Program Directory
for use with

Interactive System Productivity Facility/
Program Development Facility Version 3
with National Language Support
for
VM

5684-123
Release 2, Modification Level 0

Document Number GI10-8150-00

This Program Directory is delivered with program number 5684-123 for the following feature number(s):

5810/5811/5812/5814/5820/5821/5822/5824/5830/5831/5832/5834/5840/5841/5842/5844/5850/5851/5852/5854

This directory contains information concerning the material and procedures associated with the installation of this program.

You should read all of it before installing the program, and then keep it for future reference.

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Preface

This document is intended for the system programmer responsible for program installation and maintenance. This document contains the following sections:

- Program Materials

    This section identifies the basic and optional program materials and documentation for ISPF/PDF 3.2.0 for VM.

- Program Support

    This section describes the IBM support available for ISPF/PDF 3.2.0 for VM.

- Program and Service Level Information

    This section lists the APARs (program level) and PTFs (service level) integrated into ISPF/PDF 3.2.0 for VM.

- Installation Requirements and Considerations

    This section identifies the resources and considerations for the installation and use of ISPF/PDF 3.2.0 for VM.

    Note: The fix for the NLS APAR VM43115 for ISPF 3.2 must be installed in order to use the National Language Support (NLS) feature of ISPF 3.2.0.

- Installation Instructions

    This section provides detailed installation instructions for ISPF/PDF 3.2.0 for VM.

    It also describes the procedures for activating the functions of ISPF/PDF 3.2.0 for VM.

- Appendix A. INSTALLATION EXEC MESSAGES

    This section discusses the Installation EXEC.

- Appendix B. ISRSAVE EXEC MESSAGES

    This section discusses the ISRSAVE EXEC.

- Appendix C. FLMSAVE EXEC MESSAGES

    This section discusses the FLMSAVE EXEC.

- Appendix D. Check SCRIPT/VS Command Name

    This section discusses the SCRIPT/VS command Name.

- Appendix E. Installing Corrective Service

    This section discusses the procedure for installing corrective service.

- Appendix F. Reader's Comment Form

Before installing ISPF/PDF 3.2.0 for VM, read the section 3.2, "Preventive Service Planning" on page 6. This section tells you how to find any updates to the information and procedures in this Program Directory.

This Program Directory is intended to help the customer to install ISPF/PDF 3.2.0 for VM. It contains the requirements and instructions for installing ISPF/PDF 3.2.0 for VM. This Program Directory documents no programming interfaces for use by customers in writing programs that request or receive the services of ISPF/PDF 3.2.0 for VM.

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Contents

Tables and Figures

1.0 Introduction

This Program Directory describes the installation of ISPF/PDF 3.2.0 for VM.

This version of ISPF/PDF 3.2.0 for VM is supported by the following operating systems:

- Virtual Machine/System Product (VM/SP) Release 6 (Program Number 5664-167) with or without the corresponding release of Virtual Machine/System Product High Performance Option

- Virtual Machine/Extended Architecture System Product (VM/XA SP) Release 2 (Program Number 5664-308) (S/370 Compatibility Mode only)

- Virtual Machine/Extended System Architecture (VM/ESA) Version 1, Release 1.0 (Program Number 5684-112)

These operating systems will be referred to as "VM/SP6, VM/XA and VM/ESA" respectively, and ISPF/PDF 3.2.0 for VM will be referred to as "ISPF/PDF" throughout the document.

This release includes National Language Support (NLS). National Language Support (NLS), provided by ISPF 3.2.0, gives countries whose national language is not English the option of translating commands and keywords so that users can enter them in the country's national language. In addition, display screens, messages, and literals are shipped with the product in the non-English languages. The languages supported by ISPF/PDF 3.2.0 for VM are German, Japanese (Kanji), Swiss German, and Traditional Chinese.

ISPF 3.2.0 provides the following additional National Language Support:

- KANA and NOKANA keywords for message definitions
- Default session national language
- Session national language default override.

ISPF/PDF 3.2.0 for VM provides support for double-byte character sets (DBCS) in the VM/SP6, VM/XA and VM/ESA environment. Each DBCS character is represented by two 8-bit bytes. Japanese (Kanji) is an example of double-byte character format.

ISPF/PDF 3.2.0 for VM supports double byte character sets (DBCS) within the restrictions of the host operating system. (VM/SP6 requires that CMS FULLSCREEN mode be set ON to support DBCS.)

2.0 Program Materials

An IBM program is identified by a program number. The program number for ISPF/PDF 3.2.0 for VM is 5684-123.

You can find a description of the features supported by ISPF/PDF 3.2.0 for VM in the program announcement material. See your IBM marketing representative for this information.

The following sections identify:

* The program materials available with this program

* Publications useful during installation.

2.1 Basic Machine Readable Material (MRM)

The distribution medium for this program is a 9-track magnetic tape, written at either 1600 or 6250 BPI, a 3480 tape cartridge or a 9346 tape cartridges. The tape or cartridge contains all the programs and data needed for installation. The installation EXEC for ISPF/PDF 3.2.0 is I5684123 EXEC. See 6.0, "Installation Instructions," for more information about installing the program. Figure 1 describes the tapes or cartridge.

