.A	CICS.AUTO.STATS.A
CICSF5.AUTO.STATS.B	CICS.AUTO.STATS.B
CICSF5.DUMPA	CICS.DUMPA
CICSF5.DUMPB	CICS.DUMPB
CICSF5.TD.INTRA	CICS.TD.INTRA
CICSF5.RSD	CICS.RSD
CICSF5.DFHTEMP	DFHTEMP
CICSF5.AUXTRACE	CICS.AUXTRACE

Figure 86. Non-Shared VSE/VSAM Files of the Sample Environment

Each of the ten files must be defined separately for CPU2 using the *File and Catalog Management* dialog of the Interactive Interface. The following steps are required (file CICSF5.DUMPA is used as an example):

1. Enter the file information requested by the dialog. For the file name, do not enter DFHDMPA since the file already exists for CPU1. Enter XFHDMPA, for example.
2. Edit the job stream created in your VSE/ICCF library:
 - a. Change the file name from XFHDMPA to DFHDMPA.
 - b. Change the label procedure name from STDLABUP to STDLABP2.

You must enter the following two commands to change STDLABUP to STDLABP2:

```
VIEW 10 80
```

```
ZONE 10 80
```

Figure 87 on page 196 shows the edited job stream. Parameters DFHDMPA and STDLABP2 are highlighted.

Note that the jobs created by the dialog are *not* immediately submitted for processing. Instead they are stored in VSE/ICCF library 34 until the jobs for STDLAB2, STDLABP2, and STDLABS2 have been successfully processed. This is to ensure that the newly created label information can be correctly added to the label procedures.

Creating Standard Labels

```
* $$ JOB JNM=VSAMCLU1,CLASS=0,DISP=D,NTFY=YES,SYSID=2
// JOB VSAMCLU1  DEFINE FILE
// EXEC IDCAMS,SIZE=AUTO
  DEFINE CLUSTER ( -
    NAME (CICSF5.DUMPA                                ) -
    BLOCKS (744      1488  ) -
    SHAREOPTIONS (1) -
    RECORDSIZE (4080    7161  ) -
    RECORDFORMAT(UNDEF                                ) -
    VOLUMES (SYSWK1 ) -
    REUSE -
    NONINDEXED -
    FREESPACE (15 7)) -
    DATA (NAME (CICSF5.DUMPA.@D@                      ) ) -
    CATALOG(VSESP.USER.CATALOG                          )
/*
// OPTION STDLABEL=ADD
// DLBL DFHDMPA,'CICSF5.DUMP.A',,VSAM,                  X
      CAT=VSESPUC
/*
// EXEC IESVCLUP,SIZE=AUTO
A CICSF5.DUMP.A                                DFHDMPA VSESPUC          STDLABP2
/*
/&
* $$ EOJ
```

Figure 87. Job for Defining a Non-Shared VSE/VSAM File

STDLABS2 for CPU2

In Figure 88, the changes that were made to the copied STDLABUS procedure for CPU2 are highlighted. The job control statements were added to the copied procedure. No label definitions were deleted.

Note: VSE/SP provides the skeleton STDLABUS in VSE/ICCF library 59 to help you create standard labels for non-VSE/VSAM files and for partitions.

```
* $$ JOB JNM=STDLABS2,DISP=D,CLASS=0
// JOB CATALOG STDLABS2
// EXEC LIBR,PARM='MSHP'
ACC S=IJSYSRS.SYSLIB
CATALOG STDLABS2.PROC DATA=YES REPLACE=YES
/. USER STANDARD LABELS
// OPTION PARSTD - TO CLEAR LABEL AREA
// OPTION PARSTD=F1 - TO CLEAR LABEL AREA
// OPTION PARSTD=F2 - TO CLEAR LABEL AREA
// OPTION PARSTD=F3 - TO CLEAR LABEL AREA
// OPTION PARSTD=F4 - TO CLEAR LABEL AREA
// OPTION PARSTD=F5 - TO CLEAR LABEL AREA
/*
/&
* $$ EOJ
```

Figure 88. CPU2 – Procedure STDLABS2

Loading and Formatting Non-Shared Files

Loading Non-Shared Files

Once the jobs that define non-shared files have been successfully processed, you can load data into them. The non-shared files for the sample environment that need to be loaded are CICSF5.RSD and VSEF5.TEXT.REPSTORY.FILE.

For the sample environment, the files were loaded by selecting option 4 (COPY) from the *Display or Process a File* panel. The panel is part of the *File and Catalog Management* dialog.

Figure 89 and Figure 90 show the two jobs that were created using the copy function:

```
* $$ JOB JNM=LOADRSD,CLASS=A,DISP=D,NTFY=YES
// JOB  ADMB  COPY FILE
// DLBL COPYIN,'CICS.RSD',,VSAM                                X
//          CAT=VSESPUC
// DLBL COPYOUT,'CICSF5.RSD',,VSAM
//          CAT=VSESPUC
// EXEC IDCAMS,SIZE=AUTO
//      REPRO INFILE (COPYIN) -
//          OUTFILE (COPYOUT) -
/*
/&
* $$ EOJ
```

Figure 89. Loading CICSF5.RSD

```
* $$ JOB JNM=LOADREPS,CLASS=A,DISP=D,NTFY=YES
// JOB  ADMA  COPY FILE
// DLBL COPYIN,'VSESP.TEXT.REPSTORY.FILE',,VSAM                X
//          CAT=VSESPUC
// DLBL COPYOUT,'VSEF5.TEXT.REPSTORY.FILE',,VSAM                X
//          CAT=VSESPUC
// EXEC IDCAMS,SIZE=AUTO
//      REPRO INFILE (COPYIN) -
//          OUTFILE (COPYOUT) -
/*
/&
* $$ EOJ
```

Figure 90. Loading VSEF5.TEXT.REPSTORY.FILE

Formatting Non-Shared Files

The CICS/DOS/VS system log and user journal files for CPU1 and CPU2 need to be formatted. Figure 91 and Figure 92 show the two jobs that were used to format the system log files for CPU2.

```
* $$ JOB JNM=CICSLOGA,CLASS=A,DISP=D,SYSID=2
* $$ LST CLASS=Q,DEST=*
// JOB CICSLOGA FORMAT SYSLOG FILE A
// DLBL JOURNAL,'CICSF5.SYSTEM.LOG.A',0,SD
// EXTENT SYS011,USRWK2,1,0,6552,2976
// ASSGN SYS011,242
// LIBDEF PHASE,SEARCH=PRD1.BASE
// EXEC DFHJCJFP,SIZE=AUTO
/*
/&
* $$ EOJ
```

Figure 91. Formatting CICSF5.SYSTEM.LOG.A

```
* $$ JOB JNM=CICSLOGB,CLASS=A,DISP=D,SYSID=2
* $$ LST CLASS=Q,DEST=*
// JOB CICSLOGB FORMAT SYSLOG FILE B
// DLBL JOURNAL,'CICSF5.SYSTEM.LOG.B',0,SD
// EXTENT SYS011,USRWK2,1,0,9528,2976
// ASSGN SYS011,242
// LIBDEF PHASE,SEARCH=PRD1.BASE
// EXEC DFHJCJFP,SIZE=AUTO
/*
/&
* $$ EOJ
```

Figure 92. Formatting CICSF5.SYSTEM.LOG.B

Use these job streams also as models for formatting the following files:

- CICSF5.USER.JOURNAL.A and CICSF5.USER.JOURNAL.B for CPU2.
- CICS.SYSTEM.LOG.A and CICS.SYSTEM.LOG.B for CPU1.
- CICS.USER.JOURNAL.A and CICS.USER.JOURNAL.B for CPU1.

Printing CICS/DOS/VS Dump Data Sets

After creating the print jobs for the CICS/DOS/VS dump data sets as shown below, proceed as follows:

- Submit jobs to reader queue with disposition L.
- Add the job names to procedure COLDJOBS to ensure that the jobs are loaded in case of a COLD startup. Use skeleton SKCOLD for this task. The manual *IBM VSE/SP Administration* has details about skeleton SKCOLD.

```
* $$ JOB JNM=PRTDMPA1,CLASS=0,DISP=L,PRI=9,SYSID=1
* $$ LST CLASS=A,DISP=D,SYSID=1
// JOB PRTDMPA1 PRINT THE CICS DUMP DATASET A CPU1
// DLBL DFHDUMP,'CICS.DUMPA',0,VSAM,CAT=VSESPUC
// EXEC DFHDUP,SIZE=80K,PARM='SINGLE,TRANSLATE=FOLD'
/*
/&
* $$ EOJ
```

Figure 93. Printing CICS/DOS/VS Dump Data Set A (CPU1)

```
* $$ JOB JNM=PRTDMPA1,CLASS=0,DISP=L,PRI=9,SYSID=1
* $$ LST CLASS=A,DISP=D,SYSID=1
// JOB PRTDMPA1 PRINT THE CICS DUMP DATASET B CPU1
// DLBL DFHDUMP,'CICS.DUMPB',0,VSAM,CAT=VSESPUC
// EXEC DFHDUP,SIZE=80K,PARM='SINGLE,TRANSLATE=FOLD'
/*
/&
* $$ EOJ
```

Figure 94. Printing CICS/DOS/VS Dump Data Set B (CPU1)

```
* $$ JOB JNM=PRTDMPA2,CLASS=0,DISP=L,PRI=9,SYSID=2
* $$ LST CLASS=A,DISP=D,SYSID=2
// JOB PRTDMPA2 PRINT THE CICS DUMP DATASET A CPU2
// DLBL DFHDUMP,'CICSF5.DUMPA',0,VSAM,CAT=VSESPUC
// EXEC DFHDUP,SIZE=80K,PARM='SINGLE,TRANSLATE=FOLD'
/*
/&
* $$ EOJ
```

Figure 95. Printing CICS/DOS/VS Dump Data Set A (CPU2)

```
* $$ JOB JNM=PRTDMPB2,CLASS=0,DISP=L,PRI=9,SYSID=2
* $$ LST CLASS=A,DISP=D,SYSID=2
// JOB PRTDMPB2 PRINT THE CICS DUMP DATASET B CPU2
// DLBL DFHDUMP,'CICSF5.DUMPB',0,VSAM,CAT=VSESPUC
// EXEC DFHDUP,SIZE=80K,PARM='SINGLE,TRANSLATE=FOLD'
/*
/&
* $$ EOJ
```

Figure 96. Printing CICS/DOS/VS Dump Data Set B (CPU2)

Defining A Second Full-Function Interactive Interface

This section applies only if you want to use more than one full-function Interactive Interface.

DTSFILE Assignments

Each full-function Interactive Interface requires a *separate* VSE/ICCF DTSFILE. Because of this, you must modify *DTRICCF*, a procedure in IJSYSRS.SYSLIB. *DTRICCF* makes the necessary assignments for the DTSFILE.

Various dialogs of the Interactive Interface imbed *DTRICCF* into jobs that are executed immediately, either in an interactive partition of VSE/ICCF or via immediate submission to a batch partition. *DTRICCF* is *always* picked up from IJSYSRS.SYSLIB.

If IJSYSRS.SYSLIB is shared, *DTRICCF* must be modified to allow variable DTSFILE assignments. Figure 98 to Figure 100 illustrate one method for doing this. As shown in the overview in Figure 97:

- A statement in *DTRICCF* (Figure 98 on page 202) calls the startup procedure *\$COMVAR*. This procedure determines the CPU ID of the IPLed system.
- A separate *DTRICCF* is executed (Figure 99 on page 202 or Figure 100 on page 203), depending on the CPU ID found.

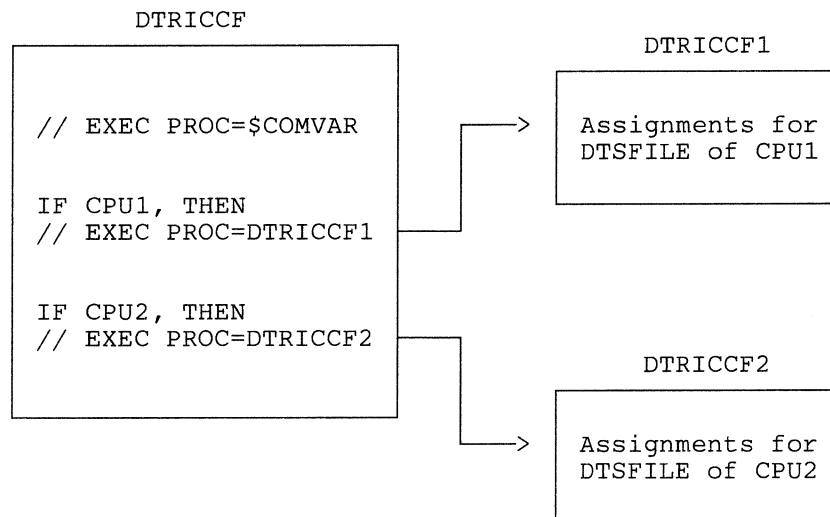


Figure 97. Using Separate *DTRICCF* Procedures

```
* $$ JOB JNM=DTRICCF,CLASS=A,DISP=D,NTFY=YES,PRI=9
* $$ LST CLASS=R,DEST=(,ADMN),DISP=D
* $$ PUN CLASS=R,DEST=(,ADMN),DISP=D
// JOB DTRICCF CATALOG PROCEDURE "DTRICCF"
// EXEC LIBR,PARM='MSHP'
ACCESS SUBLIB=IJSYSRS.SYSLIB
CATALOG DTRICCF.PROC      EOD=/+ DATA=YES REPLACE=YES
*****
* DETERMINE CPU ID AND THEN CATALOG RELATED DTRICCF PROCEDURE *
*****
// SETPARM XNCPU=' '
// EXEC PROC=$COMVAR,XNCPU
// EXEC PROC=DTRICCF&XNCPU
/+
CONNECT SUBLIB=IJSYSRS.SYSLIB : PRD2.SAVE
COPY DTRICCF.PROC  REPLACE=YES LIST=YES
/*
// EXEC LISTLOG
/&
* $$ EOJ
```

Figure 98. Modifying DTRICCF

```
* $$ JOB JNM=DTRICCF1,CLASS=A,DISP=D,NTFY=YES,PRI=9
* $$ LST CLASS=R,DEST=(,ADMN),DISP=D
* $$ PUN CLASS=R,DEST=(,ADMN),DISP=D
// JOB DTRICCF1 CATALOG PROCEDURE "DTRICCF1"
// EXEC LIBR,PARM='MSHP'
ACCESS SUBLIB=IJSYSRS.SYSLIB
CATALOG DTRICCF1.PROC      EOD=/+ DATA=YES REPLACE=YES
// ASSGN SYS010,DISK,VOL=SYSWK1,SHR      DTSFILE EXTENT
/+
CONNECT SUBLIB=IJSYSRS.SYSLIB : PRD2.SAVE
COPY DTRICCF1.PROC  REPLACE=YES LIST=YES
/*
// EXEC LISTLOG
/&
* $$ EOJ
```

Figure 99. Sample Code for DTRICCF1

```
* $$ JOB JNM=DTRICCF2,CLASS=A,DISP=D,NTFY=YES,PRI=9
* $$ LST CLASS=R,DEST=(,ADMN),DISP=D
* $$ PUN CLASS=R,DEST=(,ADMN),DISP=D
// JOB DTRICCF2 CATALOG PROCEDURE "DTRICCF2"
// EXEC LIBR,PARM='MSHP'
ACCESS SUBLIB=IJSYSRS.SYSLIB
CATALOG DTRICCF2.PROC      EOD=/+ DATA=YES REPLACE=YES
// ASSGN SYS010,DISK,VOL=USRWK2,SHR      DTSFILE EXTENT
/+
CONNECT SUBLIB=IJSYSRS.SYSLIB : PRD2.SAVE
COPY DTRICCF2.PROC REPLACE=YES LIST=YES
/*
// EXEC LISTLOG
/&
* $$ EOJ
```

Figure 100. Sample Code for DTRICCF2

VSE/VSAM Considerations

The Interactive Interface dialog for defining VSE/VSAM clusters:

- Creates an IDCAMS job to define the specified cluster.
- Creates the appropriate DLBL and EXTENT statements and adds them to the standard label area.
- Updates the procedure STD LABUP with the label information.

In a DASD-sharing environment that has a second full-function Interactive Interface, *different label procedures are required*. If different label procedures are not present, the following happens when you define a cluster for CPU2:

- The cluster is correctly defined in the specified VSE/VSAM catalog.
- The appropriate label information is stored in procedure STD LABUP (*belonging to CPU1*).
- Result = the cluster is not accessible by CPU2.

In order to avoid this situation, you must modify the VSE/ICCF member *ADM\$DTAB* in the DTSFILE for CPU2. The phases that update the VSE/VSAM label procedure access *ADM\$DTAB* for the name of the procedure. The default name is STD LABUP.

ADM\$DTAB is a member of VSE/ICCF library 50. Use the *Program Development Library* dialog to access it. Change STD LABUP to the name of the label procedure that you created for the second CPU. For the sample environment, that name is *STD LABP2*.

Appendix A. Dialogs of the Interactive Interface

This appendix lists the dialogs that are available from selection panels of the Interactive Interface. If you wish, you can invoke these dialogs from selection panels that you create and add to the Interactive Interface.

In Figure 101 on page 206:

- **VSE/SP Selection** is the name that is used for a dialog in a selection panel of the Interactive Interface.
- **Default For** shows where the dialog appears in the default panel hierarchies supplied by VSE/SP.
 - **A** = hierarchy for **SYSA** (type 1 user)
 - **O** = hierarchy for **OPER** (type 1 user)
 - **P** = hierarchy for **PROG** (type 2 user)

“Defining User Profiles” on page 35 explains the user types as defined for VSE/SP.

- **Application Profile** is the name you would specify for the dialog when creating your own selection panels.
- **VSE/ICCF Partition** shows if a particular dialog uses a VSE/ICCF interactive partition. If so, the requirements for the partition’s class and size are shown.

If a dialog does not require a VSE/ICCF interactive partition, all user types (1, 2, or 3) can access it.

If a dialog requires a partition, both type 1 and type 2 users can access it, unless otherwise indicated. Type 3 users cannot access the dialog.

- **Concurrent Execution** indicates how many users can execute a dialog at the same time. For example:
 - Any number of users can concurrently execute the *Command Mode* dialog.
 - Only one user at a time can execute the *APAR/Local Fix Handling* dialog.
 - Three users can concurrently execute the *Back Up a File* dialog.

Note that the number of allowed concurrent users is based on the initial partition layout for VSE/ICCF. You can increase the number of class A or B partitions to allow concurrent access for more users.

VSE/SP Selection	Default For	Application Profile	VSE/ICCF Partition	Concurrent Execution
Analyze and Apply PTFS from Service Tape	A	IESS\$PHT	I, 768K	1 user only
Apply PTFs from Service Tape	A	IESS\$PHJ	I, 768K	1 user only
Apply APAR/Local Fix	A	IESS\$FIX	I, 768K	1 user only
Archive All ICCF Libraries on Tape	A, P, O	IESS\$SAR	B, 512K	3 users
Back Up a File	A, P, O	IESU\$DMF	B, 512K	3 users
Back Up a User Catalog to Disk	A, O	IESC\$BUD	B, 512K	3 users
Back Up a User Catalog to Tape	A, O	IESC\$BUT	B, 512K	3 users
Back Up a Volume	A, P, O	IESU\$DMV	B, 512K	3 users
Back Up History File	A, O	IESS\$BAC	B, 512K	3 users
Back Up the DTSFILE (All ICCF Libraries)	A, P, O	IESS\$SAL	B, 512K	3 users
Back Up the Master Catalog to Disk	A, O	IESC\$BMD	B, 512K	3 users
Back Up the Master Catalog to Tape	A, O	IESC\$BMT	B, 512K	3 users
Back Up VSAM File	A, P, O	IESD\$BAC	B, 512K	3 users
Back Up VSE Library on Tape	A, O	IESS\$LSV	B, 512K	3 users
Catalog Printer UCB	A	IEST\$UCB	B, 512K	3 users
Change Nicknames	A	IESS\$CNN	I, 768K	1 user only
Command Mode [use VSE/ICCF in native mode]	A, P	IESNICCF		Any number of users
Configure EP Connected Terminals	A	IEST\$ASM	I, 768K	1 user only
Configure Hardware	A	IESA\$HDW	I, 768K	1 user only
Copy a File	A, P, O	IESU\$FCF	B, 512K	3 users
Copy a Volume	A, P, O	IESU\$FCV	B, 512K	3 users
Create Application Job Stream	A, P	IESP\$EXE	B, 512K	3 users
Create Network Tape	A	IESC\$CNT	B, 512K	3 users
Create Standalone Dump Program	A, P	IESP\$AID	B, 512K	3 users

Figure 101 (Part 1 of 5). Dialogs of the Interactive Interface

VSE/SP Selection	Default For	Application Profile	VSE/ICCF Partition	Concurrent Execution
Display Active Users/Send Message	A, P, O	IESUSER		Any number of Users
Display Channel and Device Activity	A, O	IESDS		Any number of users
Display Storage Layout	A, O	IESSTRGL		Any number of users
Display System Activity	A, P, O	IESDA		Any number of users
Display VTOC	A	IESLVTOC	A, 256K [See Note 1.]	Any number of users
Down-Level Check [system refresh installation]	A	IESS\$FSD	I, 768K	1 user only
Enter News	A, P, O	IESNEWS		1 user only
Export-Disconnect a User Catalog	A, O	IESC\$EXP	B, 512K	3 users
Export ICCF Library Members to Tape	A, P, O	IESS\$EXP	B, 512K	3 users
Export VSAM File	A, P, O	IESD\$EXP	B, 512K	3 users
File and Catalog Management Dialogs [See Note 2.]	A, P	IESVSAM	B, 512K [See Note 1.]	Any number of users
Format ICCF Dump Data	A, P	IESP\$FDM	B, 512K	3 users
FSU Installation [system refresh installation]	A	IESS\$FSI	I, 768K	1 user only
FSU Preparation	A	IESS\$FSR	I, 768K	1 user only
Import-Connect a User Catalog	A, O	IESC\$IMP	B, 512K	3 users
Import ICCF Library Member	A, P, O	IESS\$IMP	B, 512K	3 users
Import VSAM File	A, P, O	IESD\$IMP	B, 512K	3 users
Inspect Dump Management Output	A, P	IESDUMPV		Any number of users
Inspect Message Log	A, P	IESMLOG		Any number of users
Install Generation Feature	A	IESI\$GLI	I, 768K	1 user only

Figure 101 (Part 2 of 5). Dialogs of the Interactive Interface

VSE/SP Selection	Default For	Application Profile	VSE/ICCF Partition	Concurrent Execution
Install Network Tape	A	IESC\$NET	B, 512K	3 users
Install Product(s) from Tape [for Optional Licensed Programs, V2 Format]	A	IESI\$OPI	I, 768K	1 user only
Install Programs (V1 Format)	A	IESI\$ODI	I, 768K	1 user only
Invoke CEDA	A	IESCEDA		Any number of users
Invoke CEMS (Report Controller – administrator functions)	A, O	IESCEMS		Any number of users
Invoke CEOS (Report Controller – programmer subset)	P	IESCEOS		Any number of users
Invoke CEMT	A, P, O	IESCEMT		Any number of users
List All Defined User IDs	A	IESIWS6		Any number of users
List and Process User Files in Host Transfer File	A	IESIWS1		Any number of users
Look Up PTF/APAR [See Note 3.]	A, P	IESS\$RLP	I, 768K	1 user only
Maintain Application Profiles [See Note 4.]	A	IESAPM		1 user only
Maintain Printer FCB	A	IESU\$FCB	I, 768K	1 user only
Maintain Selection Panels [See Note 4.]	A	IESSPM		1 user only
Maintain Synonyms	A, P, O	IESSYN		Any number of users
Maintain User Profiles [See Note 4.]	A	IESUPM	B, 512K	1 user only
Maintain VTAM Application Names	A	IESC\$APP	I, 768K	1 user only
Maintain VTAM Startup Options	A	IESC\$ACT	I, 768K	1 user only
Manage Batch Queues	A, P, O	IESBQU		Any number of users

Figure 101 (Part 3 of 5). Dialogs of the Interactive Interface

VSE/SP Selection	Default For	Application Profile	VSE/ICCF Partition	Concurrent Execution
Move Files from Host Transfer File to ICCF	A	IESIWS5		Any number of users
Move Files from Host Transfer File to VSAM	A	IESIWS3		Any number of users
Move ICCF Members to Host Transfer File	A	IESIWS4		Any number of users
Move VSAM Files to Host Transfer File	A	IESIWS2		Any number of users
New Password	See Note 5.	IESPWD		Any number of users
Online Problem Determination	A, P	IESOLPD		Any number of users
Personalize History File	A	IESA\$LB	I, 768K	1 user only
Prepare for Installation [for Optional Licensed Programs, V2 Format]	A	IESI\$PRI	I, 768K	1 user only
Print SDAID Tape	A, P	IESP\$AIA	B, 512K	3 users
Print Service Document	A	IESS\$LST	I, 768K	1 user only
Program Development Library [See Note 6.]	A, P, O	IESLIBXX	A, 256K	5 users
Remove PTFs	A	IESS\$PHR	I, 768K	1 user only
Restore a File	A, P, O	IESU\$RSF	B, 512K	3 users
Restore a Member of an ICCF Library	A, P, O	IESS\$RME	B, 512K	3 users
Restore a User Catalog from Disk	A, O	IESC\$RUD	B, 512K	3 users
Restore a User Catalog from Tape	A, O	IESC\$RUT	B, 512K	3 users
Restore a Volume	A, P, O	IESU\$RSV	B, 512K	3 users
Restore History File	A, O	IESS\$RHS	B, 512K	3 users
Restore One ICCF Library	A, P, O	IESS\$RON	B, 512K	3 users
Restore the DTSFILE (All ICCF Libraries)	A, P, O	IESS\$RAL	B, 512K	3 users

Figure 101 (Part 4 of 5). Dialogs of the Interactive Interface

Interactive Interface Dialogs

VSE/SP Selection	Default For	Application Profile	VSE/ICCF Partition	Concurrent Execution
Restore the Master Catalog from Disk	A, O	IESC\$RMD	B, 512K	3 users
Restore the Master Catalog from Tape	A, O	IESC\$RMT	B, 512K	3 users
Restore VSAM File	A, P, O	IESD\$RES	B, 512K	3 users
Restore VSE Library from Tape	A, O	IESS\$LRS	B, 512K	3 users
Retrace [retrace entire System History File. See Note 3 for all <i>Retrace</i> dialogs.]	A, P	IESS\$RRP	I, 768K	1 user only
Retrace APARs	A, P	IESS\$RAP	I, 768K	1 user only
Retrace Component ID	A, P	IESS\$ROP	I, 768K	1 user only
Retrace Components	A, P	IESS\$RCP	I, 768K	1 user only
Retrace Members	A, P	IESS\$RMP	I, 768K	1 user only
Retrace Products	A, P	IESS\$RPP	I, 768K	1 user only
Retrace PTFs	A, P	IESS\$RFP	I, 768K	1 user only
Retrieve Files from Another System	A, P	IESFR	A, 256K	5 users
Retrieve Message	A, P, O	IESIMSG		Any number of users
Scan VSE Library Backup Tape	A, O	IESS\$SRS	B, 512K	3 users
Storage Dump Management	A, P	IESP\$IDH	B, 512K	3 users
Submit a Job to Another System	A, P	IESSS	A, 256K	5 users
Switch to PC Mode	A	IESIWS7		Any number of users
System Console [See Note 7.]	A, P, O	IESDC	B, 512K	3 users
Tailor IPL Procedure	A	IEST\$MAS	I, 768K	1 user only
Transfer Files to Another System	A, P	IESFT	A, 256K	5 users
Undo APAR/Local Fix	A	IESS\$UND	I, 768K	1 user only
Verify Location of Involved Serviced Files	A	IESS\$LOC	I, 768K	1 user only

Figure 101 (Part 5 of 5). Dialogs of the Interactive Interface

Notes:

1. *CICS/DOS/VS builds and uses a temporary VSE/ICCF interactive partition for this dialog.*
2. *If a user has authority to define VSE/VSAM files and manage catalogs, the application IESVSAM provides access to 6 functions:*

- ***Display or Process a File***
- ***Define a New File***
- ***Define a Library***
- ***Define an Alternate Index or Name***
- ***Display or Process a Catalog, Space***
- ***Define a New User Catalog***

The last two functions are not shown to a user who has no authority to manage catalogs. Selections 2 through 4 are not accessible to users with no authority to define VSE/VSAM files.

3. *The **Look Up PTF/APAR** and **Retrace** dialogs listed in this appendix are accessed via the **Retrace History File** panel.*

*The panel hierarchy for an administrator also allows access to the dialogs via the **IBM Service** panel. These dialogs are identical in function to those accessed from the **Retrace History File** panel. The only difference is that their application names end in **S**, not **P** (IESS\$RAS instead of IESS\$RAP, for example.).*

*If you wish to include an option for a **Retrace** dialog in a selection panel that you create, you can specify either application name for the dialog.*

4. *To work with this dialog, a user must have special authorization defined in his/her user profile.*
5. *This dialog is available to every user type via PF key 10 of the **VSE/SP Online** panel.*
6. *The following functions of the **Program Development Library** dialog use a VSE/ICCF interactive partition:*
 - ***Submit***
 - ***Print***
 - ***Compile***
7. *For the **System Console** dialog, a confusing operating environment can result if many users enter console commands. Authority to enter commands can be controlled via each user's profile.*

Appendix B. Fast Paths and Synonyms for Dialogs

This appendix lists the fast paths and synonyms that can be used to access dialogs of the Interactive Interface. For information about creating your own synonyms, refer to the manual *IBM VSE/SP Administration*.

In Figure 102:

- **VSE/SP Selection** is the name used for a dialog in a selection panel of the Interactive Interface (*Apply APAR/Local Fix*, for example).
- **Default For** shows where the dialog appears in the default panel hierarchies supplied by VSE/SP:
 - **A** = hierarchy for **SYSA** (type 1 user)
 - **O** = hierarchy for **OPER** (type 1 user)
 - **P** = hierarchy for **PROG** (type 2 user)
- **Fast Path** shows the number string that can be used to access the dialog from a user's *initial* selection panel.
- **Default Synonym** shows the character string (if any) that is predefined for the dialog. Users can enter the synonym from *any* selection panel of the Interactive Interface to access the dialog.

Note that predefined synonyms for groups of dialogs (such as the dialogs for backing up data) also are listed in the figure.

VSE/SP Selection	Default For	Fast Path	Default Synonym
Analyze and Apply PTFS from Service Tape	A	1422	---
Apply PTFs from Service Tape	A	1423	---
Apply APAR/Local Fix	A	143	---
Archive All ICCF Libraries on Tape	A	37242	---
	P	5652	---
	O	5242	---
Backup Dialogs	A	37	BACKUP
	P	56	BACKUP
	O	5	BACKUP

Figure 102 (Part 1 of 7). Fast Paths and Synonyms for Dialogs

VSE/SP Selection	Default For	Fast Path	Default Synonym
Back Up a File	A	3752	---
	P	5672	---
	O	552	---
Back Up a User Catalog to Disk	A	37184	---
	O	5184	---
Back Up a User Catalog to Tape	A	37183	---
	O	5183	---
Back Up a Volume	A	3751	---
	P	5671	---
	O	551	---
Back Up History File	A	373	---
	O	53	---
Back Up the DTSFILE (All ICCF Libraries)	A	37241	---
	P	5651	---
	O	5241	---
Back Up the Master Catalog to Disk	A	37182	---
	O	5182	---
Back Up the Master Catalog to Tape	A	37181	---
	O	5181	---
Back Up VSAM File	A	3713	---
	P	563	---
	O	513	---
Back Up VSE Library on Tape	A	3721	---
	O	521	---
Catalog Printer UCB	A	245	UCB
Change Nicknames	A	148	---
Configure EP Connected Terminals	A	242	---
Configure Hardware	A	241	---
Copy a File	A	3772	---
	P	5692	---
	O	572	---
Copy a Volume	A	3771	---
	P	5691	---
	O	571	---
Create Application Job Stream	A	52	---
	P	3	---
Create Network Tape	A	246	---
Create Standalone Dump Program	A	47	---
	P	47	---
Define a Library	A	223	---
	P	63	---

Figure 102 (Part 2 of 7). Fast Paths and Synonyms for Dialogs

VSE/SP Selection	Default For	Fast Path	Default Synonym
Define a New File	A P	222 62	---
Define a New User Catalog	A	226	---
Define an Alternate Index or Name	A P	224 64	---
Display Active Users/Send Message	A P O	33 52 41	USERS or MESSAGE
Display Channel and Device Activity	A O	362 72	SIO SIO
Display or Process a Catalog, Space	A	225	---
Display or Process a File	A P	221 61	---
Display Storage Layout	A O	363 73	---
Display System Activity	A P O	361 55 71	DA DA DA
Display VTOC	A	23	VTOC
Down-Level Check	A	1451	---
Enter News	A P O	34 53 42	NEWS NEWS NEWS
Export-Disconnect a User Catalog	A O	3715 515	---
Export ICCF Library Members to Tape	A P O	37243 5653 5243	---
Export VSAM File	A P O	3711 561 511	---
File and Catalog Management Dialogs	A P	22 6	VSAM VSAM
Format ICCF Dump Data	A P	48 48	---
FSU Installation	A	1453	---
FSU Preparation	A	1452	---
IBM Service Dialogs	A	14	SERVICE
Import-Connect a User Catalog	A O	3716 516	---

Figure 102 (Part 3 of 7). Fast Paths and Synonyms for Dialogs

VSE/SP Selection	Default For	Fast Path	Default Synonym
Import ICCF Library Member	A P O	37254 5664 5254	--- --- ---
Import VSAM File	A P O	3712 562 512	--- --- ---
Inspect Dump Management Output	A P	44 44	--- ---
Inspect Message Log	A P	42 42	LOG LOG
Install Generation Feature	A	13	---
Install Network Tape	A	15	---
Install Product(s) from Tape	A	112	---
Install Programs (V1 Format)	A	12	---
Invoke CEDA	A	72	RDO
Invoke CEMS	A	73	CEMS
Invoke CEOS	P O	82 62	CEOS CEOS
Invoke CEMT	A P O	71 81 61	MT MT MT
List All Defined User IDs (Move Utilities)	A	386	---
List and Process User Files in Host Transfer File	A	381	---
Look Up PTF/APAR	A P	1468 458	--- ---
Maintain Application Profiles	A	213	APM
Maintain Printer FCB	A	244	FCB
Maintain Selection Panels	A	212	SPM
Maintain Synonyms	A P O	214 57 8	SYNONYMS SYNONYMS SYNONYMS
Maintain User Profiles	A	211	UPM
Maintain VTAM Application Names	A	25	---
Maintain VTAM Startup Options	A	26	---
Manage Batch Queues	A P O	32 2 3	POWER POWER POWER

Figure 102 (Part 4 of 7). Fast Paths and Synonyms for Dialogs

VSE/SP Selection	Default For	Fast Path	Default Synonym
Manage List Queue	A P O	321 21 31	LST LST LST
Manage Punch Queue	A P O	323 23 33	PUN PUN PUN
Manage Reader Queue	A P O	322 22 32	RDR RDR RDR
Manage Transmit Queue	A P O	324 24 34	XMT XMT XMT
Move Files from Host Transfer File to ICCF	A	385	---
Move Files from Host Transfer File to VSAM	A	383	---
Move ICCF Members to Host Transfer File	A	384	---
Move VSAM Files to Host Transfer File	A	382	---
Online Problem Determination	A P	414 413	OLPD OLPD
Personal Computer Move Utilities	A	38	IWS
Personalize History File	A	147	---
Prepare for Installation (Optional Licensed Programs, V2 Format)	A	111	---
Print SDAID Tape	A P	46 46	--- ---
Print Service Document	A	1421	---
Program Development Library	A P O	51 1 1	ICCFS ICCFS ICCFS
Program Development Library [Primary Library]	A P O	511 11 11	ICCF ICCF ICCF
Remove PTFs	A	1424	---
Restore Dialogs	A P O	37 56 5	RESTORE RESTORE RESTORE
Restore a File	A P O	3762 5682 562	--- --- ---

Figure 102 (Part 5 of 7). Fast Paths and Synonyms for Dialogs

VSE/SP Selection	Default For	Fast Path	Default Synonym
Restore a Member of an ICCF Library	A P O	37253 5663 5253	--- --- ---
Restore a User Catalog from Disk	A O	37174 5174	--- ---
Restore a User Catalog from Tape	A O	37173 5173	--- ---
Restore a Volume	A P O	3761 5681 561	--- --- ---
Restore History File	A O	374 54	--- ---
Restore One ICCF Library	A P O	37252 5662 5252	--- --- ---
Restore the DTSFILE (All ICCF Libraries)	A P O	37251 5661 5251	--- --- ---
Restore the Master Catalog from Disk	A O	37172 5172	--- ---
Restore the Master Catalog from Tape	A O	37171 5171	--- ---
Restore VSAM File	A P O	3714 564 514	--- --- ---
Restore VSE Library from Tape	A O	3722 522	--- ---
Retrace [retrace entire System History File]	A P	1461 451	--- ---
Retrace APARs	A P	1465 455	--- ---
Retrace Component ID	A P	1467 457	--- ---
Retrace Components	A P	1463 453	--- ---
Retrace Members	A P	1466 456	--- ---
Retrace Products	A P	1462 452	--- ---
Retrace PTFs	A P	1464 454	--- ---
Retrieve Files from Another System	A P	392 582	--- ---

Figure 102 (Part 6 of 7). Fast Paths and Synonyms for Dialogs

VSE/SP Selection	Default For	Fast Path	Default Synonym
Retrieve Message	A P O	35 54 43	RETRIEVE RETRIEVE RETRIEVE
Scan VSE Library Backup Tape	A O	3723 523	--- ---
Storage Dump Management	A P	43 43	--- ---
Submit a Job to Another System	A P	393 583	--- ---
Switch to PC Mode	A	387	---
System Console	A P O	31 51 2	CONSOLE CONSOLE CONSOLE
Tailor IPL Procedure	A	243	---
Transfer Files and Jobs to Another System	A P	39 58	NET NET
Transfer Files to Another System	A P	391 581	--- ---
Undo APAR/Local Fix	A	144	---
Verify Location of Involved Serviced Files	A	141	---

Figure 102 (Part 7 of 7). Fast Paths and Synonyms for Dialogs

Appendix C. Additional VSE/SP Applications

VSE/SP provides a number of applications that are not included as options in selection panels of the Interactive Interface. If you wish, you can invoke one or more of these applications from selection panels that you create.

In Figure 103 on page 222:

- **Function** lists the function provided by an application.
- **Application Profile** is the name you would specify when adding an application to your own selection panels.
- **VSE/ICCF Partition** shows if a particular dialog uses a VSE/ICCF interactive partition. If so, the requirements for the partition's class and size are shown.

If a dialog does not require a VSE/ICCF interactive partition, all user profile types (1, 2, or 3) can access it.

If a dialog requires a partition, both type 1 and type 2 users can access it, unless otherwise indicated. Type 3 users cannot access the dialog.

- **Concurrent Execution** indicates how many users can execute an application at the same time. For example, only three users can concurrently invoke DITTO in a VSE/ICCF interactive partition.

Note that the number of concurrent users shown for these applications is based on the initial partition layout for VSE/ICCF. You can increase the number of class B partitions to allow concurrent access for more users.

Function	Application Profile	VSE/ICCF Partition	Concurrent Execution
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
Display Channel and Device Activity [See Note]	IESLS		Any number of users
Display LST Queue	IESLST		Any number of users
Display PUN Queue	IESPUN		Any number of users
Display RDR Queue	IESRDR		Any number of users
Display System Activity [See Note]	IESLA		Any number of users
Display XMT Queue	IESXMT		Any number of users
Interactive Structured Query Language (ISQL)	IESISQL		Any number of users
Invoke CEDB (Resource Definition Online)	IESCEDB		Any number of users
Invoke CEDC (Resource Definition Online)	IESCEDC		Any number of users
Invoke DITTO in an Interactive Partition	IESDITTO	B, 512K	3 users
Invoke FTP in an Interactive Partition	IESFTP	A, 256K	5 users
Invoke LIBR Utility in an Interactive Partition	IESLIBR	B, 512K	3 users

Figure 103 (Part 1 of 2). Additional VSE/SP Applications

Function	Application Profile	VSE/ICCF Partition	Concurrent Execution
Query Management Facility (QMF)	IESQMF		Any number of users
QMF / Trace	IESQMFT		Any number of users
Screen Definition Facility (SDF)	IESSDF		Any number of users
Shut Down ISQL Resource Manager	IESSQLT		Any number of users
Start ISQL Resource Manager	IESSQLS		Any number of users

Figure 103 (Part 2 of 2). Additional VSE/SP Applications

Note: When creating your own selection panels, specify IESLS or IESLA for application name if you want to change the system defaults for refreshing the screen. If you do not want to change the defaults, use IESDS or IESDA instead. These VSE/SP dialogs are listed in Figure 101 on page 206.

If you use an application which requires an optional licensed program:

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

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

Appendix D. VSE/SP Skeletons

As the name implies, job skeletons usually are not complete jobs that you can immediately submit for execution. Instead, they contain parameters and variables that you must specify to create jobs for your specific system. They also contain comments that describe JCL statements and variables and explain how you make the necessary changes.

To use a skeleton, you should copy it from its original VSE/ICCF library into a VSE/ICCF library that you own. You can then edit the copy and make the necessary changes.

Startup Skeletons

Member Name	Library	Use
SKALLC1	59	Allocate partitions for Environment 1, MODE = VM or E.
SKALLC13	59	Allocate partitions for Environment 1, MODE = 370.
SKALLC2	59	Allocate partitions for Environment 2, MODE = VM or E.
SKALLC23	59	Allocate partitions for Environment 2, MODE = 370.
SKALLC33	59	Allocate partitions for Environment 3, MODE = 370.
SKALLC43	59	Allocate partitions for Environment 4, MODE = 370.
SKCICS	59	Start CICS/DOS/VS and VSE/ICCF in F2.
SKCOLD	59	Load job(s) into RDR queue after a COLD startup.
SKCOMVAR	59	Define CPU IDs in a DASD-sharing environment.
SKENVOVW	59	Overview to different procedures for tailoring system startup.
SKENVSEL	59	Include jobs created by startup skeletons into a single job.

Figure 104 (Part 1 of 2). Startup Skeletons

Member Name	Library	Use
SKINITNN	59	Start all partitions except BG and F1.
SKJCL0	59	Start BG. Calls procedure defined by skeleton SKUSERBG.
SKJCL1	59	Start F1. Calls autostart procedure for VSE/POWER (skeleton SKPWSTRT).
SKLIBCHN	59	Define library search chains. Called by SKINITNN.
SKLOAD	59	Create startup job for CICS/DOS/VS during a BASIC startup.
SKPWSTRT	59	Startup job for VSE/POWER.
SKUSERBG	59	Release jobs CICSICCF and VTAMSTRT.
SKVTAM	59	Startup job for ACF/VTAM.

Figure 104 (Part 2 of 2). Startup Skeletons

CICS/DOS/VS Tables

Member Name	Library	Use
DFHDCTSP	59	Create a DCT.
DFHFCTSO	59	Create an FCT for a non-development system.
DFHFCTSP	59	Create an FCT for the development system.
DFHPCTSP	59	Create a PCT.
DFHPEP	59	Insert your code into the transaction abend process.
DFHPLTPI	59	Create a PLT for partition initialization.
DFHPLTSD	59	Create a PLT for partition shutdown.
DFHPPTSP	59	Create a PPT.
DFHSITSP	59	Create an SIT.
DFHTCTVB	59	Create a TCT for BTAM-ES terminals.
DFHTCTVV	59	Create a TCT for ACF/VTAM terminals.
DFHTSTSP	59	Create a TST.
DFHXLTS	59	Create an XLT.
DTRTCTK	59	Define an IBM 5553/57 printer to CICS/DOS/VS.

Figure 105. CICS/DOS/VS Tables

Skeletons for Intelligent Work Station Support

Member Name	Library	Use
INWDAT1	59	File used by the Move Utility exit routines.
INWDAT2	59	File used by the Move Utility exit routines.
INWDESC1	59	Descriptor record used for Move Utility exit routines.
INWDESC2	59	Descriptor record used for Move Utility exit routines.
INWEXTA1	59	Sample exit routine (Assembler) for Move Utilities.
INWEXTA2	59	Sample exit routine (Assembler) for Move Utilities.
INWEXTC1	59	Sample exit routine (COBOL) for Move Utilities.
INWPETOA	59	Procedure for converting EBCDIC to ASCII.
INWPATOE	59	Procedure for converting ASCII to EBCDIC.
INWPMS	59	Translate PC file transfer messages.
INWRJE01	68	Set up the UPLOAD function.
INWRJE02	68	Redefine downloaded files.
INWRJE03	68	PC command procedure for UPLOAD function.
INWRJE04	68	PC command procedure for REDEFINE function.
INWRJE05	68	VSE/POWER job to be uploaded.
INWRJE06	68	Installation description for File Transfer Support program for RJE.
INWRJE08	68	Procedure to send a member from a VSE/ICCF library to a remote work station.
INWSAMA1	59	Sample program (Assembler) for a transfer operation with a SEND command.
INWSAMA2	59	Sample program (Assembler) for a transfer operation with a RECEIVE command.
INWSAMC1	59	Sample program (COBOL) for a transfer operation with a SEND command.
INWSAMC2	59	Sample program (COBOL) for a transfer operation with a RECEIVE command.
INWSAMP1	59	Sample program (PL/I) for a transfer operation with a SEND command.
INWSAMP2	59	Sample program (PL/I) for a transfer operation with a RECEIVE command.
INWSCRA	59	Map for program defined by INWSAMA1.

Figure 106 (Part 1 of 2). Skeletons for Intelligent Work Station Support

Member Name	Library	Use
INWSCRC	59	Map for program defined by INWSAMC1.
INWSCRCP	59	Map for program defined by INWSAMP1.
SKIWSTF	59	Create the Host Transfer File.

Figure 106 (Part 2 of 2). Skeletons for Intelligent Work Station Support

Skeletons for Libraries

Member Name	Library	Use
SKLIBDEF	59	Define VSE user library in non-VSAM managed space.
SKLIBDEL	59	Delete VSE user library in non-VSAM managed space.
SKLIBEXT	59	Extend VSE user library in non-VSAM managed space.

Figure 107. Skeletons for Libraries

Skeletons for VSE/POWER Definitions

Member Name	Library	Use
SKPWRGEN	59	Generate VSE/POWER.
SKPWRBSC	59	Define POWER BSC lines and work stations.
SKPWRNDT	59	Create PNET network definition table.
SKPWRSNA	59	Define SDLC work stations.

Figure 108. Skeletons for VSE/POWER Definitions

Compile Skeletons

Member Name	Library	Use
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	FORTTRAN batch program.
C\$\$FOSUB	2	FORTTRAN batch subroutine.

Figure 109. Compile Skeletons

Skeletons for Network Definitions

Member Name	Library	Use
SKDTRNET.B	IJSYSRS.SYSLIB	Create resource definitions for installing and operating a VSE/SP system in a network.
SKNCPCDF	59	Create ACF/NCP diagnostic file.
SKNCPCKD	59	Load 3705 from CKD device using ACF/SSP.
SKNCPCLF	59	Create NCP load module file.
SKNCP CST	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 ACF/VTAM major node.
SKVTMCDR	59	Define CDRM and CDRS ACF/VTAM major nodes.
SKVTMMOD	59	Create ACF/VTAM Logon Mode table.
SKVTMUSS	59	Create ACF/VTAM USS table.
SKVTMPAT	59	Create ACF/VTAM path table.

Figure 110. Skeletons for Network Definitions

Note: Use a LIBRP command to punch a copy of SKDTRNET into a VSE/ICCF library.

Additional Skeletons

Member Name	Library	Use
IESBLDUP	59	Migrate user profiles.
IESELOGO	59	Change the <i>VSE/SP Online</i> panel.
SKARCHIV	59	Create user product-ID and component-ID entry for System History file.
SKDTSEXT	59	Extend the VSE/ICCF DTSFILE.
SKICFFMT	59	Format the VSE/ICCF DTSFILE.
SKICFGEN	59	Generate VSE/ICCF.
SKREFRE	59	Refresh member DTRIHIST.Z with data from System History file.
SKUNDO	59	Remove user correction from a phase.
SKVMVSE	59	Punch VM/VSE modules to VM user.
STDLABUS	59	Create standard labels for your files.

Figure 111. Additional Skeletons

Appendix E. Reserved Names in the System

VSE/SP uses certain prefixes for naming:

- 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 can not be duplicate names for these.

The following prefixes are reserved for functions of VSE/SP. You should *not* use these prefixes:

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
USER
ICCF
PF1
PF3
PF13
PF15

The CMS EXEC **SUBVSE** is also a reserved system name.

Appendix F. VSE/ICCF and VSE/POWER Generation Parameters

This appendix shows the generation parameters used by VSE/SP 3.1 for VSE/ICCF and VSE/POWER. If you want to change these parameters, follow the instructions given in manual *IBM VSE/SP Administration*.

VSE/ICCF Generation Parameters

Figure 112 on page 236 lists the operands of the *DTSOPTNS* macro that is used to generate VSE/ICCF for VSE/SP 3.1. If you wish, you can use the skeleton *SKICFGEN* to generate VSE/ICCF differently. *SKICFGEN* is a member of VSE/ICCF library 59.

You can change most of the operands shown below. Do *not*, however, change the *ALTSEC*, *COMLIB*, or *CRJE* operands. They are required for VSE/SP.

For detailed information about the *DTSOPTNS* macro, refer to the manual *VSE/ICCF Installation and Operations Reference*.

DTSOPTNS ALTSEC=NO,	X
ATN2741=YES,	X
CANKEY=PA2,	X
CISIZE=2048,	X
COMLIB=2,	X
CRJE=(YES,Q,A,D),	X
DISPKEY=PA3,	X
EDFLAG=73,	X
EDEND=72,	X
HCLINE=132,	X
INTCOMP=YES,	X
INTRVAL=1,	X
LOADPRT=YES,	X
NBUFS=20,	X
NRECS=22,	X
NUSRS=30,	X
NPARTS=5,	X
NTASKS=4,	X
PGMRINP=5,	X
PGMRLST=6,	X
PGMRPCH=7,	X
PGMRPIN=8,	X
PGMRLOG=9,	X
PSIZE=256,	X
PARTN=(0,2048,0,T,	X
1,256,4,A,	X
2,256,4,A,	X
3,512,4,BA,	X
4,512,4,BA,	X
5,768,4,IBA),	X
RDR=FFC,	X
RDR2=FFA,	X
PCH=FFD,	X
PRT=FFE,	X
SPOOL=250,	X
TCUPSI=11100000,	X
TIOA40=600,	X
TIOA00=600,	X
TCTOFS=8	

Figure 112. DTSOPTNS Macro for Generating VSE/ICCF

DTSFILE Generation Parameters

Pregenerated Libraries and User IDs

The VSE/ICCF DTSFILE generated by VSE/SP defines 99 libraries and 99 VSE/ICCF user ID records. Figure 113 shows the VSE/ICCF libraries and their use. Note that some libraries are reserved for VSE/SP. The members that VSE/SP ships in these libraries take up approximately 20% of the space reserved for the DTSFILE.

Library	Type	Contents
1	Private	VSE/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, CICS/DOS/VS tables, and IWS sample programs.
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 113. VSE/ICCF Libraries

Skeleton SKICFFMT

With the skeleton *SKICFFMT*, you can *reformat* the DTSFILE to create additional user ID records and up to 9999 libraries. This skeleton, which is a member of VSE/ICCF library 59, has the original values that VSE/SP specifies for the file.

Figure 114 shows the *FORMAT* and *ADD* statements used for the DTSFILE. The *ADD* statements define the libraries shown in Figure 113.

VSE/SP requires that you define all VSE/ICCF libraries with the *DATE* option. For detailed information about the *FORMAT* and *ADD* statements, refer to *VSE/ICCF Installation and Operation Reference*.

Note: If necessary, you can extend the DTSFILE. You can do this by defining a larger extent on SYSWK1 or by defining extents on several volumes. For information on how to use the skeleton *SKDTSEXT* to extend the DTSFILE, refer to *IBM VSE/SP Administration*.