Figure 1. Basic Material - Program Tapes for English

Feature	Track/Density or Device	External Tape Label
5810	9/1600	Basic
	9/1600	NLS (1 of 2)
	9/1600	NLS (2 of 2)
5811	9/6250	Basic
	9/6250	NLS
5812	3480	Basic
	3480	NLS
5814	9346	Basic
	9346	NLS (1 of 2)
	9346	NLS (2 of 2)

Figure 2. Basic Material - Program Tapes for German

Feature	Track/Density or Device	External Tape Label
5820	9/1600	Basic
	9/1600	NLS (1 of 2)
	9/1600	NLS (2 of 2)
5821	9/6250	Basic
	9/6250	NLS
5822	3480	Basic
	3480	NLS
5824	9346	Basic
	9346	NLS (1 of 2)
	9346	NLS (2 of 2)

Figure 3 (Page 1 of 2). Basic Material - Program Tapes for Japanese

Feature	Track/Density or Device	External Tape Label
5830	9/1600	Basic
	9/1600	NLS (1 of 2)
	9/1600	NLS (2 of 2)

Figure 3 (Page 2 of 2). Basic Material - Program Tapes for Japanese

Feature	Track/Density or Device	External Tape Label
5831	9/6250	Basic
	9/6250	NLS
5832	3480	Basic
	3480	NLS
5834	9346	Basic
	9346	NLS (1 of 2)
	9346	NLS (2 of 2)

Figure 4. Basic Material - Program Tapes for Swiss German

Feature	Track/Density or Device	External Tape Label
5840	9/1600	Basic
	9/1600	NLS (1 of 2)
	9/1600	NLS (2 of 2)
5841	9/6250	Basic
	9/6250	NLS
5842	3480	Basic
	3480	NLS
5844	9346	Basic
	9346	NLS (1 of 2)
	9346	NLS (2 of 2)

Figure 5. Basic Material - Program Tapes for Traditional Chinese

Feature	Track/Density or Device	External Tape Label
5850	9/1600	Basic
	9/1600	NLS (1 of 2)
	9/1600	NLS (2 of 2)
5851	9/6250	Basic
	9/6250	NLS
5852	3480	Basic
	3480	NLS
5854	9346	Basic
	9346	NLS (1 of 2)
	9346	NLS (2 of 2)

The following figures describe the file content of the program tapes or cartridges.

Figure 6. All Formats, BASIC - File Content

File	Name	Description
1	I5684123 032005 I5684123 EXEC	Product Identifier file Installation EXEC
2	I5684123 MEMO	Memo to Users
3	ISPF/PDF SYSTEM FILES	EXECs, TEXT decks, XEDIT macros and one MACLIB
4	SCLM SYSTEM FILES	EXECs, TEXT decks, and one MACLIB
5	SCLM HOST AGENT PARTS	TEXT decks, and one EXEC

Figure 7. 6250 BPI and 3480 Cartridge NLS - File Content

File	Name	Description
1	I5684123 032007 I5684123 EXEC	Product Identifier file Installation EXEC
2	I5684123 MEMO	Memo to Users
3	ENGLISH FILES	Panels, Messages and Skeletons
4	JAPANESE FILES	Panels, Messages and Skeletons
5	TRADITIONAL CHINESE FILES	Panels, Messages and Skeletons
6	GERMAN FILES	Panels, Messages and Skeletons
7	SWISS GERMAN FILES	Panels, Messages and Skeletons

Figure 8. 1600 BPI and 9346 Cartridge NLS (1 of 2) - File Content

File	Name	Description
1	I5684123 032005 I5684123 EXEC	Product Identifier file Installation EXEC
2	I5684123 MEMO	Memo to Users
3	ENGLISH FILES	Panels, Messages and Skeletons
4	JAPANESE FILES	Panels, Messages and Skeletons
5	TRADITIONAL CHINESE FILES	Panels, Messages and Skeletons

Figure 9. 1600 BPI and 9346 Cartridge NLS (2 of 2) - File Content

File	Name	Description
1	I5684123 032004 I5684123 EXEC	Product Identifier file Installation EXEC
2	I5684123 MEMO	Memo to Users
3	GERMAN FILES	Panels, Messages and Skeletons
4	SWISS GERMAN FILES	Panels, Messages and Skeletons

2.2 Program Publications

The following sections identify the program publications for ISPF/PDF 3.2.0 for VM, and other publications useful during installation.

2.2.1 Program Publications

Figure 10 identifies the program publications for ISPF/PDF 3.2.0 for VM. One copy of each of these publications is included when you order the basic materials for ISPF/PDF 3.2.0 for VM. For additional copies, contact your IBM marketing representative.

Figure 10. Program Publications

Publication Title	Order/Form Number
ISPF and ISPF/PDF Planning and Customizing	SC34-4305
ISPF and ISPF/PDF Master Index	SC34-4295
ISPFand ISPF/PDF Reference Summary	SC34-4309
Licensed Program Specifications	GC34-4303
ISPF/PDF Guide	SC34-4306
ISPF/PDF Services	SC34-4307
ISPF/PDF Library Management Facility	SC34-4308
Software Configuration and Library Manager (SCLM) Guide and Reference	SC34-4296
ISPF and ISPF/PDF General Information	GC34-4261

2.2.2 Publications Useful During Installation

Certain publications may be useful during the installation of ISPF/PDF 3.2.0 for VM, such as *CP Command Reference*, *Installation Guide*, and *CMS Command Reference* for the specific operating system that you are using.

3.0 Program Support

This section describes the IBM support available for ISPF/PDF 3.2.0 for VM.

3.1 Program Services

This program is classified as a Licensed Program. Contact your IBM marketing representative or Systems Engineer (SE) for specific information about available program services.

3.2 Preventive Service Planning

Before installing ISPF/PDF 3.2.0 for VM, you should also check with your IBM Support Center or use either Information/Access or IBMLink(ServiceLink) to see whether there is any additional Preventive Service Planning (PSP) information of which you should be aware. To obtain this information, specify the following UPGRADE and SUBSET values:

Figure 11. PSP/UPGRADE and SUBSET ID

Upgrade	Subset	Description
PDF320	PDFVM202	VM/PDF V3R2M0 Base
PDF320	PDFVM210	VM/PDF V3R2M0 English
PDF320	PDFVM214	VM/PDF V3R2M0 Japanese
PDF320	PDFVM230	VM/PDF V3R2M0 Traditional Chinese
PDF320	PDFVM215	VM/PDF V3R2M0 German
PDF320	PDFVM211	VM/PDF V3R2M0 Swiss German

Note:

You should install the following base PTFs on the ISPF/PDF product:

PTF UM17925, APAR VM46752
PTF UM19488, APAR VM47521
PTF UM19489, APAR VM47677

You should install the following base PTF if you have installed SCLM:

PTF UM19481, APAR VM47522

You should install the appropriate language PTFs if you have installed SCLM:

ENGLISH:
PTF UM19514, APAR VM47676
SWISS GERMAN:
PTF UM19515, APAR VM47676
JAPANESE:
PTF UM19516, APAR VM47676
GERMAN:
PTF UM19517, APAR VM47676
TRADITIONAL CHINESE:
PTF UM19518, APAR VM47676

You should install the appropriate language PTFs on the ISPF/PDF product:

ENGLISH:
PTF UM19492, APAR VM47561
PTF UM19502, APAR VM47574
PTF UM19519, APAR VM47675

SWISS GERMAN:
PTF UM19493, APAR VM47561
PTF UM19509, APAR VM47574
PTF UM19510, APAR VM47675

JAPANESE:
PTF UM19494, APAR VM47561
PTF UM19508, APAR VM47574
PTF UM19511, APAR VM47675

GERMAN:
PTF UM19495, APAR VM47561
PTF UM19503, APAR VM47574
PTF UM19512, APAR VM47675

TRADITIONAL CHINESE:
PTF UM19496, APAR VM47561
PTF UM19504, APAR VM47574
PTF UM19513, APAR VM47675

3.3 Statement of Support Procedures

Report any difficulties you have using this program to your IBM Support Center. If an APAR is required, the Support Center will ensure that it is created and assist in getting any documentation sent to the proper location.

4.0 Program and Service Level Information

This section identifies the program and service levels of ISPF/PDF 3.2.0 for VM. The program level refers to the APAR fixes that have been incorporated into the program. The service level refers to the PTFs that have been incorporated.

4.1 Program Level Information

The following APAR fixes have been incorporated into ISPF/PDF 3.2.0 for VM.

VM42299   VM43659
VM43229   VM43687

Note: The fix for the NLS APAR VM43115 for ISPF 3.2 must be installed in order to use the National Language Support (NLS) feature of ISPF 3.2.0.

4.2 Service Level Information

The following PTFs have been incorporated into ISPF/PDF 3.2.0 for VM.

UM16276
UM15824
UM15993
UM16277
UM16091

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5.0 Installation Requirements and Considerations

The following sections identify the system requirements for installing and activating ISPF/PDF 3.2.0 for VM.

5.1 Programming Systems

The following section identifies the resources and materials required to install and run ISPF/PDF 3.2.0 for VM.

5.1.1 Operating System Requirements

This version of ISPF/PDF is supported by the following operating systems:

- Virtual Machine/System Product (VM/SP) Release 6 (Program Number 5664-167) with or without the corresponding release of Virtual Machine/System Product High Performance Option
- Virtual Machine/Extended Architecture System Product (VM/XA SP) Release 2 (Program Number 5664-308) (S/370 Compatibility Mode only)
- Virtual Machine/Extended System Architecture (VM/ESA) Version 1, Release 1.0 (Program Number 5684-112)

The VM/SP6 operating system must operate with Conversational Monitor System (CMS) Release 6, and VM/XA operating system must operate with CMS Release 5.5, to install and run ISPF/PDF 3.2.0 for VM. ISPF/PDF 3.2.0 for VM operates as a CMS command processor under VM/SP6 with CMS Release 6, and VM/XA with CMS Release 5.5.

5.1.2 Programming Requirements

The following products and APARs are required:

- ISPF 3.2.0 (5684-043) is required to run ISPF/PDF 3.2.0 for VM.
- ISPF 3.2.0 APARs VM45458, VM43115, VM44707, VM44852 are required to run ISPF/PDF 3.2.0 for VM.
- ISPF/PDF APAR VM45847 is required to run SCLM while in ISPF/PDF 3.2.0 for VM.
- PASCAL Runtime Library, Version 1, Release 2 is required to install and run the SCLM part of ISPF/PDF 3.2.0 for VM.
- ESA/CMS APARS VM44106 and VM43736 are required to run ISPF/PDF 3.2.0 for VM with ESA/CMS.
- SCRIPT APAR PL77128 is required to run SCRIPT or BOOKMASTER while in ISPF/PDF 3.2.0 for VM.

5.1.3 Optional Program Interfaces

ISPF/PDF 3.2.0 for VM interfaces to the following IBM programs for foreground and batch execution. These programs are not required to operate ISPF/PDF. They may be ordered separately under IBM licensing agreements.

Figure 12. IBM Products for Foreground and Batch Execution

Program Products	Program Number
COBOL Compiler and Library	5740-CB1
VS FORTRAN Version 2 Release 3	5668-806
PL/1 Optimizing Compiler	5668-910
VS/PASCAL Compiler	5668-767
COBOL Interactive Debug	5734-CB4
Document Composition Facility(SCRIPT/VS) with the Foreground Environment (foreground only)	5748-XX9
RSCS Networking*	5748-XP1
VS COBOL II and Debug	5688-023
Assembler H	5668-962
Rexx Compiler	5664-390
VSE/VSAM Release 1.3.0 or higher	5746-AM2

 * Not required to operate ISPF/PDF 3.2.0 for VM, but must be installed if spooled output is to be sent to another node on the network. See the *ISPF/PDF Guide* for further information.

5.2 Hardware Requirements

The following section identifies the resources and materials required to install and run ISPF/PDF 3.2.0 for VM.

5.2.1 Machine Requirements

The minimum machine configuration for ISPF/PDF 3.2.0 for VM is the same as the minimum machine configuration for these operating systems:

- Virtual Machine/System Product (VM/SP) Release 6 (Program Number 5664-167) with or without the corresponding release of Virtual Machine/System Product High Performance Option

- Virtual Machine/Extended Architecture System Product (VM/XA SP) Release 2 (Program Number 5664-308) (S/370 Compatibility Mode only)

- Virtual Machine/Extended System Architecture (VM/ESA) Version 1, Release 1.0 (Program Number 5684-112)

ISPF/PDF 3.2.0 for VM requires a full screen display terminal with at least 24 lines of interactive usage. The following IBM display terminals are supported:

    3178, 3179, 3179G
    3180 [1]
    3191, 3192, 3192G, 3193
    3275 Model 2
    3275 Model 12 (using VM/VCNA)
    3276 Models 2, 3, or 4
    3276 Models 12, 13, or 14 (using VM/VCNA)
    3277 Model 2 (local or remote attachment)
    3278 Models 2, 3, 4, or 5 (local or remote attachment)
    3279 Models 2A, 3A, 2B, 3B, S3G, or 3X (local or remote)
    3290 Information Panel
    IBM PS/55 as 3270
    Any other IBM terminal that is data stream compatible with those listed.