DTSFILE Generation Parameters

```
FORMAT LIBRARIES(99) USERS(99)
* ADD LIBRARY 1 . . .
ADD LIBRARY FREESPACE(40) DATE
* ADD LIBRARY 2 . . .
ADD LIBRARY FREESPACE(10) DATE
* ADD LIBRARIES 3,4,5, AND 6 . . .
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE NOCOMMON PUBLIC
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE NOCOMMON PUBLIC
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE NOCOMMON PUBLIC
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE NOCOMMON PUBLIC
* ADD LIBRARIES 7 THRU 49 . . .
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE
.
.
.
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE
* ADD LIBRARIES 50 THRU 68 . . .
ADD LIBRARY DATE NOCOMMON PUBLIC
ADD LIBRARY DATE NOCOMMON PUBLIC
.
.
.
ADD LIBRARY DATE NOCOMMON PUBLIC
ADD LIBRARY DATE NOCOMMON PUBLIC
* ADD LIBRARIES 69 THROUGH 99
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE
.
.
.
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE
ADD LIBRARY MAXDIR(200) FREESPACE(25) DATE
```

Figure 114. Code for Formatting the DTSFILE

VSE/POWER Generation Parameters

Figure 115 on page 240 shows the operands of the *POWER* macro that is used to generate VSE/POWER for VSE/SP 3.1. If you wish, you can use the skeleton *SKPWRCEN* to generate VSE/POWER differently. *SKPWRCEN* is a member of VSE/ICCF library 59.

If you create your own *POWER* macro, you should *not* use *IPWPOWER* for its label. The phase *IPWPOWER* is serviced together with the VSE/POWER program product.

Notes:

1. *The VSE/POWER Installation and Operations Guide* has detailed information about the *POWER* macro and its operands. For example:

- To activate VSE/POWER *PNET*, you must include the operand:

```
PNET=xxxxxxxx
```

where *xxxxxxxx* is the name of your *PNET* phase. This is the name of the network definition table as specified for the first *PNODE* macro with *LOCAL=YES*.

- If you have SNA work stations attached to your system, you must specify:

```
SNA=YES
```

2. *IBM VSE/SP Administration* describes the skeleton *SKPWSTRT*. This skeleton has an *EXEC* statement for *IPWPOWER*.

If you modify VSE/POWER generation, you must change the *EXEC* statement. Replace *IPWPOWER* with the name you use for your generation phase.

VSE/POWER Generation Parameters

```
IPWPOWER POWER                                *
        ACCOUNT=YES,                          *
        CLRPRT=YES,                           *
        COPYSEP=YES,                          *
        DBLKGP=10,                             *
        DBLK=0,                                *
        FEED=NO,                               *
        JLOG=YES,                              *
        JSEP=(0,0),                            *
        LTAB=(10,00,05,10,15,20,25,30,35,40,45,50,56), *
        MEMTYPE=P,                             *
        MRKFRM=YES,                            *
        MULT12=NO,                             *
        NTFYMSG=100,                           *
        PAUSE=NO,                              *
        PRI=3,                                 *
        RBS=(0,0),                             *
        RDREXIT=NO,                            *
        SHARED=NO,                             *
        STDCARD=(0,0),                          *
        STDLINE=(0,0),                         *
        SPLIM=90,                              *
        SPOOL=YES                              *
```

Figure 115. Code for Generating VSE/POWER

Appendix G. The CICS/DOS/VS Report Controller

The Report Controller feature is new to CICS/DOS/VS 1.7. It allows users to control and print information (*reports*) created by both online applications and batch programs.

The Report Controller is part of the pregenerated VSE/SP system. During system startup, it is automatically activated and made available through the *CICS Supplied Transactions* panel of the Interactive Interface.

Information About the Report Controller

CICS/DOS/VS Manuals

The manual *IBM VSE/SP Operation* has some basic information about use of the Report Controller. The main source of information for end users, however, is the manual *CICS/DOS/VS Report Controller User's Guide*. It has both task-oriented and reference information.

In addition to the guide for end users, the following manuals for CICS/DOS/VS 1.7 contain information about the Report Controller:

- *CICS/DOS/VS Release Guide* and *CICS/DOS/VS Facilities and Planning Guide* have introductory and planning information about the Report Controller.
- *CICS/DOS/VS Installation and Operations Guide* tells system programmers how to install the Report Controller.
- *CICS/DOS/VS Resource Definition (Online)* helps system administrators define terminals for printing reports.
- *CICS/DOS/VS Application Programmer's Reference Manual (Command Level)* has guidance and reference information about the Report Controller for application designers and programmers.
- *CICS/DOS/VS Recovery and Restart Guide* describes the recovery processing provided for the Report Controller.
- *CICS/DOS/VS Problem Determination Guide* helps programmers and IBM service personnel isolate problems related to the Report Controller.

Help Panels

The Report Controller has a set of panels through which users can manage reports. In addition to selection and data entry panels, the Report Controller also provides Help panels.

Figure 116 is an example of a Help panel. Like the Helps for VSE/SP, the Helps for the Report Controller:

1. Are accessed via PF1.
2. Briefly describe the functions shown on the panel from which they were called.

```
CEMS: 1H                CICS REPORT CONTROLLER - HELP                Page 1 of 2

TO SELECT REPORTS:
  Type 1 and press ENTER to go to REPORT SELECTION where you can specify
  criteria to determine the contents of a report list.
  From the list you can print, hold, and delete reports, and see/change report
  characteristics.

TO SELECT PRINTERS:
  Type 2 and press ENTER to go to PRINTER SELECTION where you can specify
  criteria to determine the contents of a printer list.
  From the list you can start and stop printers, and see/change printer
  characteristics.

PF3=End  PF8=Forward
```

Figure 116. Help Panel for the Report Controller

VSE/SP's Implementation of the Report Controller

DFHSITSP Entry

The System Initialization table (SIT) that VSE/SP defines for CICS/DOS/VS is listed on pages 301 to 302. As shown, it contains the following entry for the Report Controller:

```
SPOOL=( YES , A , A )
```

YES specifies that the Report Controller is part of the CICS/DOS/VS system. **A,A** mean that its ID is *SYSCICSA* and its default class is *A*.

Resource Security Levels for Terminal Printers

When you install VSE/SP, the initial configuration for your system will *not* contain a terminal printer. You must use the *Configure Hardware* dialog to add one or more of these devices to the configuration.

Terminal printers added using the dialog have the following default Resource Security Levels:

- **SPRTRSL = 1**

Any user whose profile specifies RSL=1 can change the characteristics of this printer. For the Report Controller, such characteristics include the forms used for printing.

In the pregenerated VSE/SP system, only the profile for the user SYSA specifies RSL=1. PROG and OPER do not.

- **OPERRSL = 1**

The terminal printer will print reports that specify RSL=1. Such reports can either be output created by online applications or batch programs.

You can change these defaults by editing either *DTRTCTxL* (for a non-SNA terminal printer) or *DTRTCTxS* (for a SNA terminal printer). These members of VSE/ICCF library 51 have DFHTCT entries for local terminal printers that you add to your configuration via the *Configure Hardware* dialog.

After editing the library members, be sure to reassemble the TCT.

Transactions CEMS and CEOS

CICS/DOS/VS provides two transactions for the Report Controller, *CEMS* and *CEOS*. CEMS makes all functions of the Report Controller available to a user; CEOS a subset of those functions.

The Interactive Interface panel hierarchy defined for the user SYSA has a selection for CEMS. Through it, a user whose profile specifies RSL=1 can:

- Print, hold, and delete reports created by online applications or change their characteristics (priority, for example).

- Start and stop terminal printers or change their characteristics.
- Manipulate jobs in the batch queues. This includes releasing jobs for processing and printing job output.
- Create reports from data in transient data queues.

The panel hierarchies for users PROG and OPER have a selection for CEOS. These users can send reports to a printer and check their status. Because their user profiles do *not* specify RSL=1, however, they cannot change the characteristics of a report or printer. In addition, they cannot release batch jobs for processing or create reports from data in transient data queues.

Transient Data Queues Used by the Report Controller

In VSE/SP, the Report Controller makes use of two transient data queues:

- **CSPA**

This queue holds audit information about:

- Reports printed on a printer and
- Changes made to the characteristics or status of reports.

When CICS/DOS/VS is shut down, this information is forwarded to SYSLST and automatically printed.

- **CSPW**

Action messages for a print task (such as a forms change request) and severe error messages are routed to CSPW.

As described in DFHDCTSP (shown on page 271), the final destination of these messages can either be a terminal or a file. The default for VSE/SP is the system console.

If you wish, you can route the messages to any other terminal by changing the terminal ID specified in **IEP1** of DFHDCTSP. You also can use **IEP2** to hold the messages in a file. This file then can be manipulated via option 4 (Transient data queue selection) of the selection panel for CEMS.

Note: If you hold the messages in a file, be sure to print or delete them from time to time. If you do not, transient data space may gradually fill up.

Resource Security Level for Batch Reports

VSE/SP automatically assigns RSL=1 to batch reports. This matches the default OPERRSL for a terminal printer that you add to your configuration via the *Configure Hardware* dialog.

Defining Resource Security Levels

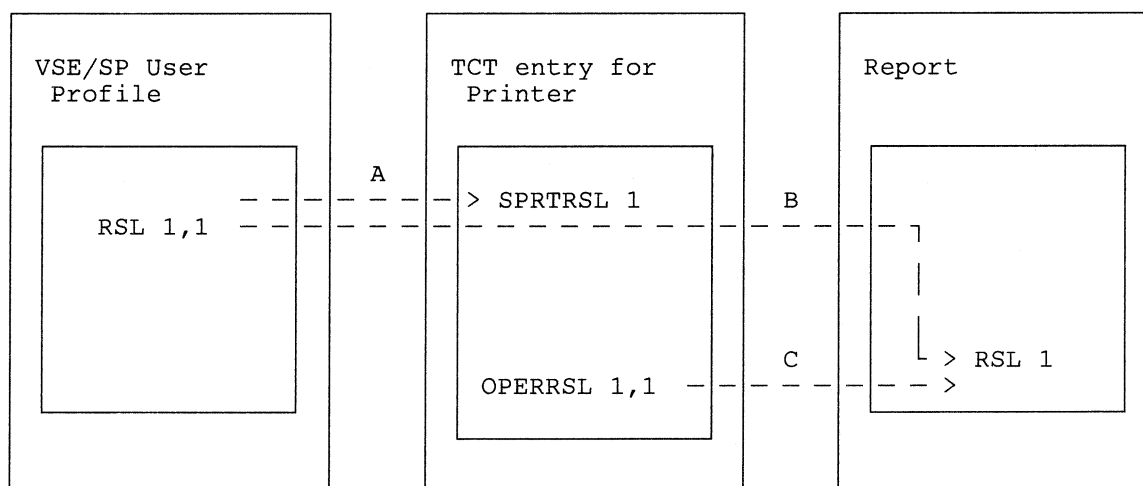
Figure 117 is a simple example of how the Report Controller uses CICS/DOS/VS *resource security level checking* to control access to reports and printers. Before you define RSLs for online transactions or change the RSL values that VSE/SP predefines for you, you should read the information about security levels and keys in the manual *CICS/DOS/VS Facilities and Planning Guide*.

Also note that an RSL other than 1 for batch job output can be specified in a VSE/POWER \$\$ LST statement. In a VSE/SP system, that statement must read:

```
* $$ LST,CLASS=A,CICSDATA=n...
```

where **n** is the RSL for the job. **CICSDATA** is a JECL output operand that is defined in the startup for VSE/POWER using the command:

```
DEFINE L,CICSDATA,3F00,1,255, *
```



- A = If a match is found, the user can change the characteristics of the printer.
- B = If a match is found, the user can change the characteristics of the report.
- C = If a match is found, the printer can print the report.

Figure 117. Use of Resource Security Levels

Appendix H. VSE/SP Definitions for Autoinstall Terminals

CICS/DOS/VS System Definition File

During initial installation, VSE/SP creates and initializes a CICS/DOS/VS System Definition (CSD) file with DFHPPTSP and DFHPCTSP entries. These entries are placed into group *VSESPG*, which can then be manipulated by the Resource Definition Online (RDO) transaction of CICS/DOS/VS. The transaction ID for RDO is *CEDA*. The name of the CSD file is *CICS.CSD*. Figure 118 shows the JCL used to initialize it. Note that the file is not used by the job stream that starts up CICS/DOS/VS and VSE/ICCF.

```
// EXEC DFHCSDUP,SIZE=AUTO      INIT CICS CSD VSAM FILE
INITIALIZE
MIGRATE TABLE(DFHPPTSP) TOGROUP(VSESPG)
MIGRATE TABLE(DFHPCTSP) TOGROUP(VSESPT)
UPGRADE USING(IESMODEL)
UPGRADE USING(DFHCU17F)
COPY GROUP(VSESPT) TO(VSESPG)
DELETE GROUP(VSESPT)
APPEND LIST(DFHLIST) TO(VSELIST)
ADD GROUP(VSETYPE) LIST(VSELIST)
ADD GROUP(VSETERM) LIST(VSELIST)
ADD GROUP(VSESPG) LIST(VSELIST)
ADD GROUP(DFHRCF) LIST(VSELIST)
LIST ALL
/*
```

Figure 118. JCL to Initialize CSD File

Note: To use RDO in your VSE/SP 3.1 system, you should add the following parameter to DFHSITSP:

```
GRPLIST=VSELIST,
```

This group list includes the group VSESPG. Once you add the GRPLIST parameter to DFHSITSP, you should no longer edit the PPT, PCT, or TCT and create new macro definitions. At system startup, these changes would be over-written by the RDO definitions of VSESPG. To change the tables, therefore, use RDO only.

DEFINE TERMINAL Statements for Autoinstall Terminals

VSE/SP uses the DEFINE TERMINAL statements listed in Figure 119 on page 249 and Figure 120 on page 250 to define autoinstall terminals and terminal printers. All of these devices are assigned to group **VSETERM**.

The DEFINE TYPETERM statements that serve as models for local non-SNA terminals and terminal printers begin on page 252. The DEFINE TYPETERM statements for SNA terminals and terminal printers begin on page 258.

IBM 3178, 3277, 3278-2, 3279-S2A, 3279-2X, 3290

```
DEFINE TERMINAL(D901) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSE32782) AUTINSTNAME(VSE32782)
```

IBM 3278-3, 3279-S3A, 3279-3X

```
DEFINE TERMINAL(D902) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSE32783) AUTINSTNAME(VSE32783)
```

IBM 3278-4

```
DEFINE TERMINAL(D903) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSE32784) AUTINSTNAME(VSE32784)
```

IBM 3278-5

```
DEFINE TERMINAL(D904) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSE32785) AUTINSTNAME(VSE32785)
```

IBM 3179, 3279-S2B

```
DEFINE TERMINAL(D905) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSE32792) AUTINSTNAME(VSE32792)
```

IBM 3279-S3B

```
DEFINE TERMINAL(D906) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSE32793) AUTINSTNAME(VSE32793)
```

IBM 5555

```
DEFINE TERMINAL(D907) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSE5555) AUTINSTNAME(VSE5555)
```

IBM 3262-3/13, 3268-2, 3287-1/2/1C/2C, 3289-1/2, 5210-G01/G02

```
DEFINE TERMINAL(D908) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  OPERRSL(1) SPOOLPRTRSL(1)
  TYPETERM(VSEDSQP) AUTINSTNAME(VSEDSQP)
```

IBM 5553, 5557

```
DEFINE TERMINAL(D909) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  OPERRSL(1) SPOOLPRTRSL(1)
  TYPETERM(VSE5557) AUTINSTNAME(VSE5557)
```

IBM 3270

```
DEFINE TERMINAL(D910) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSE3278Q) AUTINSTNAME(VSE3278Q)
```

IBM 3270P with QUERY=YES

```
DEFINE TERMINAL(D911) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  OPERRSL(1) SPOOLPRTRSL(1)
  TYPETERM(VSEDSQPQ) AUTINSTNAME(VSEDSQPQ)
```

Figure 119. DEFINE TERMINAL Statements for Local Non-SNA Terminals and Terminal Printers

IBM 3178, 3277, 3278-2, 3279-S2A, 3279-2X, 3290

```
DEFINE TERMINAL(S001) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSELU2A) AUTINSTNAME(VSELU2A)
```

IBM 3278-3, 3279-S3A, 3279-3X

```
DEFINE TERMINAL(S002) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSELU2B) AUTINSTNAME(VSELU2B)
```

IBM 3278-4

```
DEFINE TERMINAL(S003) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSELU2C) AUTINSTNAME(VSELU2C)
```

IBM 3278-5

```
DEFINE TERMINAL(S004) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSELU2D) AUTINSTNAME(VSELU2D)
```

IBM 3179, 3279-S2B

```
DEFINE TERMINAL(S005) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSELU2E) AUTINSTNAME(VSELU2E)
```

IBM 3279-S3B

```
DEFINE TERMINAL(S006) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSELU2F) AUTINSTNAME(VSELU2F)
```

IBM 3279-S3G

```
DEFINE TERMINAL(S007) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSELU2G) AUTINSTNAME(VSELU2G)
```

IBM 5555

```
DEFINE TERMINAL(S008) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSELU2H) AUTINSTNAME(VSELU2H)
```

Figure 120 (Part 1 of 2). DEFINE TERMINAL Statements for Local and Remote SNA Terminals and Terminal Printers

IBM 3262-3/13, 3268-2, 5210-G01/G02

```
DEFINE TERMINAL(S009) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  OPERRSL(1) SPOOLPRTRSL(1)
  TYPETERM(VSELU3A) AUTINSTNAME(VSELU3A)
```

IBM 3287-1/2, 3289-1/2

```
DEFINE TERMINAL(S010) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  OPERRSL(1) SPOOLPRTRSL(1)
  TYPETERM(VSESCSPA) AUTINSTNAME(VSESCSPA)
```

IBM 3287-1C/2C

```
DEFINE TERMINAL(S011) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  OPERRSL(1) SPOOLPRTRSL(1)
  TYPETERM(VSESCSPB) AUTINSTNAME(VSESCSPB)
```

IBM 5553/57 LUTYPE3 Printer (Local)

```
DEFINE TERMINAL(S012) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  OPERRSL(1) SPOOLPRTRSL(1)
  TYPETERM(VSELU3B) AUTINSTNAME(VSELU3B)
```

IBM 5553/57 SCS Printer (Local and Remote)

```
DEFINE TERMINAL(S013) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  OPERRSL(1) SPOOLPRTRSL(1)
  TYPETERM(VSESCSPC) AUTINSTNAME(VSESCSPC)
```

IBM 5553/57 LUTYPE3 Printer (Remote)

```
DEFINE TERMINAL(S014) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  OPERRSL(1) SPOOLPRTRSL(1)
  TYPETERM(VSELU3C) AUTINSTNAME(VSELU3C)
```

LUTYPE2 Terminal with QUERY=YES

```
DEFINE TERMINAL(S015) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  TYPETERM(VSELU2Q) AUTINSTNAME(VSELU2Q)
```

LUTYPE3 Printer with QUERY=YES

```
DEFINE TERMINAL(S016) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  OPERRSL(1) SPOOLPRTRSL(1)
  TYPETERM(VSELU3Q) AUTINSTNAME(VSELU3Q)
```

LUTYPE1 SCS Printer with QUERY=YES

```
DEFINE TERMINAL(S017) GROUP(VSETERM) AUTINSTMODEL(ONLY)
  OPERRSL(1) SPOOLPRTRSL(1)
  TYPETERM(VSESCSPQ) AUTINSTNAME(VSESCSPQ)
```

Figure 120 (Part 2 of 2). DEFINE TERMINAL Statements for Local and Remote SNA Terminals and Terminal Printers

DEFINE TYPETERM Models for Non-SNA Devices

All of the DEFINE TYPETERM models in this section are for *local* non-SNA terminals and terminal printers.

IBM 3178, 3277, 3278-2, 3279-S2A, 3279-2X, 3290

```
DEFINE TYPETERM(VSE32782) GROUP(VSETYPE)
  DEVICE(3270) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(00,00)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(00,00) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDED DS(NO)
  HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(0) RECEIVESIZE(0)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGs(ALL) LOGONMSG(YES)
  BUILDCHAIN(NO) USERAREALEN(255) IOAREALEN(300,0)
  UCTRAN(YES)
```

IBM 3278-3, 3279-S3A, 3279-3X

```

DEFINE TYPETERM(VSE32783) GROUP(VSETYPE)
  DEVICE(3270) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(32,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(32,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDES(NO)
  HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(0) RECEIVESIZE(0)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGS(ALL) LOGONMSG(YES)
  BUILDCHAIN(NO) USERAREALEN(255) IOAREALEN(300,0)
  UCTRAN(YES)

```

IBM 3278-4

```

DEFINE TYPETERM(VSE32784) GROUP(VSETYPE)
  DEVICE(3270) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(43,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(43,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDES(NO)
  HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(0) RECEIVESIZE(0)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGS(ALL) LOGONMSG(YES)
  BUILDCHAIN(NO) USERAREALEN(255) IOAREALEN(300,0)
  UCTRAN(YES)

```

IBM 3278-5

```
DEFINE TYPETERM(VSE32785) GROUP(VSETYPE)
  DEVICE(3270) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(27,132)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(27,132) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDES(NO)
  HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(0) RECEIVESIZE(0)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGS(ALL) LOGONMSG(YES)
  BUILDCHAIN(NO) USERAREALEN(255) IOAREALEN(300,0)
  UCTRAN(YES)
```

IBM 3179, 3279-S2B

```
DEFINE TYPETERM(VSE32792) GROUP(VSETYPE)
  DEVICE(3270) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(YES)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDES(YES)
  HIGHLIGHT(YES) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(0) RECEIVESIZE(0)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGS(ALL) LOGONMSG(YES)
  BUILDCHAIN(NO) USERAREALEN(255) IOAREALEN(300,0)
  UCTRAN(YES)
```

IBM 3279-S3B

```

DEFINE TYPETERM(VSE32793) GROUP(VSETYPE)
  DEVICE(3270) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(32,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(32,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(YES)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDES(YES)
  HIGHLIGHT(YES) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(0) RECEIVESIZE(0)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGS(ALL) LOGONMSG(YES)
  BUILDCHAIN(NO) USERAREALEN(255) IOAREALEN(300,0)
  UCTRAN(YES)

```

IBM 5555

```

DEFINE TYPETERM(VSE5555) GROUP(VSETYPE)
  DEVICE(3270) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(NO)
  COPY(NO) DUALCASEKYBD(YES) EXTENDEDDES(YES)
  HIGHLIGHT(NO) KATAKANA(YES) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(YES) PROGSYMBOLS(YES) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(YES) SOSI(YES) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(0) RECEIVESIZE(0)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGS(ALL) LOGONMSG(YES)
  BUILDCHAIN(NO) USERAREALEN(255) IOAREALEN(300,0)
  UCTRAN(YES)

```

DEFINE TYPETERM Models for Non-SNA Devices

IBM 3262-3/13, 3268-2, 3287-1/2/1C/2C, 3289-1/2, 5210-G01/G02

```
DEFINE TYPETERM(VSEDS CP) GROUP(VSETYPE)
DEVICE(3270P) TERMMODEL(2)
SHIPPABLE(NO)
PAGESIZE(24,80) ALTPAGE(24,80)
FMHPARM(NO) OBOPERID(NO)
AUTOPAGE(YES)
DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
APLTEXT(NO) AUDIBLEALARM(NO) COLOR(NO)
COPY(NO) DUALCASEKYBD(NO) EXTENDED DS(NO)
HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
FORMFEED(YES) HORIZFORM(NO) VERTICALFORM(NO)
TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
CGCSGID(0,0)
ASCII(NO) SENDSIZE(0) RECEIVESIZE(256)
BRACKET(YES)
ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
ERRHIGHLIGHT(NO)
AUTOCONNECT(YES) ATI(YES) TTI(YES)
CREATESESS(YES) RELREQ(YES) DISCREQ(YES)
NEPCLASS(0) SIGNOFF(YES)
ROUTEDMSGs(ALL) LOGONMSG(NO)
BUILDCHAIN(NO) USERAREALEN(0) IOAREALEN(0,0)
SPRTRSL(1) OPERRSL(1)
UCTRAN(NO)
```

IBM 5553, 5557

```
DEFINE TYPETERM(VSE5557) GROUP(VSETYPE)
DEVICE(3270P) TERMMODEL(2)
SHIPPABLE(NO)
PAGESIZE(24,80) ALTPAGE(24,80)
FMHPARM(NO) OBOPERID(NO)
AUTOPAGE(YES)
DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
APLTEXT(NO) AUDIBLEALARM(NO) COLOR(NO)
COPY(NO) DUALCASEKYBD(NO) EXTENDED DS(YES)
HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
PRINTADAPTER(NO) PROGSYMBOLS(YES) VALIDATION(NO)
FORMFEED(YES) HORIZFORM(NO) VERTICALFORM(NO)
TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
OUTLINE(YES) SOSI(YES) BACKTRANS(NO)
CGCSGID(0,0)
ASCII(NO) SENDSIZE(0) RECEIVESIZE(256)
BRACKET(YES)
ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
ERRHIGHLIGHT(NO)
AUTOCONNECT(YES) ATI(YES) TTI(YES)
CREATESESS(YES) RELREQ(YES) DISCREQ(YES)
NEPCLASS(0) SIGNOFF(YES)
ROUTEDMSGs(ALL) LOGONMSG(NO)
BUILDCHAIN(NO) USERAREALEN(0) IOAREALEN(0,0)
SPRTRSL(1) OPERRSL(1)
UCTRAN(NO)
```

IBM 3270 with QUERY = YES

```

DEFINE TYPETERM(VSE3278Q) GROUP(VSETYPE)
  DEVICE(3270) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) APLKYBD(NO)
  AUDIBLEALARM(YES)
  COPY(NO) DUALCASEKYBD(NO)
  KATAKANA(NO) LIGHTPEN(NO)
  PRINTADAPTER(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(ALL)
  ASCII(NO) SENDSIZE(0) RECEIVESIZE(0)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCLASS(0) SIGNOFF(YES)
  ROUTEDMSGS(ALL) LOGONMSG(YES)
  BUILDCHAIN(NO) USERAREALEN(255) IOAREALEN(300,0)
  UCTRAN(YES)

```

IBM 3270P with QUERY = YES

```

DEFINE TYPETERM(VSEDSQP) GROUP(VSETYPE)
  DEVICE(3270P) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(YES)
  DEFSCREEN(24,80) APLKYBD(NO)
  AUDIBLEALARM(NO)
  COPY(NO) DUALCASEKYBD(NO)
  KATAKANA(NO) LIGHTPEN(NO)
  PRINTADAPTER(NO)
  FORMFEED(YES) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(ALL)
  ASCII(NO) SENDSIZE(0) RECEIVESIZE(256)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(YES) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(YES) DISCREQ(YES)
  NEPCLASS(0) SIGNOFF(YES)
  ROUTEDMSGS(ALL) LOGONMSG(NO)
  BUILDCHAIN(NO) USERAREALEN(0) IOAREALEN(0,0)
  UCTRAN(NO)

```

DEFINE TYPETERM Models for SNA Devices

Unless otherwise noted, the DEFINE TYPETERM models in this section are for both local and remote SNA terminals and terminal printers.