ISPF/PDF 3.2.0 for VM does not require a display device if it is operated only in batch mode.

5.2.2 DASD Storage Requirements

The ISPF/PDF 3.2.0 for VM disk space requirements are shown in Figure 13. Disk space for the ISPF product is not included (approximately 40 cylinders minimum). Cylinder size is quoted for the IBM 3380, and provides some extra space for possible changes. However the sizes quoted below may not be adequate for MACLIB compression. You may want to allow additional space to accommodate custom tailoring and maintenance.

Figure 13. 3380 DASD Requirements for ISPF/PDF

File Type	Basic Files Only	Basic and SCLM Files	Basic, SCLM, and English Files	Basic, SCLM, English and one other language	Basic, SCLM and All Language Files
MACLIBs	12	18	36	48	84
CMS files	12	24	48	72	144
MACLIBs and CMS files	12	24	60	96	173

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[1] All operating modes (2 through 9) of the 3180 are supported. Features of the various modes of the 3180 correspond to those of four models of a 3278. Therefore, those features of a 3278 (models 2-5) that are indicated by ISPF in response to a device query are supported.

6.0 Installation Instructions

This section contains the steps to install and activate the functions of ISPF/PDF 3.2.0 for VM.

If you had ISPF/PDF installed, note that:

- The new ISPF/PDF files, with the exception of SCLM files which are prefixed with "FLM", are prefixed with "ISR".

- You must use the new ISPVM disconnected machine with the new ISPVM MODULE.

- The EXEC used to run ISPF/PDF is now *ISPF* or *PDF*. The EXEC was *SPF*. You cannot run SPF in the VM/SP Release 6 environment.

- If you have modified or extended the SPF menus, you must convert them to the new panel format, and also provide new panel and program names.

- Old foreground and background code from SPF is no longer supported.

6.1 Checklist of Major ISPF/PDF 3.2.0 for VM Installation Steps

The following is a checklist and a brief description of the major steps you will follow to install ISPF/PDF. Each of these steps is described in detail later in this chapter.

1. Create and Load the ISPF/PDF System Minidisk

   - Define and Format a New Minidisk

   - Attach the ISPF/PDF Installation Tapes and Establish Write Links to the ISPF/PDF Product Minidisk

   - Load the ISPF/PDF Installation Files

   - Run the ISPF/PDF Installation EXEC

     This procedure installs all the required ISPF/PDF files.

2. Define and Save the ISPF/PDF and SCLM Shared Segments

   - Define the ISPF/PDF DCSS and SCLM DCSSs

   - Save the ISPF/PDF and SCLM DCSSs

3. Generate the Transmit/Receive, Member Expansion and SUPERC Modules

   - Change the Variable &HNET

   - Preprocessing for Transmit/Receive

   - Run the ISRINSXR EXEC

     This procedure generates the Transmit/Receive, Member Expansion, LMF Utility, SUPERC, SCLM Services and Date Processing Modules

4. Modify and Run the ISPF or PDF EXECs

   - Establish Access to the ISPF/PDF Libraries and Files

   - Run the PDF EXEC

5. Check Link and Access Conventions for Batch Processing

6. Convert the LMF Control File

   - LMF Utility Execution

7. Installing the Library Management Facility (LMF)

   - Create and Setup a Project Machine ID

   - Run the ISRLXFIN EXEC

   - Modify the ISPFLMF EXEC

   - Performance Considerations

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The following section of Chapter 6 describes in detail the seven installation steps to install ISPF/PDF.

6.2 STEP 1: Create and Load the ISPF/PDF System Minidisk

In this step, all files you select from the installation tape are loaded to the ISPF/PDF system minidisk. The files loaded are determined by the response you give to the prompts from the ISPF/PDF installation EXEC. ISPF/PDF message, panel, skeleton, and table files are on the tape as MACLIBs only.

Note: The ISPF/PDF panels, messages, tables and skeletons can each be loaded as either MACLIBS, CMS files, or both.

Although you can load these files onto an existing minidisk, such as your S-disk, you should define a new minidisk because of the amount of space ISPF/PDF occupies. See Figure 13 on page 11. The ISPF/PDF installation EXEC allows you to place the ISPF/PDF product on more than one disk.

Use the following steps to load the ISPF/PDF files.

6.2.1 Step 1A - Define and Format a New Minidisk

Define and format a new ISPF/PDF product minidisk unless you are loading to an existing minidisk. See Figure 13 on page 11 for DASD space requirements.

Note: When installing Japanese or Traditional Chinese, English is installed as well.

6.2.2 Step 1B - Attach the ISPF/PDF Installation Tape and Establish Write Links to the ISPF/PDF Product Minidisk

Attach the ISPF/PDF installation tape to the installing user ID as 181 and establish write links to the ISPF/PDF product minidisk. If the language files are on a separate disk, you should link to that disk as well.

6.2.3 Step 1C - Load the ISPF/PDF Installation Files

Before installing ISPF/PDF 3.2.0 for VM remove any existing I5684123 files from your target system. Since you will be using multiple tapes during the installation, follow steps 1C and 1D with each tape that you use.

Use the following command to load the ISPF/PDF installation files from the tape:

```
VMFPLC2 LOAD * * m (EOF 2
```

where:

m   is the file mode of a minidisk, accessed in write mode, on which you want the ISPF/PDF installation EXEC to reside.