IBM 3178, 3277, 3278-2, 3279-S2A, 3279-2X, 3290

```
DEFINE TYPETERM(VSELU2A) GROUP(VSETYPE)
  DEVICE(LUTYPE2) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDEDS(NO)
  HILIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(1536) RECEIVESIZE(1024)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHILIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCLASS(0) SIGNOFF(YES)
  ROUTEDMSGS(ALL) LOGONMSG(YES)
  BUILDCHAIN(YES) USERAREALEN(255) IOAREALEN(1024,4096)
  UCTRAN(YES)
```

IBM 3278-3, 3279-S3A, 3279-3X

```

DEFINE TYPETERM(VSELU2B) GROUP(VSETYPE)
  DEVICE(LUTYPE2) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(32,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(32,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDEDS(NO)
  HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(1536) RECEIVESIZE(1024)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGs(ALL) LOGONMSG(YES)
  BUILDCHAIN(YES) USERAREALEN(255) IOAREALEN(1024,4096)
  UCTRAN(YES)

```

IBM 3278-4

```

DEFINE TYPETERM(VSELU2C) GROUP(VSETYPE)
  DEVICE(LUTYPE2) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(43,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(43,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDEDS(NO)
  HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(1536) RECEIVESIZE(1024)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGs(ALL) LOGONMSG(YES)
  BUILDCHAIN(YES) USERAREALEN(255) IOAREALEN(1024,4096)
  UCTRAN(YES)

```

IBM 3278-5

```
DEFINE TYPETERM(VSELU2D) GROUP(VSETYPE)
  DEVICE(LUTYPE2) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(27,132)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(27,132) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDEDS(NO)
  HILIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(1536) RECEIVESIZE(1024)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHILIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGs(ALL) LOGONMSG(YES)
  BUILDCHAIN(YES) USERAREALEN(255) IOAREALEN(1024,4096)
  UCTRAN(YES)
```

IBM 3179, 3279-S2B

```
DEFINE TYPETERM(VSELU2E) GROUP(VSETYPE)
  DEVICE(LUTYPE2) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(YES)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDEDS(YES)
  HILIGHT(YES) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(1536) RECEIVESIZE(1024)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHILIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGs(ALL) LOGONMSG(YES)
  BUILDCHAIN(YES) USERAREALEN(255) IOAREALEN(1024,4096)
  UCTRAN(YES)
```

IBM 3279-S3B

```

DEFINE TYPETERM(VSELU2F) GROUP(VSETYPE)
  DEVICE(LUTYPE2) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(32,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(32,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(YES)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDES(YES)
  HILIGHT(YES) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(1536) RECEIVESIZE(1024)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHILIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGGS(ALL) LOGONMSG(YES)
  BUILDCHAIN(YES) USERAREALEN(255) IOAREALEN(1024,4096)
  UCTRAN(YES)

```

IBM 3279-S3G

```

DEFINE TYPETERM(VSELU2G) GROUP(VSETYPE)
  DEVICE(LUTYPE2) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(32,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) ALTSCREEN(32,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(YES) COLOR(YES)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDES(YES)
  HILIGHT(YES) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(YES) VALIDATION(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(1536) RECEIVESIZE(1024)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHILIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGGS(ALL) LOGONMSG(YES)
  BUILDCHAIN(YES) USERAREALEN(255) IOAREALEN(1024,4096)
  UCTRAN(YES)

```

IBM 5555

```
DEFINE TYPETERM(VSELU2H) GROUP(VSETYPE)
DEVICE(LUTYPE2) TERMMODEL(2)
SHIPPABLE(NO)
PAGESIZE(24,80) ALTPAGE(24,80)
FMHPARM(NO) OBOPERID(NO)
AUTOPAGE(NO)
DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
APLTEXT(NO) AUDIBLEALARM(YES) COLOR(NO)
COPY(NO) DUALCASEKYBD(YES) EXTENDEDDEDS(YES)
HIGHLIGHT(NO) KATAKANA(YES) LIGHTPEN(NO)
MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
PRINTADAPTER(YES) PROGSYMBOLS(YES) VALIDATION(NO)
FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
OUTLINE(YES) SOSI(YES) BACKTRANS(NO)
CGCSGID(0,0)
ASCII(NO) SENDSIZE(1536) RECEIVESIZE(1024)
BRACKET(YES)
ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
ERRHIGHLIGHT(NO)
AUTOCONNECT(NO) ATI(YES) TTI(YES)
CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
NEPCLASS(0) SIGNOFF(YES)
ROUTEDMSGs(ALL) LOGONMSG(YES)
BUILDCHAIN(YES) USERAREALEN(255) IOAREALEN(1024,4096)
UCTRAN(YES)
```

IBM 3262-3/13, 3268-2, 5210-G01/G02

```
DEFINE TYPETERM(VSELU3A) GROUP(VSETYPE)
DEVICE(LUTYPE3) TERMMODEL(2)
SHIPPABLE(NO)
PAGESIZE(24,80) ALTPAGE(24,80)
FMHPARM(NO) OBOPERID(NO)
AUTOPAGE(YES)
DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
APLTEXT(NO) AUDIBLEALARM(NO) COLOR(NO)
COPY(NO) DUALCASEKYBD(NO) EXTENDEDDEDS(NO)
HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
FORMFEED(YES) HORIZFORM(NO) VERTICALFORM(NO)
TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
CGCSGID(0,0)
ASCII(NO) SENDSIZE(256) RECEIVESIZE(256)
BRACKET(YES)
ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
ERRHIGHLIGHT(NO)
AUTOCONNECT(YES) ATI(YES) TTI(YES)
CREATESESS(YES) RELREQ(NO) DISCREQ(NO)
NEPCLASS(0) SIGNOFF(YES)
ROUTEDMSGs(ALL) LOGONMSG(NO)
BUILDCHAIN(NO) USERAREALEN(0) IOAREALEN(0,0)
SPRTRSL(1) OPERRSL(1)
UCTRAN(NO)
```

IBM 3287-1/2, 3289-1/2

```

DEFINE TYPETERM(VSESCSPA) GROUP(VSETYPE)
  DEVICE(SCSPRINT) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(YES)
  DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(NO) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDEDS(NO)
  HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(YES) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(256) RECEIVESIZE(256)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(YES) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(YES) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGs(ALL) LOGONMSG(NO)
  BUILDCHAIN(NO) USERAREALEN(0) IOAREALEN(0,0)
  SPRTRSL(1) OPERRSL(1)
  UCTRAN(NO)

```

IBM 3287-1C/2C

```

DEFINE TYPETERM(VSESCSPB) GROUP(VSETYPE)
  DEVICE(SCSPRINT) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(YES)
  DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(NO) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDEDS(NO)
  HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(NO) VALIDATION(NO)
  FORMFEED(YES) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(NO) SOSI(NO) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(256) RECEIVESIZE(256)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(YES) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(YES) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGs(ALL) LOGONMSG(NO)
  BUILDCHAIN(NO) USERAREALEN(0) IOAREALEN(0,0)
  SPRTRSL(1) OPERRSL(1)
  UCTRAN(NO)

```

Local IBM 5553/57 LUTYPE3 Printer (Attached via 3274-X1A)

```
DEFINE TYPETERM(VSELU3B) GROUP(VSETYPE)
  DEVICE(LUTYPE3) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(YES)
  DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(NO) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDED DS(YES)
  HILIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(YES) VALIDATION(NO)
  FORMFEED(YES) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(YES) SOSI(YES) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(256) RECEIVESIZE(256)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHILIGHT(NO)
  AUTOCONNECT(YES) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(YES) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGs(ALL) LOGONMSG(NO)
  BUILDCHAIN(YES) USERAREALEN(0) IOAREALEN(0,0)
  SPRTRSL(1) OPERRSL(1)
  UCTRAN(NO)
```

Local IBM 5553/57 SCS Printer (Attached via 3274-X1A)

and

Remote IBM 5553/57 SCS Printer (Attached via 3274-X1C or as Single Station via SDLC Line)

```

DEFINE TYPETERM(VSESCSPC) GROUP(VSETYPE)
  DEVICE(SCSPRINT) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(YES)
  DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(NO) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDES(NO)
  HIGHLIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(YES) VALIDATION(NO)
  FORMFEED(YES) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(YES) SOSI(YES) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(256) RECEIVESIZE(256)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHIGHLIGHT(NO)
  AUTOCONNECT(YES) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(YES) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGs(ALL) LOGONMSG(NO)
  BUILDCHAIN(YES) USERAREALEN(0) IOAREALEN(0,0)
  SPRTRSL(1) OPERRSL(1)
  UCTRAN(NO)

```

Remote IBM 5553/57 LUTYPE3 Printer (Attached via 3274-X1C or as Single Station via SDLC Line)

```
DEFINE TYPETERM(VSELU3C) GROUP(VSETYPE)
  DEVICE(LUTYPE3) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80) ALTPAGE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(YES)
  DEFSCREEN(24,80) ALTSCREEN(24,80) APLKYBD(NO)
  APLTEXT(NO) AUDIBLEALARM(NO) COLOR(NO)
  COPY(NO) DUALCASEKYBD(NO) EXTENDEDDES(NO)
  HILIGHT(NO) KATAKANA(NO) LIGHTPEN(NO)
  MSRCONTROL (NO) OBFORMAT(NO) PARTITIONS(NO)
  PRINTADAPTER(NO) PROGSYMBOLS(YES) VALIDATION(NO)
  FORMFEED(YES) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(NO)
  OUTLINE(YES) SOSI(YES) BACKTRANS(NO)
  CGCSGID(0,0)
  ASCII(NO) SENDSIZE(256) RECEIVESIZE(256)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHILIGHT(NO)
  AUTOCONNECT(YES) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(YES) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSG(ALL) LOGONMSG(NO)
  BUILDCHAIN(YES) USERAREALEN(0) IOAREALEN(0,0)
  SPRTRSL(1) OPERRSL(1)
  UCTRAN(NO)
```

LUTYPE2 Terminals with QUERY = YES

```
DEFINE TYPETERM(VSELU2Q) GROUP(VSETYPE)
  DEVICE(LUTYPE2) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(NO)
  DEFSCREEN(24,80) APLKYBD(NO)
  AUDIBLEALARM(YES)
  COPY(NO) DUALCASEKYBD(NO)
  KATAKANA(NO) LIGHTPEN(NO)
  PRINTADAPTER(NO)
  FORMFEED(NO) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(ALL)
  ASCII(NO) SENDSIZE(1536) RECEIVESIZE(1024)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHILIGHT(NO)
  AUTOCONNECT(NO) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(NO) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSG(ALL) LOGONMSG(YES)
  BUILDCHAIN(NO) USERAREALEN(255) IOAREALEN(1024,4096)
  UCTRAN(YES)
```

LUTYPE3 Printer with QUERY = YES

```

DEFINE TYPETERM(VSELU3Q) GROUP(VSETYPE)
  DEVICE(LUTYPE3) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(YES)
  DEFSCREEN(24,80) APLKYBD(NO)
  AUDIBLEALARM(NO)
  COPY(NO) DUALCASEKYBD(NO)
  KATAKANA(NO) LIGHTPEN(NO)
  PRINTADAPTER(NO)
  FORMFEED(YES) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(ALL)
  ASCII(NO) SENDSIZE(256) RECEIVESIZE(256)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHILIGHT(NO)
  AUTOCONNECT(YES) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(YES) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGs(ALL) LOGONMSG(NO)
  BUILDCHAIN(NO) USERAREALEN(0) IOAREALEN(0,0)
  UCTRAN(NO)

```

LUTYPE1 SCS Printer with QUERY = YES

```

DEFINE TYPETERM(VSESCSPQ) GROUP(VSETYPE)
  DEVICE(SCSPRINT) TERMMODEL(2)
  SHIPPABLE(NO)
  PAGESIZE(24,80)
  FMHPARM(NO) OBOPERID(NO)
  AUTOPAGE(YES)
  DEFSCREEN(24,80) APLKYBD(NO)
  AUDIBLEALARM(NO)
  COPY(NO) DUALCASEKYBD(NO)
  KATAKANA(NO) LIGHTPEN(NO)
  PRINTADAPTER(NO)
  FORMFEED(YES) HORIZFORM(NO) VERTICALFORM(NO)
  TEXTKYBD(NO) TEXTPRINT(NO) QUERY(ALL)
  ASCII(NO) SENDSIZE(256) RECEIVESIZE(256)
  BRACKET(YES)
  ERRLASTLINE(NO) ERRINTENSIFY(NO) ERRCOLOR(NO)
  ERRHILIGHT(NO)
  AUTOCONNECT(YES) ATI(YES) TTI(YES)
  CREATESESS(YES) RELREQ(YES) DISCREQ(YES)
  NEPCCLASS(0) SIGNOFF(YES)
  ROUTEDMSGs(ALL) LOGONMSG(NO)
  BUILDCHAIN(NO) USERAREALEN(0) IOAREALEN(0,0)
  UCTRAN(NO)

```

Appendix I. CICS/DOS/VS Tables

CICS/DOS/VS Tables and Related Library Members

VSE/SP ships the CICS/DOS/VS tables listed in Figure 122 on page 270 as part of the pregenerated system. The tables contain the options that VSE/SP uses.

If you want to tailor a table to meet your needs, copy the related member from VSE/ICCF library 59 to another VSE/ICCF library that belongs to you, and add your entries to it. Comments are provided to indicate where your entries should be placed. Note that the VSE/ICCF library members have *COPY* statements for the VSE library members shown in Figure 122.

Always use the VSE/ICCF library members when you tailor options. Do not change the VSE library members.

The VSE/ICCF library members already contain job control statements. After changing a table, you only need to submit it for processing via the **SUBMIT** option of the VSE/ICCF library FULIST. Once the job finishes, shut down CICS/DOS/VS and then restart it in order to make the changes effective.

Notes:

1. Two FCTs are shipped so that you can establish a second CICS/DOS/VS partition with read only access to the VSE/SP files **IESTRFL** and **IESCNTL**. "CICS/DOS/VS Tables for a Second Partition" on page 54 lists the other tables that you must copy and change for a second CICS/DOS/VS partition.
2. You normally create a Terminal Control Table (TCT) using the **Hardware Configuration** dialog. The two TCTs provided in VSE/ICCF library 59 have sample entries that you can review, if you wish.
3. For security reasons, VSE/SP 3.1 replaces the standard CICS/DOS/VS Sign On Table (SNT) with a dummy SNT called **DFHSNT**. As shown in Figure 121 on page 270, this table only defines one user.

The user in DFHSNT has no authorization to change CICS/DOS/VS operating parameters. This is different from the standard SNT, which defines a master user who has full authorization to change CICS/DOS/VS. With DFHSNT, therefore, there is no danger that a VSE/SP user can access the master user function of CICS/DOS/VS.

```

*      PRINT NOGEN
      DFHSNT TYPE=INITIAL
      DFHSNT TYPE=ENTRY,
          OPNAME='DUMMY USER',
          USERID=DUMMY,
          PASSWRD=VSESP
      DFHSNT TYPE=FINAL
      END DFHSNTBA

```

Figure 121. SNT Shipped with VSE/SP

CICS/DOS/VS TABLE	VSE/SP LIBRARY			
	VSE/ICCF (Lib. 59)	PRD1.BASE (Standard CICS/DOS/VS)	IJSYSRS.SYSLIB VSE/SP Related	IWS Related
Destination Control Table (DCT)	DFHDCTSP	DFH\$DCT1 DFH\$DCTI	IESZDCT	— —
File Control Table (FCT)				
Main CICS/ICCF	DFHFCTSP	DFH\$FCT	IESZFCTP	IESWFCT
Additional CICS	DFHFCTSO	DFH\$FCT	IESZFCTO	—
Processing Program Table (PPT)	DFHPPTSP	DFH\$PPT DFH\$PPTI DFHSPPT	IESZPPT IESZPPTI IESZPPTL	IESWPPT IESWPPTL
Program Control Table (PCT)	DFHPCTSP	DFH\$PCT DFHSPCT	IESZPCT IESZPCTI	IESWPCT
Program List Table (PLT) Initiation Shutdown	DFHPLTPI DFHPLTSD	— —	IESZPLTI IESZPLTS	— —
System Initialization Table (SIT)	DFHSITSP	—	—	—
Temporary Storage Table (TST)	DFHTSTSP	—	IESZTST	—
Terminal Control Table (TCT) BTAM Terminals VTAM Terminals	DFHTCTVB DFHTCTVV	— —	— —	— —
Transaction List Table (XLT)	DFHXLTS	—	IESZTST IESZXLT	—

Figure 122. CICS/DOS/VS Tables Shipped with VSE/SP

Destination Control Table

```

* $$ JOB JNM=DFHDTSP,CLASS=A,DISP=D,NTFY=YES
* $$ LST CLASS=Q,DISP=H
// JOB DFHDTSP ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    TITLE 'DFHDTSP -- SUPPLIED WITH VSE/SP'
    PUNCH ' CATALOG DFHDTSP.OBJ REP=YES'
    DFHDT 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 'DFH$DCT', 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 'DFHDTSP' AND THERE IS NO NEED FOR
*   THE USER TO ALTER 'IESZDCT'.
*-----*
*
*   FOR THE CICS REPORT CONTROL FACILITY, THE FOLLOWING ARRANGEMENTS
*   HAVE BEEN MADE:
*
*   1) DESTINATION 'CSPA' IS AN INDIRECT DESTINATION TO 'IESN'.
*   THUS,MESSAGES FROM THE SPOOLER ARE PRINTED AFTER CICS
*   SHUTDOWN - THIS PREVENTS BUILDING UP MESSAGES
*   2) DESTINATION 'CSPW' IS AN INDIRECT DESTINATION TO 'IEP1'
*   WHICH WILL START A TRANSACTION THAT WRITES MESSAGES TO
*   THE CONSOLE (OR ANOTHER TERMINAL, IF THAT TERM.ID IS
*   INSERTED INSTEAD OF CNSL).
*   IF THE USER WANTS TO KEEP THE MESSAGES IN AN INTRAPARTITION
*   DATASET INSTEAD, CSPW SHOULD BE MADE INDIRECT TO 'IEP2'.
*   THIS WAY, THE MESSAGES CAN BE PRINTED USING THE CICS REPORT
*   CONTROL FACILITY (TRANSACTION CEMS).
*-----*
    SPACE 3

```

Figure 123 (Part 1 of 2). VSE/ICCF Library Member DFHDTSP

Destination Control Table

```

*-----*
*      THE CICS-SUPPLIED SDSCI ENTRY FOLLOWS THIS BOX      *
*-----*
*      COPY  DFH$DCT1      - SDSCI ENTRY                    *
*-----*
*      LOCAL ENTRIES FOR TYPE=SDSCI SHOULD BE PLACED BELOW THIS BOX  *
*-----*
*      SPACE 3
*-----*
*      LOCAL ENTRIES FOR TYPE=SDSCI SHOULD BE PLACED ABOVE THIS BOX  *
*-----*
IESN      DFHDCT TYPE=EXTRA,      ALL THE MESSAGES COME THROUGH HERE  *
          DESTID=IESN,          'IESM' POINTS TO HERE                *
          RSL=PUBLIC,           LET ANY TRANSACTION WRITE HERE      *
          DSCNAME=MSGUSR        POINT TO THE CICS-SUPPLIED DEST      *
          COPY  IESZDCT      - CICS-REQUIRED AND VSE-SP REQUIRED DESTS
          COPY  DFH$DCTI      - ICCF ENTRIES
*-----*
*      THE FOLLOWING ENTRY IS REQUIRED FOR CICS RMF.          *
*      ACTION MESSAGES CONCERNING CICS DRIVEN TERMINAL PRINTERS  *
*      WILL BE WRITTEN TO CSPW.                               *
*      NOTE:- IF YOU WANT THESE MESSAGES TO APPEAR AT THE SYSTEM CONSOLE  *
*      (OR ANOTHER TERMINAL), USE 'INDDEST=IEP1'.           *
*      - CHANGE TO 'INDDEST=IEP2' IF YOU WANT TO KEEP THE MESSAGES IN  *
*      A FILE FROM WHERE THEY CAN BE PRINTED USING CEMS      *
*-----*
CSPW      DFHDCT TYPE=INDIRECT,
          DESTID=CSPW,
          INDDEST=IEP1
*-----*
*      THE FOLLOWING ENTRY CAUSES MESSAGES WRITTEN TO THAT DESTINATION *
*      TO APPEAR AT THE SYSTEM CONSOLE.  CHANGE 'CNSL' TO ANOTHER  *
*      TERMINAL IF YOU WANT THE MESSAGES TO APPEAR SOMEWHERE ELSE  *
*-----*
IEP1      DFHDCT TYPE=INTRA,      FORWARD ALL MESSAGES DIRECTLY TO  *
          DESTID=IEP1,          A TERMINAL SO USERS CAN LOOK AT THEM  *
          DESTFAC=(TERMINAL,CNSL), WRITE TO THE SYSTEM CONSOLE      *
          RSL=PUBLIC,
          TRANSID=IEWR,
          TRIGLEV=1
IEP2      DFHDCT TYPE=INTRA,      KEEP ALL MSGS IN A FILE SO ONE  *
          DESTID=IEP2,          CAN PRINT THEM USING CEMS          *
          DESTFAC=FILE,
          RSL=PUBLIC
*-----*
*      OTHER LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX      *
*-----*
*      SPACE 3
*-----*
*      OTHER LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX      *
*-----*
          DFHDCT TYPE=FINAL
          END  DFHDCTBA
/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 123 (Part 2 of 2). VSE/ICCF Library Member DFHDCTSP

CATALOG IESZDCT.A			REPLACE=YES
SPACE 3			

* FOLLOWING ARE THE DCT ENTRIES REQUIRED FOR VSE/SP *			

IESL	DFHDCT	TYPE=INTRA, DESTID=IESL, DESTFAC=FILE, RSL=PUBLIC, TRANSID=IESX, TRIGLEV=1	VSE/SP TRANSACTIONS LOG MESSAGES HERE* THE NAME OF THE LOG IS 'IESL' IT DOES NOT REQUIRE A TERMINAL NO RESOURCE LEVEL CHECK INITIATE TRANSACTION 'IESX' EACH TIME THERE'S A MESSAGE
IESM	DFHDCT	TYPE=INDIRECT, DESTID=IESM, INDDEST=IESN	OUTPUT FROM PROGRAM 'IESLQBP' DEFINE THE DESTINATION ID SEND IT TO THE VSE/SP OUTPUT QUEUE
SPACE 3			

* THE FOLLOWING ENTRIES REPLACE THE ENTRIES DEFINED IN 'DFHSDCT' *			

CADL	DFHDCT	TYPE=INDIRECT, DESTID=CADL, INDDEST=IESL	CEDA COMMAND LOGGING COMES HERE DEFINE THE DESTINATION ID SEND IT THROUGH THE VSE/SP QUEUE
CPLI	DFHDCT	TYPE=INDIRECT, DESTID=CPLI, INDDEST=IESL, RSL=1	PL/I SYSPRT OUTPUT DEFINE THE DESTINATION ID SEND IT THROUGH THE VSE/SP QUEUE
CSSL	DFHDCT	TYPE=INDIRECT, DESTID=CSSL, INDDEST=IESM -->	STATISTICS LOG OUTPUT DEFINE THE DESTINATION ID BYPASS PROGRAM 'IESLQBP'
CPLD	DFHDCT	TYPE=INDIRECT, DESTID=CPLD, INDDEST=IESL	PL/I DUMPS DEFINE THE DESTINATION ID SEND IT THROUGH THE VSE/SP QUEUE
CSCS	DFHDCT	TYPE=INDIRECT, DESTID=CSCS, INDDEST=IESL	MESSAGES FROM SIGN OFF PROGRAM DEFINE THE DESTINATION ID SEND IT THROUGH THE VSE/SP QUEUE
CSDL	DFHDCT	TYPE=INDIRECT, DESTID=CSDL, INDDEST=IESL	CEDA COMMAND LOGGING COMES HERE DEFINE THE DESTINATION ID SEND IT THROUGH THE VSE/SP QUEUE
CSML	DFHDCT	TYPE=INDIRECT, DESTID=CSML, INDDEST=IESL	MESSAGES FROM SIGN ON PROGRAM DEFINE THE DESTINATION ID SEND IT THROUGH THE VSE/SP QUEUE
CSMT	DFHDCT	TYPE=INDIRECT, DESTID=CSMT, INDDEST=IESL	TERMINAL AND TRANSACTION ERRORS DEFINE THE DESTINATION ID SEND IT THROUGH THE VSE/SP QUEUE
CSTL	DFHDCT	TYPE=INDIRECT, DESTID=CSTL, INDDEST=IESL	TERMINAL ERROR LOG DEFINE THE DESTINATION ID SEND IT THROUGH THE VSE/SP QUEUE

Figure 124 (Part 1 of 2). VSE Library Member IESZDCT

Destination Control Table

* THE PREVIOUS ENTRIES REPLACE THE ENTRIES DEFINED IN 'DFH\$DCT' *			

* THE FOLLOWING ENTRIES ARE REQUIRED FOR THE CICS SPOOLER *			

CSPA	DFHDCT	TYPE=INDIRECT,	CICS SPOOLER DESTINATION
		DESTID=CSPA,	DEFINE THE DESTINATION ID
		INDDEST=IESN	ROUTE IT TO CICS FINAL DEST
	SPACE 3		

* END OF VSE/SP DCT ENTRIES *			

	SPACE 3		

Figure 124 (Part 2 of 2). VSE Library Member IESZDCT

File Control Tables

FCT for the Main CICS/DOS/VS Partition

```

* $$ JOB JNM=DFHFCTSP,CLASS=A,DIST=D,NTFY=YES
* $$ LST CLASS=Q,DIST=H
// JOB DFHFCTSP ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    TITLE 'DFHFCTSP -- SUPPLIED WITH VSE/SP'
    PUNCH ' CATALOG DFHFCTSP.OBJ REP=YES'
    DFHFCT TYPE=INITIAL,SUFFIX=SP
    SPACE 3

*-----*
*      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 DFH$FCT          - ENTRY FOR RDO CSD DATASET
    SPACE 3
    COPY IESZFCTP        - DATASET ENTRIES FOR VSE/SP -- ADMINISTRATIVE
    SPACE 3

*-----*
*      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
    SPACE 3

*-----*
*      LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX                  *
*-----*
    SPACE 3

*-----*
*      LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX                  *
*-----*
    SPACE 3
    DFHFCT TYPE=FINAL
    END    DFHFCTBA