6.2.4 Step 1D - Run the ISPF/PDF Installation EXEC

Run the ISPF/PDF installation EXEC by issuing:

```
I5684123
```

Based on which tape you are working with, you will be prompted for the following information some of which is described below:

- The minidisk virtual device address where the product will reside
- The minidisk virtual device address where the SCLM will reside
- The minidisk virtual device address where the languages will reside.
- The installation option (whether you want the panels, messages, skeletons, and tables each loaded as MACLIBs, CMS files, or both)
- The languages you will use.

The following table describes the contents of the ISPF/PDF installation tape.

Figure 14 (Page 1 of 3). Program Tapes - Installation File Content

Filename	Filetype	Description
ISRxxxxx	TEXT	Text files for ISPF/PDF
ISRNLxxx	TEXT	Literals modules for NLS, where language is a 3-character language abbreviation (see note 2)
ISRyyxxx	TEXT	Terminal Translate Tables for NLS, where yy is a 2-character language abbreviation and xxx is a 3-character terminal identifier. The following are examples of the Terminal Translate naming convention:
ISPF	EXEC	Used to invoke PDF
ISPFLMF	EXEC	Used to start the LMF disconnected machine
ISREDRTI	EXEC	Creates the edit recovery table
ISREDRTS	EXEC	Displays the edit recovery table
ISREDSUB	EXEC	Used to submit jobs to another machine via the submit command in edit. If users are submitting jobs to a DOS machine, you should consider deleting the commands in this EXEC that punch a slash and an
ISREDXED	EXEC	PDF to XEDIT interface EXEC
ISRFXFM	EXEC	Used by foreground processing (option 4)
ISRFXMC	EXEC	Used by foreground processing (option 4)
ISRFXMXP	EXEC	Used by foreground processing (option 4)
ISRFXPRT	EXEC	Used by foreground processing (option 4)
ISRFXnn	EXEC	Used by foreground processing (option 4); nn is a number between 01 and 12.
ISRHFCMD	EXEC	Used by SCLM Host Agent
ISRINSXR	EXEC	Used to generate the transmit/receive m ember expansion modules (see Installation step 3)
ISRJXMXP	EXEC	Used by batch processing (option 5)
ISRJXSM	EXEC	Used by batch processing (option 5) expansion (see Installation step 5)
ISRJXnn	EXEC	Used by batch processing (option 5); nn is a number between 01 and 12
ISRLESRT	EXEC	Member Expansion/Member Parts List Interface to CMS SORT
ISRLICEN	EXEC	Used to invoke workstation license counting program
ISRLMFU	EXEC	Used to convert LMF control files
ISRLQSRT	EXEC	LMF listings (option 8.5) interface to CMS sort
ISRLXCMP	EXEC	LMF compress (option 8.7) interface to CMS MACLIB COMP command
ISRLXFIN	EXEC	Creates the LMF control file
ISRSAVE	EXEC	Used to save the PDF DCSS
ISRSCMP	EXEC	Sample to show how SUPERC can be invoked from EXEC
ISRSSF	EXEC	Sample to show how Search - For can be invoked from EXEC
PDF	EXEC	Used to invoke PDF
ISREDXED	XEDIT	Used by ISPF/PDF to interface to XEDIT
ISRMODEL	XEDIT	Used by ISPF/PDF XEDIT interface (option 2)
ISRMODRS	XEDIT	Used by ISPF/PDF XEDIT interface (option 2)
ISRMODSV	XEDIT	XEDIT Model support
ISRMODTR	XEDIT	Used by ISPF/PDF XEDIT interface (option 2)
ISRNOTE	XEDIT	Used by ISPF/PDF XEDIT interface (option 2)

Figure 14 (Page 2 of 3). Program Tapes - Installation File Content

Filename	Filetype	Description
MODEL	XEDIT	Used by ISPF/PDF XEDIT interface (option 2)
ISRSPFXP	MACLIB	One member of this MACLIB(SPFXP) is required for assembling ISRXPARM
ISRTLIB	MACLIB	ISPF/PDF tables (loaded only if MACLIB or both MACLIBs and CMS files are selected)
FLMxxxxx	TEXT	TEXT files for SCLM
FLMNUCX	EXEC	Used to NUCXLOAD the SCLM project definition
FLMNUCXD	EXEC	Used to NUCXDROP the SCLM project definition
FLMOSCOB	EXEC	SCLM OS COBOL Support
FLMPLI	EXEC	SCLM PLI support
FLMSAVE	EXEC	Used to save the SCLM DCSS
FLMSCRIP	EXEC	SCLM SCRIPT support
FLMVSCOB	EXEC	SCLM VS COBOL2 support
FLMVSPAS	EXEC	SCLM VS PASCAL support
FLMVCAT	EXEC	SCLM VSAM master catalogue - used by FLMDEFMC
FLMVMD	EXEC	SCLM VSAM minidisk format
FLMVDEF	EXEC	Define SCLM Accounting Database
FLMDEFMC	AMSERV	Defines master catalogue for VSAM
FLMTEMP	DSF	Control card for DSF
FLMVDEF	AMSERV	Defines SCLM accounting base
FLMVINIT	AMSERV	Reproduce VSAM files
FLMVREC	RECORD	SCLM Accounting file initialization record
SCLM	MACLIB	SCLM MACRO for SCLM project and language definition
SAMPPROJ	MACLIB	Sample project definition
SAMPARCH	MACLIB	Sample architecture definition
SAMPSRC	MACLIB	Sample source
ISRHxxxx	TEXT	Host agent files
ISRPLIB	MACLIB	ISPF/PDF panel definitions (loaded only if MACLIBs and CM files are selected)
ISRMLIB	MACLIB	ISPF/PDF message definitions (loaded only if MACLIBs and MS files are selected)
ISRSLIB	MACLIB	ISPF/PDF skeleton procedures and edit models (loaded only if MACLIBs or both MACLIBs and CMS files are selected)
ISRPLJPN	MACLIB	ISPF/PDF Japanese panel definitions (loaded only if MACLIBs and CMS files are selected)
ISRMLJPN	MACLIB	ISPF/PDF Japanese message definitions (loaded only if MACLIBs and CMS files are selected)
ISRSLJPN	MACLIB	ISPF/PDF Japanese skeleton procedures and edit models (loaded only if MACLIBS or both MACLIBs and CMS files are selected)
ISRPLCHT	MACLIB	ISPF/PDF Traditional Chinese panel definitions (loaded only if MACLIBs and CMS files are selected)
ISRMLCHT	MACLIB	ISPF/PDF Traditional Chinese message definitions (loaded only if MACLIBs and CMS files are selected)
ISRSLCHT	MACLIB	ISPF/PDF Traditional Chinese skeleton procedures and edit models (loaded only if MACLIBS or both MACLIBs and CMS files are selected)
ISRPLDEU	MACLIB	ISPF/PDF German panel definitions (loaded only if MACLIBs and CMS files are selected)