/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 125. VSE/ICCF Library Member DFHFCTSP

```

CATALOG IESZFCTP.A                                REPLACE=YES
      SPACE 3
*-----*
*
*      FOLLOWING ARE THE FCT ENTRIES REQUIRED FOR VSE/SP
*
*      THIS COPY BOOK IS FOR USE IN THE ADMINISTRATIVE PARTITION
*
*-----*
      SPACE 3
*-----*
*      ONLINE PROBLEM DETERMINATION INCIDENT FILE
*-----*
IESPRB  DFHFCT TYPE=DATASET,DATASET=IESPRB,
          ACCMETH=VSAM,
          SERVREQ=(READ,UPDATE,ADD),          READ/WRITE ACCESS
          RECFORM=(VARIABLE,UNBLOCKED),
          FILSTAT=(ENABLED,OPENED),
          BUFNI=4,
          BUFND=3,
          RSL=PUBLIC,LSRPOOL=NO,
          STRNO=2,
          LOG=NO
      SPACE 3
*-----*
*      MESSAGE FILE FOR VSE/SP CICS PROGRAMS
*-----*
IESTRFL DFHFCT TYPE=DATASET,DATASET=IESTRFL,
          ACCMETH=VSAM,
          SERVREQ=(ADD,DELETE,UPDATE),          READ/WRITE ACCESS
          RECFORM=(VARIABLE,UNBLOCKED),
          FILSTAT=(ENABLED,OPENED),
          RSL=PUBLIC,
          STRNO=2,
          LOG=NO
      SPACE 3
*-----*
*      CONTROL FILE FOR VSE/SP SYSTEM RECORDS
*-----*
IESCNTL DFHFCT TYPE=DATASET,DATASET=IESCNTL,
          ACCMETH=VSAM,
          SERVREQ=(ADD,DELETE,UPDATE,BROWSE),  READ/WRITE ACCESS
          RECFORM=(VARIABLE,UNBLOCKED),
          FILSTAT=(ENABLED,OPENED),
          BUFNI=4,
          BUFND=3,
          LSRPOOL=NO,
          RSL=PUBLIC,
          STRNO=2,
          LOG=NO

```

Figure 126 (Part 1 of 2). VSE Library Member IESZFCTP


```
*-----*
*          MESSAGE ROUTING FILE FOR VSE/SP PROGRAMS          *
*-----*
IESROUT  DFHFCT TYPE=DATASET,DATASET=IESROUT,
          ACCMETH=VSAM,
          SERVREQ=(READ,UPDATE,ADD,BROWSE,DELETE),
          RECFORM=(VARIABLE,UNBLOCKED),
          FILSTAT=(ENABLED,OPENED),
          RSL=PUBLIC,
          STRNO=5,
          LOG=NO
*-----*
*          END OF VSE/SP FCT ENTRIES                          *
*-----*
          SPACE 3
```

Figure 126 (Part 2 of 2). VSE Library Member IESZFCTP

FCT for Other CICS/DOS/VS Partitions

```

* $$ JOB JNM=DFHFCTSO,CLASS=A,DIST=D,NTFY=YES
* $$ LST CLASS=Q,DIST=H
// JOB DFHFCTSO ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    TITLE 'DFHFCTSO -- SUPPLIED WITH VSE/SP'
    PUNCH ' CATALOG DFHFCTSO.OBJ REP=YES'
    DFHFCT TYPE=INITIAL,SUFFIX=SO
    SPACE 3

*-----*
*      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 DFH$FCT          - ENTRY FOR RDO CSD DATASET
    SPACE 3
    COPY IESZFCTO -- DATASET ENTRIES FOR VSE/SP -- OTHER PARTITION
    SPACE 3

*-----*
*      IF YOU WANT TO ADD THE DATASET WHICH IS REQUIRED FOR CHANGING    *
*      THE PASSWORD FOR TYPE 3 USERS FROM THE NON-ICCF PARTITION,      *
*      THEN REMOVE THE * IN COLUMN 1 OF THE LINE FOLLOWING THIS        *
*      BOX. YOU SHOULD ALSO MAKE SURE THE VALUE SPECIFIED FOR          *
*      SYSIDNT IS THE SAME AS THE VALUE SPECIFIED IN YOUR TCT          *
*      TO IDENTIFY THE PARTITION WHERE THE MAIN INTERACTIVE            *
*      INTERFACE IS RUNNING.                                           *
*-----*
*      DFHFCT TYPE=REMOTE,DATASET=IESRCTL,RMTNAME=IESCNTL,
*      RSL=PUBLIC,SYSIDNT=MAIN,
*      KEYLEN=12
*-----*
    SPACE 3

*-----*
*      LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX                  *
*-----*
    SPACE 3

*-----*
*      LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX                  *
*-----*
    SPACE 3
    DFHFCT TYPE=FINAL
    END    DFHFCTBA

/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 127. VSE/ICCF Library Member DFHFCTSO

```

CATALOG IESZFCTO.A                                REPLACE=YES
      SPACE 3
*-----*
*
*      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.
*-----*
      SPACE 3
*-----*
*      ONLINE PROBLEM DETERMINATION INCIDENT FILE
*-----*
IESPRB  DFHFCT TYPE=DATASET,DATASET=IESPRB,
          ACCMETH=VSAM,
          SERVREQ=(READ,UPDATE,ADD),          READ/WRITE ACCESS
          RECFORM=(VARIABLE,UNBLOCKED),
          FILSTAT=(ENABLED,OPENED),
          BUFNI=4,
          BUFND=3,
          RSL=PUBLIC,LSRPOOL=NO,
          STRNO=2,
          LOG=NO
      SPACE 3
*-----*
*      MESSAGE FILE FOR VSE/SP CICS PROGRAMS
*-----*
IESTRFL DFHFCT TYPE=DATASET,DATASET=IESTRFL,
          ACCMETH=VSAM,
          SERVREQ=(READ),          READ ONLY ACCESS
          RECFORM=(VARIABLE,UNBLOCKED),
          FILSTAT=(ENABLED,OPENED),
          RSL=PUBLIC,
          STRNO=2,
          LOG=NO
      SPACE 3
*-----*
*      CONTROL FILE FOR VSE/SP SYSTEM RECORDS
*-----*
IESCNTL DFHFCT TYPE=DATASET,DATASET=IESCNTL,
          ACCMETH=VSAM,
          SERVREQ=(READ,BROWSE),          READ ONLY ACCESS
          RECFORM=(VARIABLE,UNBLOCKED),
          FILSTAT=(ENABLED,OPENED),
          BUFNI=4,
          BUFND=3,
          LSRPOOL=NO,
          RSL=PUBLIC,
          STRNO=2,
          LOG=NO

```

Figure 128 (Part 1 of 2). VSE Library Member IESZFCTO

```

*-----*
*          MESSAGE ROUTING FILE FOR VSE/SP PROGRAMS          *
*-----*
IESROUT  DFHFCT TYPE=DATASET,DATASET=IESROUT,
          ACCMETH=VSAM,
          SERVREQ=( READ,UPDATE,ADD,BROWSE,DELETE) ,
          RECFORM=( VARIABLE,UNBLOCKED) ,
          FILSTAT=( ENABLED,OPENED) ,
          RSL=PUBLIC,
          STRNO=5,
          LOG=NO
*-----*
*          END OF VSE/SP FCT ENTRIES                          *
*-----*
SPACE 3

```

Figure 128 (Part 2 of 2). VSE Library Member IESZFCTO

IWS Related VSE Library Member for Main and Additional CICS/DOS/VS

```

CATALOG IESWFCT.A                      REPLACE=YES
SPACE 3
*-----*
*          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=( READ,UPDATE,ADD,BROWSE,DELETE) ,
          FILSTAT=( ENABLED,OPENED) ,
          BUFND=11,
          BUFNI=13,
          STRNO=10,
          RSL=PUBLIC,
          LOG=NO
*-----*
SPACE 3

```

Figure 129. VSE Library Member IESWFCT

Processing Program Table

```

* $$ JOB JNM=DFHPPTSP,CLASS=A,DIST=D,NTFY=YES
* $$ LST CLASS=Q,DIST=H
// JOB DFHPPTSP ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    TITLE 'DFHPPTSP -- SUPPLIED WITH VSE/SP'
    PUNCH ' CATALOG DFHPPTSP.OBJ REP=YES'
    DFHPPT TYPE=INITIAL,SUFFIX=SP
    COPY IESZPPT          - VSE/SP CICS/VS PROGRAMS
    COPY IESZPPTI         - VSE/SP CICS/VS PROGRAMS
*                          (ICCF RELATED ENTRIES ONLY)
    COPY IESZPPTL         - VSE/SP MAPSETS AND OTHERS
    COPY IESWPPT          - INTELLIGENT WORK STATION PROGRAMS
    COPY IESWPPTL         - INTELLIGENT WORK STATION MAPSETS
    COPY DFH$PPT          - BASIC CICS/VS FACILITIES
    COPY DFH$PPTI         - ICCF PPT ENTRIES
    COPY DFHPSPT         - CICS SPOOLER ENTRIES
    SPACE 3
*-----*
*          LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX          *
*-----*
    SPACE 3
*-----*
*          LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX          *
*-----*
    SPACE 3
    DFHPPT TYPE=FINAL
    END    DFHPPTBA
/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 130. VSE/ICCF Library Member DFHPPTSP

Processing Program Table

CATALOG IESZPPT.A	REPLACE=YES
SPACE 3	

* FOLLOWING ARE THE PPT ENTRIES REQUIRED FOR VSE/SP	*
* IN ANY CICS PARTITION	*
* NOTE THAT THIS IS NOT A COMPLETE LIST -- THE REMAINDER ARE	*
* COPIED IN MEMBER 'IESZPPTL' AND 'IESZPPTI'	*

SPACE 3	

DFHPPT TYPE=ENTRY,PROGRAM=DFHPLTPI, POST INITIALIZATION LIST TABLE	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=DFHPLTSD, SHUT DOWN LIST TABLE	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=DFHSNT, CICS SIGN ON TABLE	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=DFHXLTSF, TRANSACTION LIST TABLE - SHUTDOWN	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESBQP2, BATCH QUEUE FULIST PROCESSOR	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESBQUP, BATCH QUEUE INITIAL PROCESSOR	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESBQUR, BATCH QUEUE PROCESSOR RECOVERY	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESCFDA, CONTROL FILE ACCESS PROGRAM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESCICIN, CICS INITIALIZATION	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESCICS, START CICS TRANSACTION CEMS/CEOS	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESCICSD, CICS TERMINATION	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESDUSR, DISPLAY USERS	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESFPPEP, FUNCTION PROCESSOR END PROGRAM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESFPIP, FUNCTION PROCESSOR INITIATE PGM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESGPWD, GET PWD FOR DS	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESGUID, GET UID FOR DS	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESIES01, SIGN ON PROGRAM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESIES5, SIGN OFF PROGRAM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESIMSG, ICCF MESSAGE DELIVERY	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESLCASE, SET OFF THE 'UCTRAN' FEATURE	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESLQBP, LOG QUEUE BUILD PROGRAM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESLQDP, LOG QUEUE DISPLAY PROGRAM	*
RSL=PUBLIC	

Figure 131 (Part 1 of 2). VSE Library Member IESZPPT

DFHPPT	TYPE=ENTRY,PROGRAM=IESMDP, RSL=PUBLIC	MESSAGE DELIVERY PROGRAM	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESMRFA, RSL=PUBLIC	MESSAGE FILE ACCESS PROGRAM	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESMRTP, RSL=PUBLIC	MESSAGE RETRIEVAL PROGRAM	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESNEWS, RSL=PUBLIC	NEWS REPORTER/RECORDER	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESOPIA, RSL=PUBLIC	O-L PROBDT - ABEND EXIT	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESOPADD, RSL=PUBLIC	O-L PROBDT - FILE MANAGER	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESOPDC, RSL=PUBLIC	O-L PROBDT - DATA COLLECTION	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESOPERR, RSL=PUBLIC	O-L PROBDT - FILE MANAGER	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESOPFE, RSL=PUBLIC	O-L PROBDT - DISPLAY FRONT-END	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESOPID, RSL=PUBLIC	O-L PROBDT - INCIDENT DISPLAY	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESOPINI, RSL=PUBLIC	O-L PROBDT - FILE MANAGER	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESOPLRP, RSL=PUBLIC	O-L PROBDT - FILE MANAGER (LRP)	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESOPRO, RSL=PUBLIC	O-L PROBDT - FILE MANAGER	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESRESET, RSL=PUBLIC	VM RESET TERMINAL PROGRAM	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESRQRC, RSL=PUBLIC	REQUEST RECOVERY FOR DS	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESRTEP, RSL=PUBLIC	MESSAGE NOTIFY ROUTING PROGRAM	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESSCRH, RSL=PUBLIC	HELPER FOR THE SCREEN I/O MODULE	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESSCRIO, RSL=PUBLIC	SCREEN I/O MODULE	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESSVL, RSL=PUBLIC	VSE/SP / CICS SYSTEM VECTOR LIST	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESSYSL, RSL=PUBLIC	DISPLAY STORAGE LAYOUT	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESTUP, RSL=PUBLIC	TUTORIAL PROGRAM	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESUCASE, RSL=PUBLIC	SET ON THE 'UCTRAN' FEATURE	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESWRCO, RSL=PUBLIC	WRITE IEPI (CSPW) MSGS TO CONSOLE	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESXDA, RSL=PUBLIC	DISPLAY ACTIVE PARTITIONS	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESXPWD, RSL=PUBLIC	PASSWORD CHANGE	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESXSIO, RSL=PUBLIC	DISPLAY SIO STATS	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESXSYN, RSL=PUBLIC	SYNONYM TABLE MAINTENANCE	*
DFHPPT	TYPE=ENTRY,PROGRAM=IESZATDX, RSL=PUBLIC	AUTO INSTALL TERMINAL USER EXIT	*

*	END OF VSE/SP PPT MEMBER		*

SPACE 3			

Figure 131 (Part 2 of 2). VSE Library Member IESZPPT

Processing Program Table

CATALOG IESZPPTI.A	REPLACE=YES
SPACE 3	

* FOLLOWING ARE THE ICCF RELATED PPT ENTRIES REQUIRED FOR	*
* VSE/SP WHEN RUNNING IN A PARTITION WITH ICCF	*
* THIS COPYBOOK IS NOT NEEDED IN CICS PARTITIONS W/O ICCF	*
* NOTE THAT THIS IS NOT A COMPLETE LIST -- THE REMAINDER ARE	*
* COPIED IN MEMBER 'IESZPPTL' AND 'IESZPPT'	*

SPACE 3	

DFHPPT TYPE=ENTRY,PROGRAM=IESAPT, APPLICATION PROFILE TABLE	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESCOMM, XPCCB COMMUNICATION PROGRAM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESHTAB, ICCF MESSAGE HASH TABLE	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESICCF, VSE/SP / ICCF INTERFACE	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESICCF, ICCF CALL FORMATTER	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESLIBA, ADD PROCESSOR	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESLIBC, COMPILE OPTION PROCESSOR	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESLIBD, LIBRARY PROCESSOR DISPLAY	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESLIBE, LIBRARY PROCESSOR EXIT	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESLIBI, LIBRARY PROCESSOR INITIATION	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESLIBM, MULTIPLE OPTION PROCESSOR	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESLIBR, LIBRARY PROCESSOR RECOVERY	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESVFE, VSAM MENU PGM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESVFESH, VSAM SHOW DATA PGM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESVFECF, V CAT PROC PGM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESVFEB, V Q L BLDR PGM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESVFED, V DEFINE PGM	*
RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=IESVFEFP, V PROCESSOR PGM	*
RSL=PUBLIC	

Figure 132 (Part 1 of 2). VSE Library Member IESZPPTI

DFHPPT	TYPE=ENTRY,PROGRAM=IESVFELD,	VSAM STUFF	*
	RSL=PUBLIC		
DFHPPT	TYPE=ENTRY,PROGRAM=IESVFER,	VSAM RECVRY PGM	*
	RSL=PUBLIC		
DFHPPT	TYPE=ENTRY,PROGRAM=IESVTOCF,	LVTOC PGM	*
	RSL=PUBLIC		
DFHPPT	TYPE=ENTRY,PROGRAM=IESVTOCR,	LVTOC RCVRY PGM	*
	RSL=PUBLIC		
DFHPPT	TYPE=ENTRY,PROGRAM=IESXAPM,	APPLICATION PROFILE MAINT	*
	RSL=PUBLIC		
DFHPPT	TYPE=ENTRY,PROGRAM=IESXSPM,	SELECTION PANEL MAINTENANCE	*
	RSL=PUBLIC		
DFHPPT	TYPE=ENTRY,PROGRAM=IESXUPM,	USER PROFILE MAINTENANCE	*
	RSL=PUBLIC		
*	-----		*
*	END OF VSE/SP ICCF RELATED PPT ENTRIES		*
*	-----		*
	SPACE 3		

Figure 132 (Part 2 of 2). VSE Library Member IESZPPTI

Processing Program Table

```
CATALOG IESZPPTL.A                                REPLACE=YES
      SPACE 3
*-----*
*
*      FOLLOWING ARE THE PPT ENTRIES REQUIRED FOR VSE/SP
*      NOTE THAT THIS IS NOT A COMPLETE LIST -- THE REMAINDER ARE
*      COPIED IN MEMBER 'IESZPPT'
*-----*
      SPACE 3
*-----*
DFHPPT TYPE=ENTRY,MAPSET=IESEADA, MAP SET -- XSPM AND XAPM
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEADM, MAP SET -- IESFPIP, IESNEWS
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEADS, MAP SET -- XSPM AND XAPM
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEBQU, MAP SET -- BATCH QUEUE PROCESSORS
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESECPW, MAP SET -- PASSWORD CHANGE
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEDA,  MAP SET -- DISPLAY ACTIVE
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEDUM, MAP SET -- DISPLAY USERS
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEFRS, MAP SET -- VSAM VOLUME FREE SPACE
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEIMG, MAP SET -- ICCF MESSAGE DISPLAY
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESELIB, MAP SET -- LIBRARY PROCESSORS
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESELOGO, USER TAILORABLE LOGO MODULE
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESELQM, MAP SET -- DISPLAY LOQ QUEUE MSGS
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESELVT, MAP SET -- LVTOC
      RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEOPM, MAP SET -- ONLINE PROBLEM DETERM
      RSL=PUBLIC
```

Figure 133 (Part 1 of 2). VSE Library Member IESZPPTL

```

DFHPPT TYPE=ENTRY,MAPSET=IESESER, MAP SET -- DELIVERY OF HELP TEXT
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESESIO, MAP SET -- XSIO
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IEESL, MAP SET -- DISPLAY STORAGE LAYOUT
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESESOP, MAP SET -- SIGN ON
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IEESYN, MAP SET -- SYNONYM TABLE MAINT
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESETUT, MAP SET -- TUTORIAL
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEUPM, MAP SET -- USER PROFILE MAINT
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEVCF, MAP SET -- VSAM CATALOG & FILE
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEVCT, MAP SET -- VSAM CATALOG
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEVFC, MAP SET -- VSAM CATALOG LIST
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEVFD, MAP SET -- VSAM DEFINE
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEVFE, MAP SET -- VSAM MENU
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEVFP, MAP SET -- VSAM PROCES
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEVFT, MAP SET -- VSAM PROCES
RSL=PUBLIC
DFHPPT TYPE=ENTRY,MAPSET=IESEVfy, MAP SET -- VSAM PROCES
RSL=PUBLIC
DFHPPT TYPE=ENTRY,PROGRAM=IESMRE, EMERGENCY MESSAGES FOR IESMRTP
RSL=PUBLIC
*-----*
*                END OF VSE/SP PPTL MEMBER                *
*-----*
SPACE 3

```

Figure 133 (Part 2 of 2). VSE Library Member IESZPPTL

Processing Program Table

CATALOG IESWPPT.A	REPLACE=YES
SPACE 3	

* 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'.	*

SPACE 3	

DFHPPT TYPE=ENTRY,PROGRAM=CFTRIWS,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWERASE,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWCABND,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWCDRO,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWCINIT,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWCPMSG,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWCURO,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWFMGR,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWFMGR2,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWFMGR4,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWFMGR7,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMBRO,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMCHNG,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMCOPY,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMPRIN,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMRXA1,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS1,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS2,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS3,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS4,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS5,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS6,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMRXS7,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMSHAR,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWMTSQU,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWNTFY,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWPATOE,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWPETOA,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWPCCOM,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWPMSKJ,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWPMSKO,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWPMSCH,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWPMSTA,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWPMSTUS,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWTUID,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWWEXE,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWWMSUS,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWWHPUS,RSL=PUBLIC	
DFHPPT TYPE=ENTRY,PROGRAM=INWWPNUS,RSL=PUBLIC	

* END OF INTELLIGENT WORK STATION PPT MEMBER	*

SPACE 3	

Figure 134. VSE Library Member IESWPPT

```
CATALOG IESWPPTL.A                                REPLACE=YES
      SPACE 3
*-----*
*
*      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'.                    *
*-----*
      SPACE 1
DFHPPT TYPE=ENTRY,MAPSET=INWEXM1,RSL=PUBLIC MAP SET IWS MOVE
DFHPPT TYPE=ENTRY,MAPSET=INWEBMS,RSL=PUBLIC MAP SET IWS BROWSE
      SPACE 1
*-----*
*      END OF INTELLIGENT WORK STATION PPTL MEMBER      *
*-----*
      SPACE 3
```