Figure 14 (Page 3 of 3). Program Tapes - Installation File Content

Filename	Filetype	Description
ISRMLDEU	MACLIB	ISPF/PDF German message definitions (loaded only if MACLIBs and CMS files are selected)
ISRSLDEU	MACLIB	ISPF/PDF German skeleton procedures and edit models (loaded only if MACLIBS or both MACLIBs and CMS files are selected)
ISRPLDES	MACLIB	ISPF/PDF Swiss German panel definitions (loaded only if MACLIBs and CMS files are selected)
ISRMLDES	MACLIB	ISPF/PDF Swiss German message definitions (loaded only if MACLIBs and CMS files are selected)
ISRSLDES	MACLIB	ISPF/PDF Swiss German skeleton procedures and edit models (loaded only if MACLIBS or both MACLIBs and CMS files are selected)

6.3 STEP 2: Define and Save the ISPF/PDF and SCLM Shared Segments

6.3.1 Step 2A - Define the ISPF/PDF and SCLM DCSSs

ISPF/PDF and the SCLM part of the ISPF/PDF product must be run from discontiguous shared segments (DCSSs). Shared segments for ISPF/PDF and for SCLM must be created and loaded. To create a shared segment under VM/SP6 operating systems, or the VM/ESA operating system with the 370 feature, you must generate an entry in the DMKSNT ASSEMBLE file for the shared segment that you will be using. To create shared segments under VM/XA operating system or the VM/ESA operating system with the ESA feature, use the DEFSEG command.

Note: SCLM is not required for ISPF/PDF. For more information on the SCLM function of ISPF/PDF, refer to ISPF/PDF Software Configuration and Library Manager (SCLM) Guide and Reference, (SC34-4296).

Define the ISPF/PDF and SCLM DCSSs (VM/SP or VM/ESA with 370 Feature)

The number of languages loaded, and whether you plan to load LMF will affect the size of the ISPF/PDF shared segment. Figure 15 shows shared segment size, in decimal and hexidecimal pages, required to load the PDF shared segment under the circumstances where you choose to install English only, or English with a second language or all languages. The hexadecimal page count is shown in parentheses. The sizes include enough room for LMF to be loaded in the ISPF/PDF shared segment. (LMF requires approximately 66 decimal pages.) You will indicate what languages you want to be loaded to the ISPF/PDF shared segment and whether you want LMF to be loaded, when you invoke the ISRSAVE EXEC. The default name for the ISPF/PDF shared segment is ISRDCSS (which is used in the ISRSAVE EXEC, distributed with the tape). See the notes at the end of section 6.5 to see what you have to do if you choose not to use the default ISPF/PDF shared segment name.

The number of languages used will also affect the size of the SCLM shared segment. The shared segment definition for SCLM will have its own entry in the DMKSNT ASSEMBLE file. Figure 15 shows the required shared segment size for SCLM for English only, English and a second language, and all languages. You will indicate what languages you want to be loaded to the SCLM shared segment when you invoke the FLMSAVE EXEC. The default name for the SCLM shared segment is FLMDCSS. See the notes at the end this section to see what you have to do if you choose not to use the default SCLM shared segment name.

Assemble the DMKSNT ASSEMBLE file when the two shared segment entries are complete, regenerate the CP nucleus, and re-IPL the VM/SP system.

Define the ISPF/PDF and SCLM DCSSs (VM/XA or VMESA, with the ESA Feature)

The procedure used to create shared segments under the XA/SP operating system, and under the VM/ESA operating system with the ESA feature differs from the procedure used under VM/SP6 operating system and the VM/ESA operating system with the 370 feature. Under the first two systems a shared segment is defined using the DEFSEG command; there is no revision to DMKSNT ASSEMBLE, and no regeneration of the CP nucleus is required.

The DEFSEG command is used below to define an ISPF/PDF shared segment of size 256 decimal (FF hexadecimal) pages. This is only an example. The address range and shared segment name for the shared segment that you use will differ from those used in this example, based on the number of languages loaded to the shared segment, whether LMF is loaded, and whether the shared segment name that you choose to use is the default name, ISRDCSS.

```
DEFSEG ISRDCSS 900-9FF SR
```

Define both shared segments at the appropriate addresses and with the appropriate sizes, using the DEFSEG command.

Notes:

1. If you do not use the default ISPF/PDF shared segment name then you will have to make changes to the PDF exec. Refer to section 6.5 for more information about non default names.

2. If you do not use the default SCLM shared segment name then you will have to change ISRPLIB MACLIB, specifically the member ISR@PRIM. Use the following procedure (for MACLIB files and English language installation).

   - Perform a **filelist** on the ISRPLIB MACLIB, from the command line. A new screen will come up.

   - Perform a **maclist / n** on the command line next to the file. The member list will appear on the screen.

   - Locate panel ISR@PRIM.

   - XEDIT this member.

   - Set the variable name &ZFLMDCSS to the desired shared segment name.

   - Issue **set serial off** from the edit mode.

   - Issue **file** to save

   If you are using a language other than English, then change ISRPLxxx to appropriate language, where xxx is the 3 character language indicator for JPN, DEU, DES, or CHT. Change the member ISR@PRIM, as described above.

3. When specifying the address of the shared segment you must specify only the starting through ending hexadecimal page numbers.

4. If you need to rebuild an existing shared segment after issuing a DEFSEG, (redefine the shared segment via DEFSEG and reload via ISRSAVE) you must purge the existing shared segment before using DEFSEG (again) or an error will occur.

5. The ISPF/PDF additional shared segment space requirements for Library Management Facility (LMF) is 66 decimal pages.

DCSS Memory Requirements

The following table indicates storage required for ISPF/PDF and SCLM shared segments if you choose to install English only, or English with one other language, or all languages.

Figure 15. ISPF DCSS Storage Requirements

Shared Segment	English with LMF	English, 2nd Language, with LMF	All Languages, with LMF
ISPF/PDF	270 (10E)	277 (115)	423 (1A7)
SCLM	371 (173)	405 (195)	476 (1D6)

Note: The SCLM shared segment contains no LMF code.

6.3.2 Step 2B - Save the ISPF/PDF and SCLM DCSSs

Save the ISPF/PDF DCSS

Use the ISRSAVE EXEC (distributed with ISPF/PDF) to save the ISPF/PDF shared segment. ISRSAVE must be run from a virtual machine that has class E privilege and enough virtual storage to include the entire shared segment area.

Using the ISRSAVE EXEC

The format of the ISRSAVE command is:

ISRSAVE   [sysname]
                 [ISRDCSS]

where:

sysname   is the saved-system name you choose for ISPF/PDF Version 3 Release 2 Modification Level 0 shared
            segment. If no parameter is specified with the ISRSAVE command, the default name (ISRDCSS) is used.

Usage Notes:

1. Invoke ISRSAVE as follows:

    • No parameters: uses default sysname of ISRDCSS

    • One parameter: uses specified sysname.

2. You need to have write access to the minidisk to which the ISPF/PDF system files were loaded.

3. The ISRSAVE EXEC finds the address of the shared segment that you previously defined and loads PDF there.
   If the specified SYSNAME does not exist, an error message is issued and a prompt is displayed to enter the
   name again or to quit.

4. If you change the default sysname, you must also change this name in the ISPF, and PDF EXECs. See
   "ISPDCS Command " in the *ISPF and ISPF/PDF Planning and Customizing Guide.*

5. ISRSAVE prompts you to see if you want LMF installed. If you do, the appropriate CSECTs for LMF are included
   in the shared segment.

6. ISRSAVE prompts you to see if you want Japanese (Kanji), German, Swiss German, and Traditional Chinese
   literals included in the shared segment.

7. The ISRSAVE EXEC explicitly loads each ISPF/PDF CSECT to optimize the code page references. This
   operation causes many loader warning messages in the load map, but they are resolved by the end of the load.

8. When defining the ISPF/PDF shared segment close to the beginning of the CMS nucleus or close to the top of
   the virtual machine you should consider the following:

    • Since CMS allocates free storage from the high end of the virtual machine downward, you should always
      define your storage at least 1 Mb greater than the ending address of the shared segment, to avoid storage
      conflicts when saving the shared segment. For example, a shared segment defined at 12 Mb (C00-CFF)
      requires a 14Mb minimum virtual machine size to save the shared segment.

    • If the CMS nucleus resides within any portion of the top megabyte of your virtual machine storage and ends
      at the top or outside of your virtual machine, then you must allow for at least one additional megabyte of
      storage, between the end of the shared segment and the start of the CMS nucleus, for CMS to use for free
      storage. For example, if you have a 16Mb virtual machine and the CMS nucleus begins at 14Mb (and ends
      at 16Mb), then the storage between 13Mb-14Mb should not be used to save a shared segment.

    Appropriate planning should be done when defining the location of the CMS nucleus and a program product's
    shared segment.

9. When the LOAD command is trying to resolve external references, it looks for TEXT files in your minidisk search
   sequence. *None of the predecessor disks in your search order should contain any TEXT file whose name is the
   same as the name of any ISPF/PDF TEXT file.*

The ISRSAVE EXEC saves the load map in a file named 'sysname MAP', where sysname is the ISPF/PDF system
name you chose. You can refer to this load map when you must identify and report ISPF/PDF problems.

Save the SCLM DCSS

Use the FLMSAVE EXEC (distributed with ISPF/PDF) to save the SCLM shared segment. FLMSAVE must be run
from a virtual machine that has class E privilege and enough virtual storage to include the entire shared segment
area.

Using the FLMSAVE EXEC

The format of the FLMSAVE command is:

FLMSAVE   [sysname]
                [FLMDCSS]

where:

sysname   is the saved-system name you choose for ISPF/PDF Version 3 Release 2 Modification Level 0 shared
           segment. If no parameter is specified with the FLMSAVE command, the default name (FLMDCSS) is
           used.

Usage Notes:

1. Invoke FLMSAVE as follows:

   - No parameters: uses default sysname of FLMDCSS

   - One parameter: uses specified sysname.

2. You need to have write access to the minidisk to which the system files were loaded.

3. The FLMSAVE EXEC finds the address of the shared segment that you previously defined and loads SCLM
   there. If the specified SYSNAME does not exist, an error message is issued and a prompt is displayed to enter
   the name again or to quit.

4. If you change the default sysname, you must also change this name in the ISR@PRIM panel file.

5. FLMSAVE does not prompt you to see if you want LMF installed.

6. FLMSAVE prompts you to see if you want Japanese (Kanji), German, Swiss German, and Traditional Chinese
   literals included in the shared segment.

7. You must be linked to the Pascal runtime services to use the SCLM DCSS.

8. The FLMSAVE EXEC explicitly loads each SCLM CSECT to optimize the code page references. This operation
   causes many loader warning messages in the load map, but they are resolved by the end of the load.