Figure 135. VSE Library Member IESWPPTL

Program Control Table

The PCT member in the VSE/SP library contains entries that VSE/SP requires and entries that VSE/ICCF requires.

```

* $$ JOB JNM=DFHPCTSP,CLASS=A,DIST=D,NTFY=YES
* $$ LST CLASS=Q,DIST=H
// JOB DFHPCTSP ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    TITLE 'DFHPCTSP -- SUPPLIED WITH VSE/SP'
    PUNCH ' CATALOG DFHPCTSP.OBJ REP=YES'
    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
*-----*
    SPACE 3
    COPY IESZPCT      -- VSE/SP PCT ENTRIES MUST BE BEFORE CICS'S
    COPY IESZPCTI     -- VSE/SP PCT ICCF RELATED ENTRIES
    COPY IESWPCT      -- INTELLIGENT WORK STATION SUPPORT
    COPY DFH$PCT      -- BASIC CICS/VS FACILITIES
    COPY DFHPSPCT     -- CICS SPOOLER ENTRIES
*-----*
*      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.
*-----*
    SPACE 3
*-----*
*      LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX
*-----*
    SPACE 3
*-----*
*      LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX
*-----*
    SPACE 3
    DFHPCT TYPE=FINAL
    END    DFHPCTBA
/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 136. VSE/ICCF Library Member DFHPCTSP

CATALOG IESZPCT.A		REPLACE=YES
SPACE 3		

* FOLLOWING ARE THE PCT ENTRIES REQUIRED FOR VSE/SP *		
* RUNNING IN ANY CICS PARTITION *		

IECC	DFHPCT TYPE=ENTRY,TRANSID=IECC,PROGRAM=IESCICS,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IEDA	DFHPCT TYPE=ENTRY,TRANSID=IEDA,PROGRAM=IESXDA,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IEDS	DFHPCT TYPE=ENTRY,TRANSID=IEDS,PROGRAM=IESXSIO,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IEEP	DFHPCT TYPE=ENTRY,TRANSID=IEEP,PROGRAM=IESFPEP,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IEGM	DFHPCT TYPE=ENTRY,TRANSID=IEGM,PROGRAM=IESIES01,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=99,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1	*
IELA	DFHPCT TYPE=ENTRY,TRANSID=IELA,PROGRAM=IESXDA,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IELS	DFHPCT TYPE=ENTRY,TRANSID=IELS,PROGRAM=IESXSIO,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IEMD	DFHPCT TYPE=ENTRY,TRANSID=IEMD,PROGRAM=IESMDP,	*
	SCRNSZE=ALTERNATE,TRNPRTY=20,TWASIZE=128,TRANSEC=1,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,	*
	TPURGE=YES,SPURGE=YES,RSL=PUBLIC	*
IEPW	DFHPCT TYPE=ENTRY,TRANSID=IEPW,PROGRAM=IESXPWD,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IESI	DFHPCT TYPE=ENTRY,TRANSID=IESI,PROGRAM=IESFPIP,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IESN	DFHPCT TYPE=ENTRY,TRANSID=IESN,PROGRAM=IESNEWS,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IESO	DFHPCT TYPE=ENTRY,TRANSID=IESO,PROGRAM=IESOPINI,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=700,TPURGE=YES,SPURGE=NO,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*

Figure 137 (Part 1 of 3). VSE Library Member IESZPCT

Program Control Table

IESQ	DFHPCT TYPE=ENTRY, TRANSID=IESQ, PROGRAM=IESBQUP,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20, TWASIZE=400, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=61	
IESR	DFHPCT TYPE=ENTRY, TRANSID=IESR, PROGRAM=IESBQP2,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20, TWASIZE=400, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=61	
IEST	DFHPCT TYPE=ENTRY, TRANSID=IEST, PROGRAM=IESTUP,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20, TWASIZE=128, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=1	
IESX	DFHPCT TYPE=ENTRY, TRANSID=IESX, PROGRAM=IESLQBP,	*
	TRNPRTY=50, TWASIZE=128, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=61	
IESY	DFHPCT TYPE=ENTRY, TRANSID=IESY, PROGRAM=IESLQDP,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20, TWASIZE=128, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=61	
IESZ	DFHPCT TYPE=ENTRY, TRANSID=IESZ, PROGRAM=IESIMSG,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20, TWASIZE=128, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=61	
IES1	DFHPCT TYPE=ENTRY, TRANSID=IES1, PROGRAM=IESFPEP,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20, TWASIZE=128, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=61	
IES6	DFHPCT TYPE=ENTRY, TRANSID=IES6, PROGRAM=IESIES01,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20, TWASIZE=128, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=1	
IES8	DFHPCT TYPE=ENTRY, TRANSID=IES8, PROGRAM=IESOPFE,	*
	SCRNSZE=ALTERNATE, TRNPRTY=20, TWASIZE=700, TRANSEC=61,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES,	*
	TPURGE=YES, SPURGE=YES, RSL=PUBLIC	
IES9	DFHPCT TYPE=ENTRY, TRANSID=IES9, PROGRAM=IESOPID,	*
	SCRNSZE=ALTERNATE, TRNPRTY=20, TWASIZE=700, TRANSEC=61,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES,	*
	TPURGE=YES, SPURGE=YES, RSL=PUBLIC	
IETA	DFHPCT TYPE=ENTRY, TRANSID=IETA, PROGRAM=IESXDA,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20, TWASIZE=128, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=61	
IETM	DFHPCT TYPE=ENTRY, TRANSID=IETM, PROGRAM=IESXSYN,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20, TWASIZE=400, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=61	
IETS	DFHPCT TYPE=ENTRY, TRANSID=IETS, PROGRAM=IESXSIO,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20, TWASIZE=128, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=61	
IEWR	DFHPCT TYPE=ENTRY, TRANSID=IEWR, PROGRAM=IESWRCO,	*
	TRNPRTY=20, TWASIZE=400, TPURGE=YES, SPURGE=YES, RSL=PUBLIC,	*
	DTB=NO, DUMP=YES, EXTSEC=NO, TRACE=YES, TRANSEC=1	

Figure 137 (Part 2 of 3). VSE Library Member IESZPCT

IEYL	DFHPCT	TYPE=ENTRY,TRANSID=IEYL,PROGRAM=IESSYSL, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
HELP	DFHPCT	TYPE=ENTRY,TRANSID=HELP,PROGRAM=IESFPEP, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1	*
OLPD	DFHPCT	TYPE=ENTRY,TRANSID=OLPD,PROGRAM=IESOPFE, SCRNSZE=ALTERNATE,TRNPRTY=20,TWASIZE=700,TRANSEC=61, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES, TPURGE=YES,SPURGE=YES,RSL=PUBLIC	*
PF1	DFHPCT	TYPE=ENTRY,TASKREQ=PF1,PROGRAM=IESFPEP, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1	*
PF13	DFHPCT	TYPE=ENTRY,TASKREQ=PF13,PROGRAM=IESFPEP, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1	*
PF15	DFHPCT	TYPE=ENTRY,TASKREQ=PF15,PROGRAM=IESFPEP, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1	*
PF3	DFHPCT	TYPE=ENTRY,TASKREQ=PF3,PROGRAM=IESFPEP, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1	*
USER	DFHPCT	TYPE=ENTRY,TRANSID=USER,PROGRAM=IESDUSR, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
	EJECT		*
		-----*	*
		END OF VSE/SP PCT ENTRIES	*
		-----*	*
		SPACE 3	

Figure 137 (Part 3 of 3). VSE Library Member IESZPCT

Program Control Table

CATALOG IESZPCTI.A		REPLACE=YES
SPACE 3		
-----		*
* FOLLOWING ARE THE ICCF RELATED PCT ENTRIES REQUIRED		*
* FOR VSE/SP RUNNING IN A CICS PARTITION WITH ICCF		*
-----		*
IE\$L	DFHPCT TYPE=ENTRY,TRANSID=IE\$L,PROGRAM=IESLIBD, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IE\$M	DFHPCT TYPE=ENTRY,TRANSID=IE\$M,PROGRAM=IESCOMM, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IE\$1	DFHPCT TYPE=ENTRY,TRANSID=IE\$1,PROGRAM=IESICCF, SCRNSZE=ALTERNATE, TRNPRTY=99,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1	*
IE\$2	DFHPCT TYPE=ENTRY,TRANSID=IE\$2,PROGRAM=IESICCF, SCRNSZE=ALTERNATE, TRNPRTY=99,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=1	*
IEA\$	DFHPCT TYPE=ENTRY,TRANSID=IEA\$,PROGRAM=IESLIBA, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IEC\$	DFHPCT TYPE=ENTRY,TRANSID=IEC\$,PROGRAM=IESLIBC, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IESA	DFHPCT TYPE=ENTRY,TRANSID=IESA,PROGRAM=IESXAPM, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IESB	DFHPCT TYPE=ENTRY,TRANSID=IESB,PROGRAM=IESVFELD, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IESC	DFHPCT TYPE=ENTRY,TRANSID=IESC,PROGRAM=IESVFECF, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IESD	DFHPCT TYPE=ENTRY,TRANSID=IESD,PROGRAM=IESVFEFD, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*
IESF	DFHPCT TYPE=ENTRY,TRANSID=IESF,PROGRAM=IESVFEFH, SCRNSZE=ALTERNATE, TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC, DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	*

Figure 138 (Part 1 of 3). VSE Library Member IESZPCTI

IESL	DFHPCT TYPE=ENTRY,TRANSID=IESL,PROGRAM=IESLIBI,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	
IESM	DFHPCT TYPE=ENTRY,TRANSID=IESM,PROGRAM=IESVFE,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	
IESP	DFHPCT TYPE=ENTRY,TRANSID=IESP,PROGRAM=IESVFEFP,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	
IESS	DFHPCT TYPE=ENTRY,TRANSID=IESS,PROGRAM=IESXSPM,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	
IESV	DFHPCT TYPE=ENTRY,TRANSID=IESV,PROGRAM=IESVTOCF,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=400,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	
IESW	DFHPCT TYPE=ENTRY,TRANSID=IESW,PROGRAM=IESXUPM,	*
	SCRNSZE=ALTERNATE,	*
	TRNPRTY=20,TWASIZE=128,TPURGE=YES,SPURGE=YES,RSL=PUBLIC,	*
	DTB=NO,DUMP=YES,EXTSEC=NO,TRACE=YES,TRANSEC=61	
-----		*
* PCT ENTRIES FOR ICCF		*
-----		*
	DFHPCT TYPE=ENTRY,TRANSID=ICCF,PROGRAM=DTSICCF,TWASIZE=1650,	*
	RSL=PUBLIC,	*
	SCRNSZE=ALTERNATE	
	DFHPCT TYPE=ENTRY,TRANSID=I\$P,PROGRAM=DTSICCF,TWASIZE=1650,	*
	RSL=PUBLIC,	*
	SCRNSZE=ALTERNATE	
	DFHPCT TYPE=ENTRY,TRANSID=I\$Q,PROGRAM=DTSICCF,TWASIZE=512,	*
	RSL=PUBLIC	
	DFHPCT TYPE=ENTRY,TRANSID=I\$1,PROGRAM=DTSICCF,TWASIZE=1650,	*
	RSL=PUBLIC,	*
	SCRNSZE=ALTERNATE	
	DFHPCT TYPE=ENTRY,TRANSID=I\$2,PROGRAM=DTSICCF,TWASIZE=1650,	*
	RSL=PUBLIC,	*
	SCRNSZE=ALTERNATE	
	DFHPCT TYPE=ENTRY,TRANSID=I\$3,PROGRAM=DTSICCF,TWASIZE=1650,	*
	RSL=PUBLIC,	*
	SCRNSZE=ALTERNATE	
	DFHPCT TYPE=ENTRY,TRANSID=I\$4,PROGRAM=DTSICCF,TWASIZE=1650,	*
	RSL=PUBLIC,	*
	SCRNSZE=ALTERNATE	

Figure 138 (Part 2 of 3). VSE Library Member IESZPCTI

Program Control Table

```
DFHPCT TYPE=ENTRY,TRANSID=I$$5,PROGRAM=DTSICCF,TWASIZE=512,      *
      RSL=PUBLIC                                                    *
DFHPCT TYPE=ENTRY,TRANSID=I$$6,PROGRAM=DTSICCF,TWASIZE=512,      *
      RSL=PUBLIC,                                                    *
      SCRNSZE=ALTERNATE                                              *
DFHPCT TYPE=ENTRY,TRANSID=I$$7,PROGRAM=DTSICCF,TWASIZE=1650,     *
      RSL=PUBLIC,                                                    *
      SCRNSZE=ALTERNATE                                              *
DFHPCT TYPE=ENTRY,TRANSID=I$$8,PROGRAM=DTSICCF,TWASIZE=1650,     *
      RSL=PUBLIC,                                                    *
      SCRNSZE=ALTERNATE                                              *
DFHPCT TYPE=ENTRY,TRANSID=I$$9,PROGRAM=DTSICCF,TWASIZE=1650,     *
      RSL=PUBLIC,                                                    *
      SCRNSZE=ALTERNATE                                              *
*-----*
*      END OF VSE/SP ICCF RELATED PCT ENTRIES                      *
*-----*
```

SPACE 3

Figure 138 (Part 3 of 3). VSE Library Member IESZPCTI

CATALOG IESWPCT.A	REPLACE=YES
SPACE 3	

* FOLLOWING ARE THE PCT ENTRIES REQUIRED FOR	*
* INTELLIGENT WORK STATION	*
-----	*
IND\$ DFHPCT TYPE=ENTRY,TRANSID=IND\$,PROGRAM=INWPCCOM,TWASIZE=128,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC,RSLC=YES	
APVU DFHPCT TYPE=ENTRY,TRANSID=APVU,PROGRAM=INWPCCOM,TWASIZE=128,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC,RSLC=YES	
INWB DFHPCT TYPE=ENTRY,TRANSID=INWB,PROGRAM=INWMBRO,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INWC DFHPCT TYPE=ENTRY,TRANSID=INWC,PROGRAM=INWMCOPY,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INWE DFHPCT TYPE=ENTRY,TRANSID=INWE,PROGRAM=INWERASE,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INWM DFHPCT TYPE=ENTRY,TRANSID=INWM,PROGRAM=INWMRXA1,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INWN DFHPCT TYPE=ENTRY,TRANSID=INWN,PROGRAM=INWNIFY,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INWP DFHPCT TYPE=ENTRY,TRANSID=INWP,PROGRAM=INWMPRIN,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INWQ DFHPCT TYPE=ENTRY,TRANSID=INWQ,PROGRAM=INWMTSQU,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INWR DFHPCT TYPE=ENTRY,TRANSID=INWR,PROGRAM=INWMCHNG,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INWS DFHPCT TYPE=ENTRY,TRANSID=INWS,PROGRAM=INWMCHAR,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INW1 DFHPCT TYPE=ENTRY,TRANSID=INW1,PROGRAM=INWMRXS1,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INW2 DFHPCT TYPE=ENTRY,TRANSID=INW2,PROGRAM=INWMRXS2,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INW3 DFHPCT TYPE=ENTRY,TRANSID=INW3,PROGRAM=INWMRXS3,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	
INW4 DFHPCT TYPE=ENTRY,TRANSID=INW4,PROGRAM=INWMRXS4,TWASIZE=256,	
SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES,	
RSL=PUBLIC	

Figure 139 (Part 1 of 2). VSE Library Member IESWPCT

Program Control Table

INW5	DFHPCT TYPE=ENTRY,TRANSID=INW5,PROGRAM=INWMRXS5,TWASIZE=256, SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES, RSL=PUBLIC
INW6	DFHPCT TYPE=ENTRY,TRANSID=INW6,PROGRAM=INWMRXS6,TWASIZE=256, SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES, RSL=PUBLIC
INW7	DFHPCT TYPE=ENTRY,TRANSID=INW7,PROGRAM=INWMRXS7,TWASIZE=256, SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES, RSL=PUBLIC
INWX	DFHPCT TYPE=ENTRY,TRANSID=INWX,PROGRAM=INWCPMSG,TWASIZE=256, SCRNSZE=DEFAULT,TRANSEC=61,TPURGE=YES,SPURGE=YES, RSL=PUBLIC

* END OF INTELLIGENT WORK STATION PCT ENTRIES *	

SPACE 3	

Figure 139 (Part 2 of 2). VSE Library Member IESWPCT

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

```

* $$ JOB JNM=DFHPLTPI,CLASS=A,DIST=D,NTFY=YES
* $$ LST CLASS=Q,DIST=H
// JOB DFHPLTI ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
      PUNCH ' CATALOG DFHPLTPI.OBJ REP=YES '
      DFHPLT TYPE=INITIAL,SUFFIX=PI
      SPACE 3

*-----*
*
*          VSE/SP ENTRIES FOR PLTPI FOLLOW HERE
*
*-----*
*          COPY IESZPLTI          COPY VSE/SP ENTRIES
*-----*
*          LOCAL ENTRIES SHOULD BE MADE AFTER THIS POINT
*-----*
      SPACE 3
      DFHPLT TYPE=FINAL
      END

/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 140. VSE/ICCF Library Member DFHPLTPI

```

CATALOG IESZPLTI.A                      REPLACE=YES
      SPACE 3

*-----*
*
*          FOLLOWING ARE THE PLTPI ENTRIES REQUIRED FOR VSE/SP
*
*-----*
*          DFHPLT TYPE=ENTRY,PROGRAM=IESCICIN
*-----*
*          END OF VSE/SP PLTPI ENTRIES
*-----*
      SPACE 3

```

Figure 141. VSE Library Member IESZPLTI

PLT for CICS/DOS/VS Partition Shutdown

```

* $$ JOB JNM=DFHPLTSD,CLASS=A,DIST=D,NTFY=YES
* $$ LST CLASS=Q,DIST=H
// JOB DFHPLTSD ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    PUNCH ' CATALOG DFHPLTSD.OBJ REP=YES'
    DFHPLT TYPE=INITIAL,SUFFIX=SD
    SPACE 3
*-----*
*
*          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
/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 142. VSE/ICCF Library Member DFHPLTSD

```

CATALOG IESZPLTS.A                      REPLACE=YES
    SPACE 3
*-----*
*
*          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
*-----*
*          SPACE 3

```

Figure 143. VSE Library Member IESZPLTS

System Initialization Table

```

* $$ JOB JNM=DFHSITSP,CLASS=A,DIST=D,NTFY=YES
* $$ LST CLASS=Q,DIST=H
// JOB DFHSITSP ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    TITLE 'DFHSITSP -- SUPPLIED WITH VSE/SP'
    PUNCH ' CATALOG DFHSITSP.OBJ REP=YES'
    DFHSIT TYPE=CSECT,
        AKPFREQ=200,          ACTIVITY KEYPOINTING FREQUENCY
        ALT=NO,              NO APPLICATION LOAD TABLE
        AMXT=10,             MAX ACTIVE TASKS
        APPLID=DBDCCICS,     CICS APPLICATION NAME
        AUTINST=(10,IESZATDX,700), AUTO INSTALL TERMINALS
        BFP=NO,              NO BUILT-IN FUNCTIONS
        BMS=FULL,           FULL BASIC MAPPING SUPPORT
        CMXT=(10,10,10,10,10,10,10,10,10,10), 10 TASKS/ TRANS CL
        DATFORM=MMDDYY,     EXTERNAL DATE DISPLAY
        DBP=1$,             DYNAMIC BACKOUT
        DBUFSZ=700,         DYNAMIC BACKOUT BUFFER SIZE
        DCT=SP,             SUPPLIED WITH VSE/SP
        DIP=NO,             NO BATCH DATA INTERCHANGE
        DLI=NO,             NO DL/I SUPPORT
        DUMP=(FORMAT),      FORMATTED DUMP ONLY
        DUMPDS=AUTO,        AUTO SWITCH DUMP DATA SETS
        EXEC=YES,           EXEC LEVEL SUPPORT
        EXITS=YES,          USER EXIT INTERFACE
        EXTSEC=NO,          NO RACF SUPPORT
        FCT=SP,             SUPPLIED WITH VSE/SP
        GMTEXT='VSE/SP ONLINE', GOOD MORNING MESSAGE TEXT
        GMTRAN=IEGM,        LOGON TRANSACTION ID
        ICP=COLD,           INTERVAL CONTROL PGM
        ICV=1000,           INTERVAL CONTROL EXIT TIME-MS
        ICVR=20000,         RUNAWAY TASK TIME
        ICVS=20000,         DELAY BEFORE STALL PURGE
        ICVTS=250,          TERMINAL SCAN DELAY
        IRCSTRT=NO,         NO INTERREGION COMMUNICATION
        ISC=NO,             NO INTERSYSTEM COMMUNICATION
        JCT=NO,             NO JOURNALLING
        LGNMSG=YES,         VTAM LOGON DATA

```

Figure 144 (Part 1 of 2). VSE/ICCF Library Member DFHSITSP

System Initialization Table

MCT=NO,	NO MONITOR CONTROL TABLE
MSGVL=2,	START-UP MSGS ON SYSLOG/SYSLST
MXT=999,	MAX NO. OF ALL CONCURRENT TASKS
NLT=NO,	DEFAULT LOAD ORDER FOR NUCLEUS
PCT=SP,	SUPPLIED WITH VSE/SP
PGCHAIN=X/,	BMS CHAINING COMMAND
PGCOPY=COPY/,	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
PRGDLY=100,	ONE HOUR PURGE DELAY
SCS=12288,	STORAGE CUSHION-MIN OF 4 PAGES
SPOOL=(YES,A,A),	CICS SPOOLER ACTIVE
SRT=1\$,	DEFAULT SRT
START=AUTO,	REFRESH EVERYTHING
SUFFIX=SP,	SUPPLIED WITH VSE/SP
SVD=YES,	STORAGE VIOLATION DUMP&RECOVERY
TCP=S\$,	TERMINAL CONTROL PROGRAM
TCT=SP,	BUILT AFTER CONFIGURATION
TD=(3,3),	THREE BUFFERS & THREE STRINGS
TRACE=800,	TRACE TABLE
TS=(,8,8),	EIGHT BUFFERS & EIGHT STRINGS
TSMGSET=4,	4 MESSAGE SET ENTRIES
TST=NO,	NO TEMP STORAGE TABLE INCLUDED
VTAM=YES,	SUPPORT FOR VTAM TERMINALS
WRKAREA=512,	COMMON WORK AREA OF THE CSA
XLT=SP,	SUPPLIED WITH VSE/SP
ZCP=S\$,	ALL ACCESS METHODS
DUMMY=DUMMY	TO END MACRO
END DFHSITBA	
/*	
// EXEC LNKEDT	
/*	
/&	
* \$\$ EOJ	

Figure 144 (Part 2 of 2). VSE/ICCF Library Member DFHSITSP

Temporary Storage Table

```

* $$ JOB JNM=DFHTSTSP,CLASS=A,DIST=D,NTFY=YES
* $$ LST CLASS=Q,DIST=H
// JOB DFHTSTSP ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    TITLE 'DFHTSTSP -- SUPPLIED WITH VSE/SP'
    PUNCH ' CATALOG DFHTSTSP.OBJ REP=YES'
    DFHTST TYPE=INITIAL,SUFFIX=SP
    COPY IESZTST      - VSE/SP TEMPORARY STORAGE TABLE ENTRIES
    SPACE 3
*-----*
*          LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX          *
*-----*
*          SPACE 3          *
*-----*
*          LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX          *
*-----*
*          SPACE 3          *
    DFHTST TYPE=FINAL
    END
/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 145. VSE/ICCF Library Member DFHTSTSP

```

CATALOG IESZTST.A                      REPLACE=YES
    SPACE 3
*-----*
*          FOLLOWING ARE THE TST ENTRIES REQUIRED FOR VSE/SP          *
*-----*
*          DFHTST TYPE=ENTRY,DATAID=CFTR  VSE/SP QUEUE ID          *
*          DFHTST TYPE=SECURITY,DATAID=CFTR,RSL=10  VSE/SP SECURITY CHECK *
*-----*
*          END OF VSE/SP TST ENTRIES          *
*-----*
    SPACE 3

```

Figure 146. VSE Library Member IESZTST

Terminal Control Tables

TCT for BTAM Terminals

```

* $$ JOB JNM=DFHTCTVB,CLASS=A,DISP=D,NTFY=YES
* $$ LST CLASS=Q,DISP=H
// JOB DFHTCTVB ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
*****
*   $MOD(DFHTCTVB),COMP(5666-345),PROD(VSESP)
*****
      TITLE 'DFHTCTVB CICS SAMPLE TCT. CONSOLE AND BTAM TERMINALS'
      PUNCH ' CATALOG DFHTCTVB.OBJ REPLACE=YES'
      DFHTCT TYPE=INITIAL,SUFFIX=VB,STARTER=YES,ACCMETH=NONVTAM,
      MODNAME=BTMLR32T
*****
* * * * * D T F S * * *
*****
      DS      OD
      DC      CL32'INPUT AND OUTPUT DTFS'
      DFHTCT  TYPE=SDSCI,
      DEVAADDR=SYSRDR,
      DEVICE=2540,
      DSCNAME=READER
      DFHEJECT
      DFHTCT  TYPE=SDSCI,
      DEVAADDR=SYSLST,
      DEVICE=1403,
      DSCNAME=PRINTER
      DFHEJECT
*****
* * * * * L I N E   A N D   T E R M I N A L   * * *
* * * * * D E F I N I T I O N * * *
*****
      DS      OD
      DC      CL64'T E R M I N A L   A N D   L I N E   E N T R I E S'
*****
      DS      OD
      DC      CL32'S A M A   LINE AND TERMINAL ENTRY'
      DFHTCT  TYPE=LINE,
      ACCMETH=SEQUENTIAL,
      TRMTYPE=CRLP,
      ISADSCN=READER,
      OSADSCN=PRINTER,
      INAREAL=88,
      DUMMY=DUMMY
      DFHTCT  TYPE=TERMINAL,
      TRMIDNT=SAMA,
      TRMPRTY=32,
      TRMSTAT=(TRANSCIVE),
      DUMMY=DUMMY

```

Figure 147 (Part 1 of 2). VSE/ICCF Library Member DFHTCTVB

```

*****
* * *                               F I N A L I Z E                               * * *
*****
      DS      OD
      DC      CL32'T C T   WAIT LIST'
DFHTCT TYPE=SDSCI,                                     *
      DEVICE=CONSOLE
DFHTCT TYPE=LINE,                                     *
      ACCMETH=SEQUENTIAL,                             *
      INAREAL=80,                                       *
      TRMTYPE=CONSOLE
DFHTCT TYPE=TERMINAL,                                 *
      TRMIDNT=CNSL,                                    *
      TCTUAL=255,                                       *
      TIOAL=80,                                         *
      TRMSTAT=RECEIVE,                                  *
      OPERPRI=255,                                      *
      OPERSEC=(1,24,60,61,62,63,64)
DFHTCT TYPE=GPENTRY,                                  1 LINE FOR:                X
      GPTYPE=3270L,                                    1 LOCAL 3270 DEVICE                X
      LININL=160,                                       TIOA LENGTH                        X
      LINELST=(020),                                   ADDRESS                            X
      TRMFAT=(DSA),                                    FEATURE                            X
      TRMSTAT=(A),                                     TERMINAL STATUS                    X
      TRMMODL=(2A),                                    TERMINAL MODEL                     X
      TRMUAL=(32),                                     USER AREA LENGTH                  X
      TRMIDNT=(L77A)                                  TERMINAL NAME
DFHTCT TYPE=GPENTRY,                                  1 LINE FOR:                X
      GPTYPE=3270L,                                    3 LOCAL 3270 DEVICES              X
      LININL=160,                                       TIOA LENGTH                        X
      LINELST=(021,022,027),                           ADDRESSES                          X
      TRMFAT=(DSA,DSA,P),                               FEATURES                           X
      TRMSTAT=(A,A,A),                                  TERMINAL STATUS                    X
      TRMMODL=(2A,2A,2C),                               TERMINAL MODELS                    X
      TRMUAL=(32,32,32),                               USER AREA LENGTH                  X
      TRMIDNT=(L77B,L77C,L86P)                         TERMINAL NAMES
DFHTCT TYPE=FINAL
/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 147 (Part 2 of 2). VSE/ICCF Library Member DFHTCTVB

TCT for VTAM Terminals

```

* $$ JOB JNM=DFHTCTVV,CLASS=A,DISP=D,NTFY=YES
* $$ LST CLASS=Q,DISP=H
// JOB DFHTCTVV ASSEMBLE
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
*****
*      $MOD(DFHTCTVV),COMP(5666-345),PROD(VSESP)
*****
      TITLE 'DFHTCTVV VSE/SP INIT TCT. CONSOLE AND VTAM TERMINALS'
      PUNCH ' CATALOG DFHTCTVV.OBJ      REPLACE=YES'
      DFHTCT TYPE=INITIAL,SUFFIX=VV,STARTER=YES,
              ACCMETH=(VTAM,ONVTAM),GMTEXT='VSE/SP ONLINE'
*****
* * *               D T F S               * * *
*****
      DS      OD
      DC      CL32'INPUT AND OUTPUT DTFS'
      DFHTCT  TYPE=SDSCI,
              DEVADDR=SYSRDR,
              DEVICE=2540,
              DSCNAME=READER
      DFHEJECT
      DFHTCT  TYPE=SDSCI,
              DEVADDR=SYSLST,
              DEVICE=1403,
              DSCNAME=PRINTER
      DFHEJECT
*****
* * *               L I N E      A N D      T E R M I N A L      * * *
* * *               D E F I N I T I O N                          * * *
*****
      DS      OD
      DC      CL64'T E R M I N A L      A N D      L I N E      E N T R I E S'
*****
      DS      OD
      DC      CL32'S A M A  LINE AND TERMINAL ENTRY'
      DFHTCT  TYPE=LINE,
              ACCMETH=SEQUENTIAL,
              TRMTYPE=CRLP,
              ISADSCN=READER,
              OSADSCN=PRINTER,
              INAREAL=88,
              DUMMY=DUMMY
      DFHTCT  TYPE=TERMINAL,
              TRMIDNT=SAMA,
              TRMPRTY=32,
              TRMSTAT=(TRANSCIVE),
              DUMMY=DUMMY

```

Figure 148 (Part 1 of 3). VSE/ICCF Library Member DFHTCTVV

* * *		
F I N A L I Z E		

DS	OD	
DC	CL32'T C T WAIT LIST'	
DFHTCT	TYPE=SDSCI,	*
	DEVICE=CONSOLE	
DFHTCT	TYPE=LINE,	*
	ACCMETH=SEQUENTIAL,	*
	INAREAL=80,	*
	TRMTYPE=CONSOLE	
DFHTCT	TYPE=TERMINAL,	*
	TRMIDNT=CNSL,	*
	TCTUAL=255,	*
	TIOAL=80,	*
	TRMSTAT=RECEIVE,	*
	OPERPRI=255,	*
	OPERSEC=(1,24,60,61,62,63,64)	

* L77A - VTAM	TRMTYPE LUTYPE2	NETNAME - D72L301.
* L77B - VTAM	,,	NETNAME - D72L302.
* L77C - VTAM	,,	NETNAME - D72L303.
* L77D - VTAM	TRMTYPE 3270	NETNAME - D72L304.
* L77E - VTAM	,,	NETNAME - D72L305.
* L77F - VTAM	,,	NETNAME - D72L306.
* L86P - VTAM	NON-SNA 3270 PRINTER.	NETNAME - P42L308.

VTRM1	DFHTCT TYPE=TERMINAL,TRMIDNT=L77A,TRMTYPE=LUTYPE2,TRMMODL=2,	*
	TIOAL=(1500,1920),	*
	BUFFER=1536,	*
	RELREQ=(NO,YES),	*
	FEATURE=(SELCTPEN,AUDALARM,DCKYBD),	*
	CHNASSY=YES,	*
	NETNAME=D72L301,	*
	PRINTTO=(VTRM7),	*
	GMMSG=YES,	*
	ACCMETH=VTAM,TCTUAL=32,	*
	CONNECT=AUTO,TRMSTAT=(TRANSCIEVE)	
VTRM2	DFHTCT TYPE=TERMINAL,TRMIDNT=L77B,TRMTYPE=LUTYPE2,TRMMODL=2,	*
	TIOAL=(1500,1920),	*
	BUFFER=1536,	*
	RELREQ=(NO,YES),	*
	FEATURE=(SELCTPEN,AUDALARM,DCKYBD),	*
	CHNASSY=YES,	*
	NETNAME=D72L302,	*
	PRINTTO=(VTRM7),	*
	GMMSG=YES,	*
	ACCMETH=VTAM,TCTUAL=32,	*
	CONNECT=AUTO,TRMSTAT=(TRANSCIEVE)	

Figure 148 (Part 2 of 3). VSE/ICCF Library Member DFHTCTVV

VTRM3	DFHTCT TYPE=TERMINAL,TRMIDNT=L77C,TRMTYPE=LUTYPE2,TRMMODL=2, TIOAL=(1500,1920), BUFFER=1536, RELREQ=(NO,YES), FEATURE=(SELCTPEN,AUDALARM,DCKYBD), CHNASSY=YES, NETNAME=D72L303, PRINTTO=(VTRM7), GMMMSG=YES, ACCMETH=VTAM,TCTUAL=32, CONNECT=AUTO,TRMSTAT=(TRANSCIVE)	* * * * * * * * * *
VTRM4	DFHTCT TYPE=TERMINAL,TRMIDNT=L77D,TRMTYPE=3270,TRMMODL=2, CLASS=(CONV,VIDEO),TIOAL=1500,RELREQ=(NO,YES), FEATURE=(SELCTPEN,AUDALARM,DCKYBD), NETNAME=D72L304, PRINTTO=(VTRM7), GMMMSG=YES, ACCMETH=VTAM,TCTUAL=32, CONNECT=AUTO,TRMSTAT=(TRANSCIVE)	* * * * * * *
VTRM5	DFHTCT TYPE=TERMINAL,TRMIDNT=L77E,TRMTYPE=3270,TRMMODL=2, CLASS=(CONV,VIDEO),TIOAL=1500,RELREQ=(NO,YES), FEATURE=(SELCTPEN,AUDALARM,DCKYBD), NETNAME=D72L305, PRINTTO=(VTRM7), GMMMSG=YES, ACCMETH=VTAM,TCTUAL=32, CONNECT=AUTO,TRMSTAT=(TRANSCIVE)	* * * * * * *
VTRM6	DFHTCT TYPE=TERMINAL,TRMIDNT=L77F,TRMTYPE=3270,TRMMODL=2, CLASS=(CONV,VIDEO),TIOAL=1500,RELREQ=(NO,YES), FEATURE=(SELCTPEN,AUDALARM,DCKYBD), NETNAME=D72L306, PRINTTO=(VTRM7), GMMMSG=YES, ACCMETH=VTAM,TCTUAL=32, CONNECT=AUTO,TRMSTAT=(TRANSCIVE)	* * * * * * *
VTRM7	DFHTCT TYPE=TERMINAL,TRMIDNT=L86P,TRMTYPE=3270P,TRMMODL=2, NETNAME=P42L308, RELREQ=(YES,YES), CLASS=(CONV,VIDEO),TIOAL=1500,TCTUAL=32, ACCMETH=VTAM,CONNECT=AUTO,TRMSTAT=(TRANSCIVE)	* * * *
	DFHTCT TYPE=FINAL	
	/*	
	// EXEC LNKEDT	
	/*	
	/&	
	* \$\$ EOJ	

Figure 148 (Part 3 of 3). VSE/ICCF Library Member DFHTCTVV

Transaction List Table

```

* $$ JOB JNM=DFHXLTSP,CLASS=A,DIST=D,NTFY=YES
* $$ LST CLASS=Q,DIST=H
// JOB DFHXLTSP ASSEMBLY
// LIBDEF *,CATALOG=PRD2.CONFIG
// OPTION CATAL,LIST
// EXEC ASSEMBLY
    TITLE 'DFHXLTSP -- SUPPLIED WITH VSE/SP'
    PUNCH ' CATALOG DFHXLTSP.OBJ REP=YES'
    DFHTST TYPE=INITIAL,SUFFIX=SP
    COPY IESZTST      - VSE/SP TEMPORARY STORAGE TABLE ENTRIES
    SPACE 3
*-----*
*              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            *
*-----*
    SPACE 3
    COPY IESZXLT      - VSE/SP FACILITIES
*-----*
*              OTHER LOCAL ENTRIES SHOULD BE PLACED BELOW THIS BOX  *
*-----*
    SPACE 3
*-----*
*              OTHER LOCAL ENTRIES SHOULD BE PLACED ABOVE THIS BOX  *
*-----*
    DFHXLT TYPE=FINAL
    END    DFHXLTBA
/*
// EXEC LNKEDT
/*
/&
* $$ EOJ

```

Figure 149. VSE/ICCF Library Member DFHXLTSP

Transaction List Table

```
CATALOG IESZXLT.A                                REPLACE=YES
SPACE 3
*-----*
*
* FOLLOWING ARE THE XLT ENTRIES REQUIRED FOR VSE/SP
*-----*
      DFHXLT TYPE=ENTRY,TRANSID=(IEGM,  VSE/SP SIGNON TRANSACTION
      IES6,      SIGN ON COMPLETION
      IES1,      FUNCTION SELECTION
      IETA,      SYSTEM ACTIVITY RETURN
      IETS,      I/O ACTIVITY RETURN
      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
*-----*
SPACE 3
```

Figure 150. VSE Library Member IESZXLT

Related IBM Publications

This appendix lists some, not all, of the publications written for the IBM programs included in VSE/SP. For complete listings, refer to a specific program's general information publications or library guide (when available).

Advanced Communications Function for VTAM Version 3, Release 1 (ACF/VTAM)

Network Program Products General Information, GC23-0108

Advanced Communications Function for VTAM Reference Summary, SC23-0135

Advanced Communications Function for VTAM Installation and Resource Definition, SC23-0111

Advanced Communications Function for VTAM Customization, SC23-0112

Advanced Communications Function for VTAM Programming, SC23-0115

Advanced Communications Function for VTAM Operation, SC23-0113

Advanced Communications Function for VTAM Diagnosis Guide, SC23-0116

Advanced Communications Function for VTAM Data Areas for VSE, LY30-5579

Advanced Communications Function for VTAM Messages and Codes, SC23-0114

Basic Telecommunications Access Method Extended Support Version 1, Release 1 (BTAM-ES)

Basic Telecommunications Access Method Extended Support General Information, GC38-0292

Basic Telecommunications Access Method Extended Support Installation, SC38-0294

Basic Telecommunications Access Method Extended Support Programming, SC38-0293

Basic Telecommunications Access Method Extended Support Messages, SC38-0295

Customer Information Control System/DOS/VS Version 1, Release 7 (CICS/DOS/VS)

CICS/DOS/VS General Information, GC33-0155
CICS/DOS/VS Release Guide, GC33-0130
CICS/DOS/VS Library Guide, GC33-0358
CICS/DOS/VS Master Index, SC33-0095
CICS/DOS/VS Facilities and Planning Guide, SC33-0228
CICS/DOS/VS Installation and Operations Guide, SC33-0070
CICS/DOS/VS Intercommunication Facilities Guide, SC33-0133
CICS/DOS/VS Resource Definition (Online), SC33-0238
CICS/DOS/VS Resource Definition (Macro), SC33-0149
CICS/DOS/VS Performance Guide, SC33-0134
CICS/DOS/VS Recovery and Restart Guide, SC33-0135
CICS/DOS/VS Customization Guide, SC33-0131
CICS/DOS/VS Problem Determination Guide, SC33-0089
CICS/DOS/VS Program Debugging Reference Summary, SX33-6010
CICS/DOS/VS Messages and Codes, SC33-0081

Data Interfile Transfer, Testing, and Operations Utility for VSE and VM Version 2, Release 1 (DITTO)

Data Interfile Transfer, Testing, and Operations Utility for VSE and VM General Information,
GH19-8101
*Data Interfile Transfer, Testing, and Operations Utility for VSE and VM User's Guide and
Reference*, SH19-8102
Data Interfile Transfer, Testing, and Operations Utility for VSE and VM Reference Summary,
SX11-6101

Device Support Facilities Version 1, Release 8

Device Support Facilities User's Guide and Reference, GC35-0033

Environmental Recording, Editing and Printing Program Version 3, Release 2 (EREP)

EREP User's Guide and Reference, GC28-1378

VSE/Advanced Functions Version 2, Release 1

VSE/Advanced Functions Program Summary, GC33-6157

VSE/Advanced Functions Planning and Installation, SC33-6193

VSE/Advanced Functions System Management Guide, SC33-6191

VSE/Advanced Functions System Control Statements, SC33-6198

VSE/Advanced Functions Data Management Concepts, GC33-6192

VSE/Advanced Functions Operation, SC33-6194

VSE/Advanced Functions Application Programming: Macro User's Guide, SC33-6196

VSE/Advanced Functions Application Programming: Macro Reference, SC33-6197

VSE/Advanced Functions Maintain System History Program Reference, SC33-6199

VSE/Advanced Functions Service Aids, SC33-6195

VSE/Fast Copy Data Set Program Version 1, Release 2 (VSE/Fast Copy)

VSE/Fast Copy Data Set Program Program Summary, GC33-6158

VSE/Fast Copy Data Set Program Installation Reference, SC33-6082

VSE/Interactive Computing and Control Facility Version 2, Release 1 (VSE/ICCF)

VSE/Interactive Computing and Control Facility Program Summary, GC33-6159

VSE/Interactive Computing and Control Facility Introduction to Interactive Programming, SC33-6202

VSE/Interactive Computing and Control Facility Installation and Operation Reference, SC33-6203

VSE/Interactive Computing and Control Facility Terminal User's Guide, SC33-6204

VSE/Interactive Computing and Control Facility Reference Summary, GX33-9011

VSE/Online Test Executive Program Version 1, Release 1 (VSE/OLTEP)

VSE/Online Test Executive Program Installation and Operation, GC33-6156

VSE/Online Test Executive Program Diagnosis Reference, SY33-9105

VSE/Priority Output Writers, Execution Processors, and Input Readers Version 2, Release 3 (VSE/POWER)

VSE/POWER Program Summary, GC33-6273

VSE/POWER Installation and Operations Guide, SH12-5329

VSE/POWER Application Programming, SC33-6276

VSE/POWER Remote Job Entry User's Guide, SH12-5328

VSE/POWER Networking User's Guide, SC33-6140

VSE/POWER Reference Summary, SH12-5435

VSE/Virtual Storage Access Method Version 1, Release 3 (VSE/VSAM)

VSE/VSAM General Information, GC24-5143

Using VSE/VSAM Commands and Macros, SC24-5144

VSE/VSAM Documentation Subset, SC24-5191

VSE/VSAM Programmer's Reference, SC24-5145

VSE/VSAM Features

Using the VSE/VSAM Backup/Restore Feature, SC24-5216

Using the VSE/VSAM Space Management for SAM Feature, SC24-5192

Glossary

This glossary defines terms as they are used in the VSE/SP library.

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. Advanced Communications Function.

ACF/NCP. Advanced Communications Function for the Network Control Program. Synonym for *NCP*.

ACF/SSP. Advanced Communications Function for the System Support Programs. Synonym for *SSP*.

ACF/VTAM. (Advanced Communication Function for Virtual Telecommunications Access Method) An IBM licensed program that controls communication and the flow of data in an SNA network. It provides single-domain, multiple-domain, and interconnected network capability.

activate. To make a resource of a node ready to perform the functions for which it was designed. Contrast with *deactivate*.

active. (1) The state a resource is in when it has been activated and is operational. Contrast with *inactive*, *pending*, and *inoperative*. (2) Pertaining to a major or minor node that has been activated by VTAM. Most resources are activated as part of VTAM start processing or as the result of a VARY ACT command.

Advanced Communications Function (ACF). A group of IBM licensed programs (principally VTAM, TCAM, NCP, and SSP) that use the concepts of Systems Network Architecture (SNA), including distribution of function and resource sharing.

*** address.** See device address.

alternate index. In systems with VSE/VSAM, a collection of index entries related to a given base cluster and organized by an alternate key, that is, a key other than the prime key of the associated base cluster data records. Its function is to provide an alternate directory of locating records in the data component of a base cluster.

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.

application program major node. A group of application program minor nodes. In the VTAM definition library, it is a member, book, or file that contains one or more APPL statements, which represent application programs. In MVS, it is a member of the library; in VSE, it is a book; and in VM, it is a CMS file of filetype VTAMLST.

ASCII. American National Standard Code for Information Interchange. The standard code, using a coded character set consisting of 7-bit coded characters, used for information interchange among data processing systems, data communication systems, and associated equipment. The ASCII set consists of control characters and graphic characters.

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.

base file. In systems with VSE/VSAM, a key-sequenced or entry-sequenced file containing data. It can be accessed directly or via alternate indexes.

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.

binary synchronous communication (BSC).

(1) Communication using binary synchronous line discipline. (2) A uniform procedure, using a standardized set of control characters and control character sequences, for synchronous transmission of binary-coded data between stations. using binary synchronous line discipline. (3) A uniform procedure, using a standardized set of control characters and control character sequences, for synchronous transmission of binary-coded data between stations.

bps. (bits per second) In serial transmission, the instantaneous bit speed with which a device or channel transmits a character.

BSC. see binary synchronous communication

BTAM-ES. (Basic Telecommunication Access Method Extended Storage) An IBM-supplied telecommunication access method. It permits read and write communication with remote devices.

B-transient. A phase with a name beginning with \$\$B and running in the Logical Transient Area (LTA). Such a phase is activated by special Supervisor calls.

CDRM. Cross-domain resource manager.

CDRSC. Cross-domain resource.

channel. A functional unit, controlled by the processor, that handles the transfer of data between processor storage and local peripheral equipment.

CDRSC. Cross-domain resource.

channel adapter. A communication controller hardware unit used to attach the controller to a System/360 or a System/370 channel.

channel-attached. Pertaining to the attachment of devices directly by data channels (I/O channels) to a host processor. Contrast with *link-attached*. Synonymous with *local-attached*.

channel-attachment major node. (1) A major node that includes an NCP that is channel-attached to a data host. (2) A major node that may include minor nodes that are the line groups and lines that represent a channel attachment to an adjacent (channel-attached) host. (3) In VM or VSE operating systems, a major node that may include minor nodes that are resources (host processors, NCPs, line groups, lines, SNA physical units and logical units, cluster controllers, and terminals) attached through a communication adapter.

character-coded. Synonym for *unformatted*.

CICS/DOS/VS. (Customer Information Control System/Disk Operating System/Virtual Storage) A general-purpose licensed program 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.

cluster controller. A device that can control the input/output operations of more than one device connected to it. A cluster controller may be controlled by a program stored and executed in the unit; for example, the IBM 3601 Finance Communication Controller. Or it may be controlled entirely by hardware; for example, the IBM 3272 Control Unit.

CNM. Communication network management.

communication adapter. An optional hardware feature, available on certain processors, that permits communication lines to be attached to the processors.

communication controller. A type of communication control unit whose operations are controlled by one or more programs stored and executed in the unit; for example, the IBM 3725 Communication Controller. It manages the 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.

communication identifier (CID). In VTAM, a key for locating the control blocks that represent a session. The key is created during the session-establishment procedure and deleted when the session ends.

communication line. Depreciated term for *telecommunication line* and *transmission line*.

communication network management (CNM). The process of designing, installing, operating, and managing the distribution of information and controls among end users of communication systems.

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.

connection. Synonym for *physical connection*.

*** 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.

converted command. An intermediate form of a character-coded command produced by VTAM through use of an unformatted system services definition table. The format of a converted command is fixed; the unformatted system services definition table must be constructed in such a manner that the character-coded command (as entered by a logical unit) is converted into the predefined, converted command format. See also *unformatted*.

CR/LF (carriage return/line feed). CR/LF characters (X'0D0A') are used to delimit logical records in a PC file.

cross-domain. In SNA, pertaining to control of resources involving more than one domain.

cross-domain resource (CDRSC). A resource owned by a cross-domain resource manager (CDRM) in another domain but known by the CDRM in this domain by network name and associated CDRM.

cross-domain resource manager (CDRM). In VTAM, the function in the system services control point (SSCP) that controls initiation and termination of cross-domain sessions.

CUT (Control Unit Terminal) mode. IBM PCs operating in CUT mode are defined to VSE/SP like a 3278-2 or 3279-2A display station. No special features are required for the CICS/DOS/VS Terminal Control Table (DFHTCT).

Data Conversion Descriptor File. See DCDF.

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 link. In SNA, synonym for *link*.

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.

DCDF (Data Conversion Descriptor File). With your PC you can send data to or receive data from the host. When issuing a SEND/RECEIVE command you can specify the name of the DCDF. With a DCDF you can convert individual fields within a record during data transfer. A DCDF defines the record layout (fields) of a particular file for both, the PC and the host environment. It consists of a header record and one or more field records.

deactivate. To take a resource of a node out of service, rendering it inoperable, or to place it in a state in which it cannot perform the functions for which it was designed. Contrast with *activate*.

definition statement. (1) In VTAM, the statement that describes an element of the network. (2) In NCP, a type of instruction that defines a resource to the NCP. See also *macro instruction*.

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.

DFT. See distributed function terminal

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.

distributed function terminal mode. A mode which offers several host sessions simultaneously using windows.

distribution tape. A magnetic tape that contains an IBM licensed program like VSE/SP. This tape is shipped to the customer for program installation.

DITTO. (Data Interfile Transfer, Testing, and Operations Utility) An IBM licensed program that provides file-to-file services for card I/O, magnetic tape, and disk devices.

domain. (1) An access method, its application programs, communication controllers, connecting lines, modems, and attached terminals. (2) In SNA, a system services control point (SSCP) and the physical units (PUs), logical units (LUs), links, link stations, and all the associated resources that the SSCP has the ability to control by means of activation requests and deactivation requests. See also *single-domain network* and *multiple-domain network*.

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.

duplex. * In data communication, pertaining to a simultaneous two-way independent transmission in both directions. Synonymous with *full duplex*. Contrast with *half duplex*.

EBCDIC. Extended binary-coded decimal interchange code. A coded character set consisting of 8-bit coded characters.

Emulation Program (EP). An IBM control program that allows a channel-attached 3705 or 3725 communication controller to emulate the functions of an IBM 2701 Data Adapter Unit, an IBM 2702 Transmission Control, or an IBM 2703 Transmission Control. See also *network control program*.

end user. In SNA, the ultimate source or destination of application data flowing through an SNA network. An end user may be an application program or a terminal operator.

EP. Emulation Program.

ER. (1) Explicit route. (2) Exception response.

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.

ESDS. (Entry Sequenced Data Set) A VSE/VSAM file whose records are loaded without respect to their contents, and whose relative byte addresses cannot change. Records are retrieved and stored by addressed access, and new records are added at the end of the data set.

explicit route (ER). In SNA, the path control network elements, including a specific set of one or more transmission groups, that connect two subarea nodes. An explicit route is identified by an origin subarea address, a destination subarea address, an explicit route number, and a reverse explicit route number. Contrast with *virtual route (VR)*. See also *path* and *route extension*.

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.

FCOPY. See VSE/FCOPY.

field-formatted. Pertaining to a request or response that is encoded into fields, each having a specified format such as binary codes, bit-significant flags, and symbolic names. Contrast with *character-coded*.

*** file.** (1) A set of related records that are treated as a unit. (2) Also known as a data set.

formatted system services. A portion of VTAM that provides certain system services as a result of receiving a field-formatted command, such as an Initiate or Terminate command. Contrast with *unformatted system services (USS)*. See also *field-formatted*.

FULIST (Function LIST). A FULIST displays a list of items which you can process, for example, VSE/ICCF library

Glossary

members, VSE/VSAM files, VSE/POWER queue entries, or files in the host transfer file.

full duplex (FDX). Synonym for *duplex*.

generation. The process of assembling and link editing definition statements so that resources can be identified to all the necessary programs in a network.

generation definition. The definition statement of a resource used in generating a program.

global command. A global command must be typed into the global command area which is usually located at the top of the screen. It allows the user to change or delete the same word or character string throughout a library member.

half-duplex. * In data communication, pertaining to an alternate, one way at a time, independent transmission. Contrast with *duplex*.

* **hardware.** (1) Physical equipment used in data processing, as opposed to computer programs, procedures, rules, and associated documentation. Contrast with software.

help panel. An online display that tells you how to use a command or another aspect of a product. See *task panel*.

host (operating) mode. When working at your PC in this mode, you can access the VSE/SP Interactive Interface in the same way as a 3270 user. For Intelligent Work Station (IWS) functions, you can use the *Move Utilities* of VSE/SP.

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).

Host Transfer File. See HTF.

HTF. (Host Transfer File) Used by the IWS support of VSE/SP as holding area for files that are sent to and from IBM Personal Computers.

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.

inactive. In VTAM, describes the state of a resource that has not been activated or for which the VARY INACT command has been issued. Contrast with *active*. See also *inoperative*.

inoperative. The condition of a resource that has been active, but is not. The resource may have failed, received an INOP request, or is suspended while a reactivate command is being processed. See also *inactive*.

Intelligent Workstation Support. See IWS.

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.

Interactive Interface. The Interactive Interface controls how different people see and work with the system by means of *user profiles*. When signing on, the Interactive Interface makes available those parts of the system authorized by the profile. The Interactive Interface has an extensive set of selection and data entry panels that acts as a buffer between users and system components. Through these panels, users communicate with the system and supply it with information to do something for them.

IWS. (Intelligent Workstation Support) Enables the exchange of data between IBM Personal Computers. The data is first stored in the VSE/SP host system. Users can retrieve that data and work with it independent of VSE/SP.

* **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.

IUCV. (Interactive User Communication Vehicle) The IUCV support allows you to communicate with other users or CP in the same way you would with a nonpreferred guest.

IWS PC dialog. The IWS PC dialog is shipped with the host system (VSE/SP) and has to be downloaded to an IBM Personal Computer before it can be invoked. It then allows you to issue SEND/RECEIVE commands, thus transferring data to/from your IBM Personal Computer.

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.

JECL. (Job Entry Control Language) A control language that allows the programmer to specify how VSE/POWER handles a certain job.

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.

KSDS. (Key Sequenced Data Set). A VSE/VSAM file whose records are loaded in key sequence and controlled by an index. Records are retrieved and stored by keyed access or by addressed access, and new records are inserted in key sequence by means of distributed free space. Relative byte address of records can change, because of control interval or control area splits.

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 VSE/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 *communication line*.

line commands. VSE/ICCF has special line commands that let you change individual lines on your screen. Line commands you type into the 'line command area' associated with the line you want to add/move/copy/delete.

link. In SNA, the combination of the link connection and the link stations joining network nodes; for example: (1) a System/370 channel and its associated protocols, (2) a serial-by-bit connection under the control of Synchronous Data Link Control (SDLC). A link connection is the physical medium of transmission. A link, however, is both logical and physical. Synonymous with *data link*.

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.

link-attached. In VTAM, pertaining to devices that are physically connected by a telecommunication line. Synonymous with *remote*. Contrast with *channel-attached*.

local address. In SNA, an address used in a peripheral node in place of an SNA network address and transformed to or from an SNA network address by the boundary function in a subarea node.

local-attached. Deprecated term for *channel-attached*.

local SNA major node. In VTAM, a major node whose minor nodes are channel-attached peripheral nodes.

logical unit (LU). In SNA, a port through which an end user accesses the SNA network in order to communicate with another end user and through which the end user accesses the functions provided by system services control points (SSCPs). An LU can support at least two sessions—one with an SSCP and one with another LU—and may be capable of supporting many sessions with other logical units. See also *network addressable unit (NAU)*, *peripheral LU*, *physical unit (PU)*, *system services control point (SSCP)*, *primary logical unit (PLU)*, and *secondary logical unit (SLU)*. Contrast with *physical unit (PU)*.

logo. A trademark or other art work that is associated with a firm or product. Related to the terms *logotype* and *logogram*.

logon mode. In VTAM, a subset of session parameters specified in a logon mode table for communication with a logical unit. See also *session parameters*.

logon mode table. In VTAM, a set of entries for one or more logon modes. Each logon mode is identified by a logon mode name.

logon-interpret routine. In VTAM, an installation exit routine, associated with an interpret table entry, that translates logon information. It may also verify the logon.

LU. Logical unit.

LU-LU session. In SNA, a session between two logical units (LUs) in an SNA network. It provides communication between two end users, or between an end user and an LU services component.

macro instruction. (1) * (ISO) An instruction in a source language that is to be replaced by a defined sequence of instructions in the same source language. The macro instruction may also specify values for parameters in the instructions that are to replace it. (2) In assembler programming, an assembler language statement that causes the assembler to process a predefined set of statements called a macro definition. The statements normally produced from the macro definition replace the macro instruction in the program. See also *definition statement*.

major node. In VTAM, a set of resources that can be activated and deactivated as a group. See *node* and *minor node*.

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.

minor node. In VTAM, a uniquely-defined resource within a major node. See *node* and *major node*.

modem. A device that modulates and demodulates signals transmitted over data communication facilities. The term is a contraction for modulator-demodulator.

MSHP. (Maintain System History Program) A program used for automating and controlling various installation, tailoring, and service activities for a VSE system.

multiple-domain network. In SNA, a network with more than one system services control point (SSCP). Contrast with *single-domain network*.

MVS/SP. (Multiple Virtual Storage/System Product) A licensed program that is an extension of OS/VS2.

native (PC operating) mode. In this mode you are using the native functions and facilities of your PC. For example, you are editing or changing a file on your disk.

NAU. Network addressable unit.

NCCF. Network Communications Control Facility.

NCP. (1) Network Control Program (IBM licensed program). Its full name is Advanced Communications Function for the Network Control Program. (2) Network control program (general term).

NCP major node. In VTAM, a set of minor nodes representing resources, such as lines and peripheral nodes, controlled by a network control program. See *major node*.

NetView. An IBM licensed program used to monitor a network, manage it, and diagnose its problems.

network. (1) * An interconnected group of nodes. (2) The assembly of equipment through which connections are made between data stations.

network address. In SNA, an address, consisting of subarea and element fields, that identifies a link, a link station, or a network addressable unit. Subarea nodes use network addresses; peripheral nodes use local addresses. The boundary function in the subarea node to which a peripheral node is attached transforms local addresses to network addresses and vice versa. See *local address*. See also *network name*.

network addressable unit (NAU). In SNA, a logical unit, a physical unit, or a system services control point. It is the origin or the destination of information transmitted by the path control network. Each NAU has a network address that represents it to the path control network. See also *network name*, *network address*, and *path control network*.

Network Communications Control Facility (NCCF). (1) An IBM licensed program that is a base for command processors that can monitor, control, and improve the operations of a network. Its function is included and enhanced in NetView's command facility. (2) A traditional, alternative name for the command facility of NetView.

Network Control Program (NCP). An IBM licensed program that provides communication controller support for single-domain, multiple-domain, and interconnected network

capability. Its full name is Advanced Communications Function for the Network Control Program.

network control program. A program, generated by the user from a library of IBM-supplied modules, that controls the operation of a communication controller.

networking. In a multiple-domain network, communication among domains.

Network Logical Data Manager (NLDM). (1) An IBM licensed program that collects and correlates session-related data and provides online access to this information. It runs as an NCCF communication network management (CNM) application program. Its function is included and enhanced in NetView's session monitor. (2) A traditional, alternative name for the session monitor of NetView.

network name. (1) In SNA, the symbolic identifier by which end users refer to a network addressable unit (NAU), a link, or a link station. See also *network address*. (2) In a multiple-domain network, the name of the APPL statement defining a VTAM application program is its network name and it must be unique across domains. Contrast with *ACB name*. See *uninterpreted name*.

network node. Synonym for *node*.

network operator. (1) A person or program responsible for controlling the operation of all or part of a network. (2) The person or program that controls all the domains in a multiple-domain network. Contrast with *domain operator*.

Network Terminal Option (NTO). An IBM licensed program that allows certain non-SNA devices to participate in sessions with SNA application programs in the host processor. NTO converts non-SNA protocol to SNA protocol when data is sent to the host from a non-SNA device and reconverts SNA protocol to non-SNA protocol when data is sent back to the device.

NLDM. Network Logical Data Manager.

node. (1) In SNA, an endpoint of a link or junction common to two or more links in a network. Nodes can be distributed to host processors, communication controllers, cluster controllers, or terminals. Nodes can vary in routing and other functional capabilities. (2) In VTAM, a point in a network defined by a symbolic name. Synonymous with *network node*. See *major node* and *minor node*.

node name. In VTAM, the symbolic name assigned to a specific major or minor node during network definition.

node type. In SNA, a designation of a node according to the protocols it supports and the network addressable units (NAUs) that it can contain. Four types are defined: 1, 2, 4, and 5. Type 1 and type 2 nodes are also referred to as peripheral nodes and type 4 and type 5 nodes are also referred to as subarea nodes. See also *physical unit type*.

nonswitched line. A telecommunication line on which connections do not have to be established by dialing. Contrast with *switched line*.

NTO. Network Terminal Option.

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.

packet. A sequence of binary digits including data and call control signals that is sent as a composite whole. The data, call control signals, and possibly error control information, are arranged in a specific format.

packet switching. * (TC97) The processing of routing and transferring data by means of addressed packets so that a channel is occupied only during the transmission of a packet. Upon completion of the transmission, the channel is made available for the transfer of other packets.

packet-switched data network (PSDN). A public data network established and operated by network common carriers or telecommunication administrations for providing packet switched data transmission.

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 manual; that is, you go backward and forward through panels, just like you do when turning a manual'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.

partitioned emulation programming (PEP) extension. A function of a network control program that enables a communication controller to operate some telecommunication lines in network control mode while simultaneously operating others in emulation mode.

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.

path. (1) In SNA, the series of path control network components (path control and data link control) that are traversed by the information exchanged between two network addressable units (NAUs). A path consists of a virtual route and its route extension, if any. See also *explicit route*. (2) In defining a switched major node, a potential dial-out port that can be used to reach a physical unit.

pending active session. In VTAM, the state of an LU-LU session recorded by the system services control point (SSCP) when it finds both logical units (LUs) available and has sent a CINIT request to the primary logical unit (PLU) of the requested session.

PEP. Partitioned emulation programming.

peripheral LU. In SNA, a logical unit representing a peripheral node.

peripheral node. In SNA, a node that uses local addresses for routing and therefore is not affected by changes in network addresses. A peripheral node requires boundary function assistance from an adjacent subarea node. A peripheral node is a type 1 or type 2 node connected to a subarea node.

peripheral PU. In SNA, a physical unit representing a peripheral node.

phase. The smallest unit of executable code that can be referred to in a program library.

physical unit (PU). In SNA, one of three types of network addressable units (NAUs). Each node of an SNA network contains a physical unit (PU) that manages and monitors the resources (such as attached links) of a node, as requested by a system services control point (SSCP) via an SSCP-PU session. An SSCP activates a session with the physical unit in order to indirectly manage, through the PU, resources of the node such as attached links. See also *peripheral PU*, *physical unit (PU) type*, and *subarea PU*.

physical unit (PU) type. In SNA, the classification of a physical unit (PU) according to the type of node in which it resides. The PU type is the same as its node type; that is, a type 1 PU resides in a type 1 node, and so forth.

PLU. Primary logical unit.

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.

primary logical unit (PLU). In SNA, the logical unit (LU) that contains the primary half-session for a particular LU-LU session. Each session must have a PLU and secondary logical unit (SLU). The PLU is the unit responsible for the bind and is the controlling LU for the session. A particular LU may contain both primary and secondary half-sessions for different active LU-LU sessions. Contrast with *secondary logical unit (SLU)*.

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.

protocol. (1) (CCITT/ITU) A specification for the format and relative timing of information exchanged between communicating parties. (2) * (TC97) The set of rules governing the operation of functional units of a communication system that must be followed if communication is to be achieved. (3) In SNA, the meanings of, and the sequencing rules for, requests and responses used for managing the network, transferring data, and synchronizing the states of network components. See also *bracket protocol*. Synonymous with *line control discipline* and *line discipline*. See also *link protocol*.

PSDN. Packet-switched data network.

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.

PU. Physical unit.

PU type. Physical unit type.

public network. A network established and operated by communication common carriers or telecommunication Administrations for the specific purpose of providing circuit-switched, packet-switched, and leased-circuit services to the public. Contrast with *user-application network*.

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.

Recommendation X.25 (Geneva 1980). A Consultative Committee on International Telegraph and Telephone (CCITT) recommendation for the interface between data terminal equipment and packet-switched data networks. See also *packet switching*.

*** record.** A collection of related data or words, treated as a unit (for example, in stock control, each invoice could constitute one record).

record formatted maintenance statistics (RECFMS). In NetView, a statistical record built by an SNA controller and usually solicited by the host.

refresh. In VSE/SP, this refers to an upgraded VSE/SP system with the latest level of maintenance.

remote. Synonym for *link-attached*.

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.

RJE work station. An IBM PC that has an SDL Communication Adapter and the SNA 3270 Emulation and RJE Support Program installed can operate either as a 3270 display station or as a 3770 RJE work station.

RRDS. (Relative Record Data Set) A VSAM file whose records are loaded into fixed-length slots and represented by the relative-record numbers of the slots they occupy.

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.

SAM. Sequential Access Method.

SDLC. See synchronous data link control.

secondary logical unit (SLU). In SNA, the logical unit (LU) that contains the secondary half-session for a particular LU-LU session. An LU may contain secondary and primary half-sessions for different active LU-LU sessions. Contrast with *primary logical unit (PLU)*.

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 to 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.

session parameters. In SNA, the parameters that specify or constrain the protocols (such as bracket protocol and pacing) for a session between two network addressable units. See also *logon mode*.

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.

single-domain network. In SNA, a network with one system services control point (SSCP). Contrast with *multiple-domain network*.

skeleton. In VSE/SP, an incomplete job for a specific task provided in a VSE/ICCF library. The user completes the job by changing variables and parameters.

SNA. See Systems Network Architecture

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.

SS. Start-stop.

SSCP. System services control point.

SSCP-LU session. In SNA, a session between a system services control point (SSCP) and a logical unit (LU); the session enables the LU to request the SSCP to help initiate LU-LU sessions.

SSCP-PU session. In SNA, a session between a system services control point (SSCP) and a physical unit (PU); SSCP-PU sessions allow SSCPs to send requests to and

receive status information from individual nodes in order to control the network configuration.

SSCP-SSCP session. In SNA, a session between the system services control point (SSCP) in one domain and the SSCP in another domain. An SSCP-SSCP session is used to initiate and terminate cross-domain LU-LU sessions.

SSP. System Support Programs (IBM licensed program). Its full name is Advanced Communications Function for System Support Programs.

start option. In VTAM, a user-specified or IBM-supplied option that determines certain conditions that are to exist during the time a VTAM system is operating. Start options can be predefined or specified when VTAM is started.

start-stop system. * (TC97) A data transmission system in which each character id preceded by a start signal and is followed by a stop signal.

station. (1) One of the input or output points of a network that uses communication facilities; for example, the telephone set in the telephone system or the point where the business machine interfaces with the channel on a leased private line. (2) One or more computers, terminals, or devices at a particular location.

*** 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.

subarea (SA). A portion of the SNA network consisting of a subarea node, any attached peripheral nodes, and their associated resources. Within a subarea node, all network addressable units, links, and adjacent link stations (in attached peripheral or subarea nodes) that are addressable within the subarea share a common subarea address and have distinct element addresses.

subarea address. In SNA, a value in the subarea field of the network address that identifies a particular subarea. See also *element address*.

subarea link. In SNA, a link that connects two subarea nodes.

subarea PU. In SNA, a physical unit (PU) in a subarea node.

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.

switched line. A communication line in which the connection between the communication controller and a remote link station is established by dialing.

switched major node. In VTAM, a major node whose minor nodes are physical units and logical units attached by switched SDLC links.

switched virtual circuit (SVC). An X.25 NPSI circuit that is dynamically established when needed. The X.25 equivalent of a switched line.

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.

*** system console.** A functional unit containing devices that are used for communication between a computer operator and a data processing system.

system library. In VSE/SP, the library IJSYSRS is often referred to as the *system library*. IJSYSRS is a VSE library allocated on the disk volume DOSRES. It is the only library necessary to IPL the system.

system refresh. In VSE/SP, this refers to an upgraded VSE/SP system with the latest level of maintenance.

system services control point (SSCP). In SNA, a focal point within an SNA network for managing the configuration, coordinating network operator and problem determination requests, and providing directory support and other session services for end users of the network. Multiple SSCPs, cooperating as peers, can divide the network into domains of control, with each SSCP having a hierarchical control relationship to the physical units and logical units within its domain.

Systems Network Architecture (SNA). The description of the logical structure, formats, protocols, and operational sequences for transmitting information units through and controlling the configuration and operation of networks.

System Support Programs (SSP). An IBM licensed program, made up of a collection of utilities and small programs, that supports the operation of the NCP.

task panel. Online display from which you communicate with the program in order to accomplish the program's function, either by selecting an option provided on the panel or by entering an explicit command. See *help panel*.

telecommunication. The transmission of data between computer systems and between such a system and remote devices.

telecommunication line. Any physical medium such as a wire or microwave beam, that is used to transmit data. Synonymous with *transmission line*.

teletypewriter exchange service (TWX). Teletypewriter service in which suitably arranged teletypewriter stations are provided with lines to a central office for access to other such stations throughout the U.S. and Canada. Both baudot and ASCII-coded machines are used. Business machines may also be used with certain restrictions.

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.

token. A sequence of bits passed from one device to another along the network.

token-ring. A network configuration where a series of attaching devices are connected by unidirectional transmission links to form a closed path. Tokens are passed from adapter to adapter.

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.

transmission group (TG). In SNA, a group of links between adjacent subarea nodes, appearing as a single logical link for routing of messages. A transmission group may consist of one or more SDLC links (parallel links) or of a single System/370 channel.

transmission line. Synonym for *telecommunication line*.

TWX. teletypewriter exchange service

unformatted. In VTAM, pertaining to commands (such as LOGON or LOGOFF) entered by an end user and sent by a logical unit in character form. The character-coded command must be in the syntax defined in the user's unformatted system services definition table. Synonymous with *character-coded*. Contrast with *field-formatted*.

unformatted system services (USS). In SNA products, a system services control point (SSCP) facility that translates a character-coded request, such as a logon or logoff request into a field-formatted request for processing by formatted system services and translates field-formatted replies and responses into character-coded requests for processing by a logical unit. Contrast with *formatted system services*. See also *converted command*.

USS. Unformatted system services.

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.

V1 (version 1) format. If VSE licensed programs are shipped in V1 format, they are distributed in the librarian format of pre-Version 2 VSE/Advanced Functions. One licensed program resides on a single tape.

V2 (version 2) format. If VSE licensed programs are shipped in V2 format, they are distributed in the librarian format of VSE/Advanced Functions Version 2. Optional Licensed programs are stacked on tape; other VSE licensed programs are not. If there are optional licensed programs on the tape, the tape can be scanned to determine the space needed by each licensed program on tape.

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 route (VR). In SNA, a logical connection (1) between two subarea nodes that is physically realized as a particular explicit route, or (2) that is contained wholly within a subarea node for intra-node sessions. A virtual route between distinct subarea nodes imposes a transmission priority on the underlying explicit route, provides flow control through virtual-route pacing, and provides data integrity through sequence numbering of path information units (PIUs).

*** 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.

Virtual Telecommunications Access Method (VTAM). See ACF/VTAM.

VMCF. Virtual Machine Communication Facility

VM/SP. (Virtual Machine/System Product) A licensed program 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.

volatility. The percentage of records on a file that are added or deleted in a run.

volume. A disk pack, tape reel, or diskette (pack).

volume identifier (VOLID). This is the volume serial number which is a number in a volume label that is assigned when a volume is prepared for use in the system.

VR. Virtual route.

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 licensed program 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 licensed program 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.

VTAM. See ACF/VTAM.

VTAM application program. A program that has opened an ACB to identify itself to VTAM and can now issue VTAM macro instructions.

X.25. See *Recommendation X.25 (Geneva 1980)*.

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Default Selection Panel Hierarchy for System Administrator

VSE/SP Function Selection

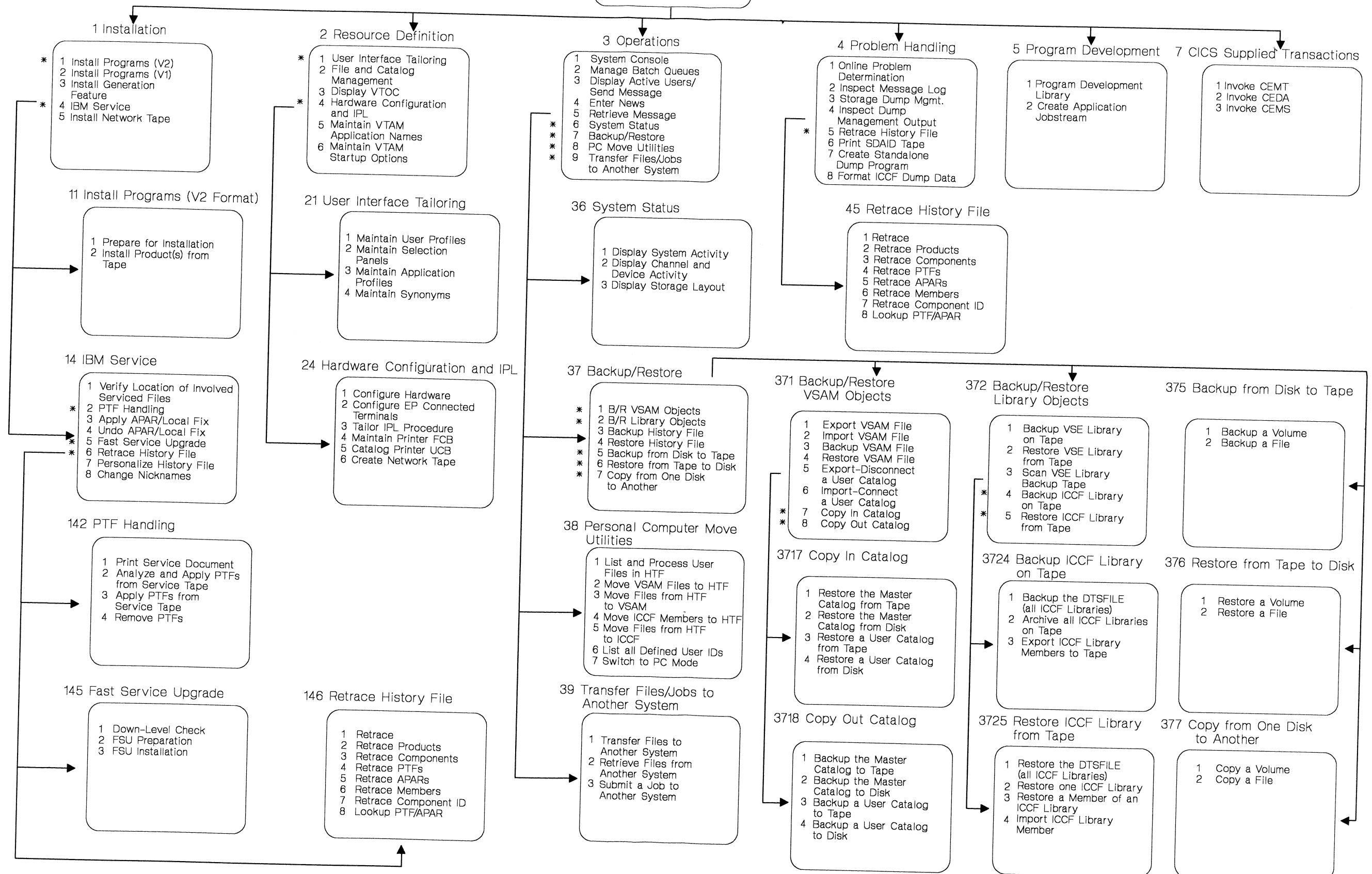
- * 1 Installation
- * 2 Resource Definition
- * 3 Operations
- * 4 Problem Handling
- * 5 Program Development
- * 6 Command Mode
- * 7 CICS Supplied Transactions

* Selection Panel

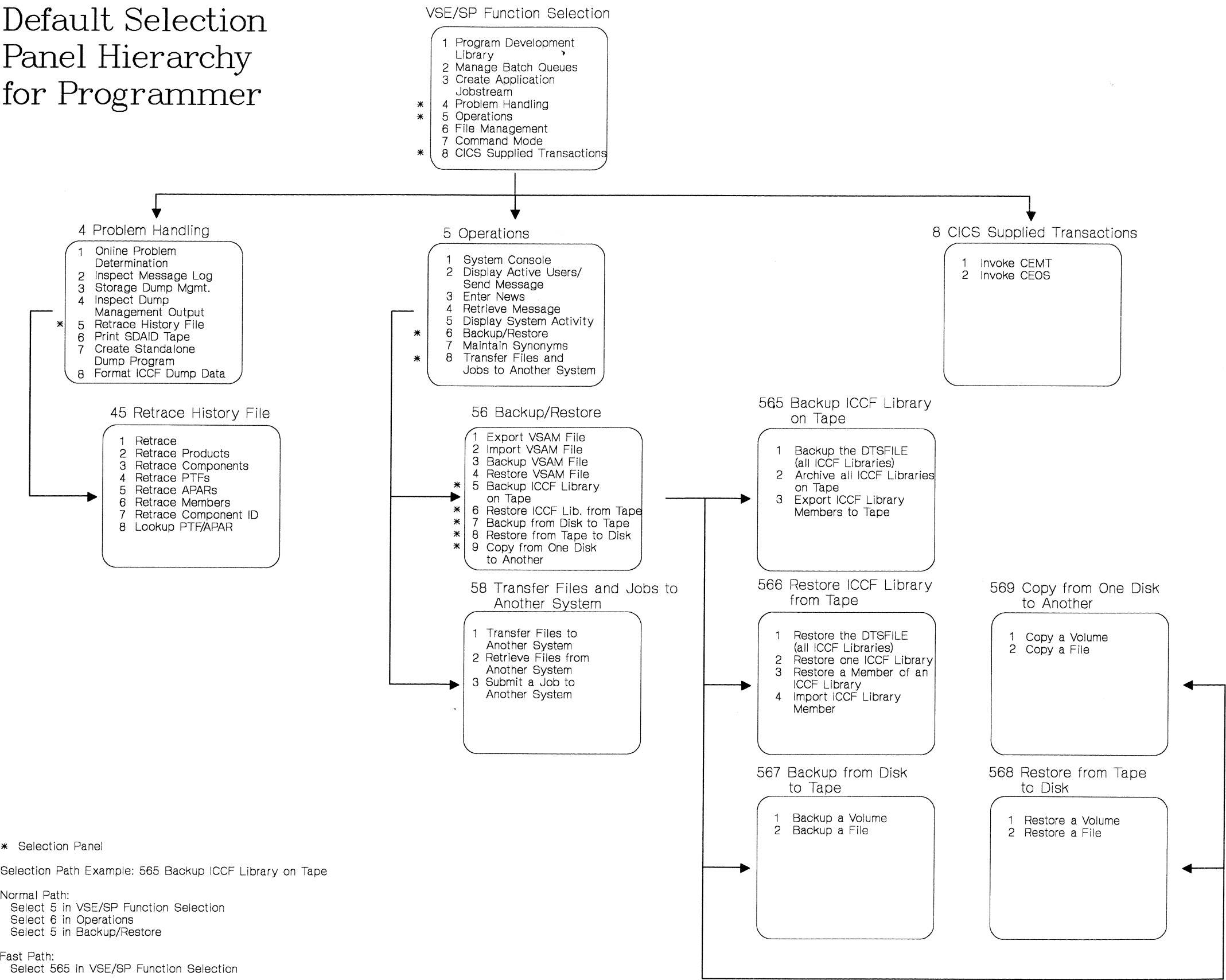
Selection Path Example: 372 B/R Library Objects

Normal Path:
Select 3 in VSE/SP Function Selection
Select 7 in Operations
Select 2 in Backup/Restore

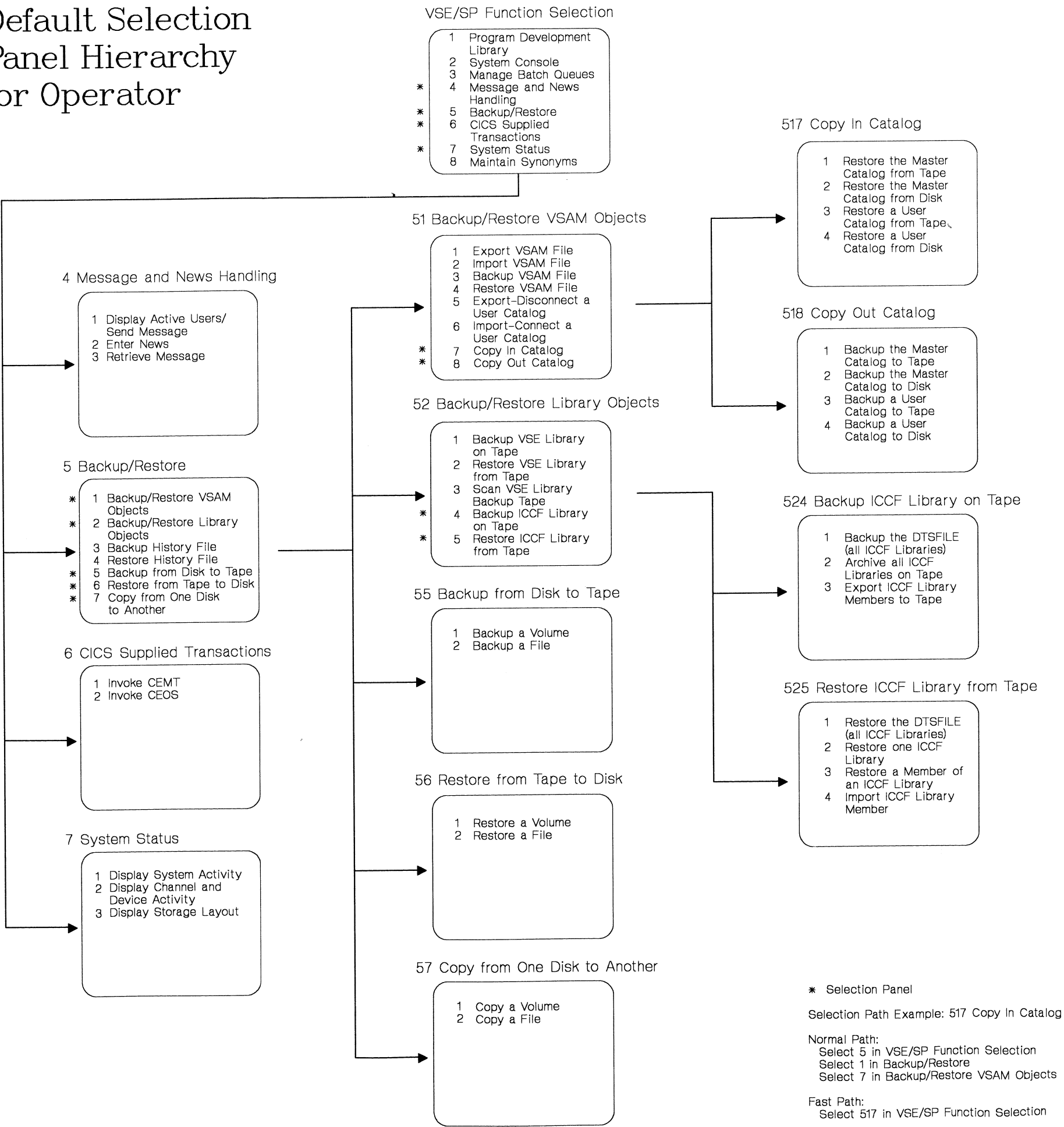
Fast Path:
Select 372 in VSE/SP Function Selection



Default Selection Panel Hierarchy for Programmer



Default Selection Panel Hierarchy for Operator



IBM Virtual Storage Extended/
System Package
System Planning
Order No. SC33-6304-00

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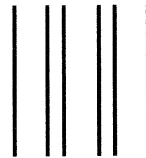
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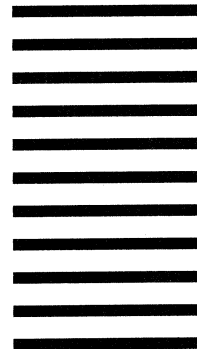
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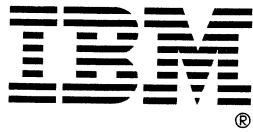
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