9. When defining the SCLM shared segment close to the beginning of the CMS nucleus or close to the top of the
   virtual machine you should take into consideration the same items as discussed in item 8, in the ISRSAVE usage
   notes.

10. When the LOAD command is trying to resolve external references, it looks for TEXT files in your minidisk search
    sequence. *None of the predecessor disks in your search order should contain any TEXT file whose name is the
    same as the name of any SCLM TEXT file.*

The FLMSAVE EXEC saves the load map in a file named 'sysname MAP', where sysname is the SCLM system name
you chose. You can refer to this load map when you must identify and report ISPF/PDF problems.

6.4 STEP 3: Generate the Transmit/Receive, Member Expansion, and SUPERC Modules

6.4.1 Step 3A - Change the Variable &HNET

ISPF provides interfaces to the Remote Spooling Communications Subsystem (RSCS) Networking Licensed Program, 5748-XP1. This licensed program supports spooling of output to remote nodes and links on an RSCS network. If you wish to use this interface, check the network machine ID variable (&HNET) to be sure that it is compatible with the one at your installation.

- To change the network machine ID for ISPF/PDF, make the following updates:

- Change the value of variable &HNET in panels ISRUHC1 and ISRUHC2 from RSCS to your network machine USERID:

```
 &HNET = yournet
```

where:

yournet   is your network machine USERID.

- Change RSCS in the SPOOL statement in the ISRFXPRT EXEC and ISRFX09 EXEC to your network machine USERID:

```
CP SPOOL PRINT RSCS CLASS &C COPY &CO &XBIN
```

- For the transmit/receive options for utilities 3.6 and 3.7, the network machine ID is specified by a macro parameter during ISPF/PDF installation step 3C.

6.4.2 STEP 3B - Preprocessing for Transmit/Receive

The PDF spool utility (option 3.6) allows PDF libraries and CMS files to be transmitted to users on other nodes in an RSCS network. The PDF reader utility (option 3.7) allows libraries and files to be received from other nodes. Operation of this transmit/receive support requires the generation of two special MODULE files. An ASSEMBLE file must be created first, before the MODULE files can be generated.

You must create a file named ISRXPARM ASSEMBLE. It will contain one statement that invokes the SPFXP macro, followed by an assembler END statement. The syntax for invoking the SPFXP macro is shown in Figure 16.

```
Cols:           10            16                                  72

                SPFXP         VM=(nodename, cpuid),               X
                              OUTWARN=(n1,n2),                    X
                              OUTLIM=n3,                          X
                              VNET=machineid
                END
```

Figure 16. Syntax for Invoking SPFXP Macro

where:

VM   Specifies the node name and the CPU ID on which ISPF/PDF will be run (that is, this CPU). The value of
            cpuid is the six hexadecimal digits of the CPU serial number. In an MP environment, the VM parameter
            is entered as follows:

```
VM=(NODE1,CPUID1,NODE2,CPUID2)
```

OUTWARN
            Specifies the number of output records sent before the user is given a warning that a large file is being
            sent. The first warning is given after *n1* records. Thereafter, another warning is given every *n2* records.
            The default value for both *n1* and *n2* is 999999.

OUTLIM   Specifies the number of records at which the user's transmission is terminated. The default value is
            999999.

VNET   Specifies the virtual machine ID on which RSCS Networking is running. If VNET is not set to 'RSCS',
            refer to ISPF step 4, "Check Network Machine ID."

Figure 17. shows a sample *ISRXPARM ASSEMBLE* file (refer to the previous syntax description for the correct
column numbers for the data in these lines):

```
 SPFXP  VM=(NETNODE,123456),                                  X
        OUTWARN=(10000,5000),                                 X
        OUTLIM=100000,                                        X
        VNET=RSCS
 END
```

Figure 17. Sample ISRXPARM ASSEMBLE file

6.4.3 Step 3D - Run the ISRINSXR EXEC

After you have created the ISRXPARM ASSEMBLE file, access the ISPF/PDF system minidisk in write mode and execute the ISRINSXR EXEC. This EXEC is distributed with ISPF/PDF. It requires one parameter:

```
ISRINSXR  fm
```

where:

fm   is the mode of the disk where the modules are to reside.

The ISRINSXR EXEC issues a GLOBAL MACLIB command to reference the ISRSPFXP MACLIB. This MACLIB is distributed with ISPF/PDF and should be on the ISPF/PDF system minidisk. It contains one member (SPFXP), which is required to assemble the ISRXPARM ASSEMBLE file that you created on your A-disk.

The ISRINSXR EXEC assembles ISRXPARM and then generates two MODULE files required by PDF for transmit/receive processing. The MODULE files are named ISRXMIT and ISRRECV; they are non-reentrant. The EXEC generates these MODULE files on the ISPF/PDF system minidisk. It also generates the associated load maps, ISRXMIT MAP, and ISRRECV MAP.

The member expansion module (options 4 and 5) allows source data to be packed and still capable of being compiled. It also generates the member parts list. ISRINSXR generates module ISRLEMX on the ISPF/PDF system minidisk as well as the associated load map ISRLEMX MAP.

The EXEC also builds the SUPERC module ISRSUPC, and the associated load map ISRSUPC MAP. In addition, ISRINSXR creates two modules for use by SCLM. FLMCMD and ISRFXDAT are created to allow SCLM service and dialog functions to perform. A load map is produced for each of these modules.

6.5 STEP 4: Modify and Run the ISPF or PDF EXECs

6.5.1 Step 4A - Establish Access to the ISPF/PDF Libraries and Files

ISPF/PDF files exist in three formats: as MACLIBs, as CMS files, and as a combination of MACLIBs and CMS files. Users have the option of using CMS files and/or MACLIBs for ISPF/PDF system and application files. The ISPF/PDF files are listed in Figure 18. Character language abbreviations (used in the table below) for Japanese, German, Swiss German, and Traditional Chinese are JPN, DEU, DES, CHT respectively. If ISPF/PDF is to be run with another language besides English then the FILEDEFs in the PDF and ISPF EXECs must be changed. For example, if German were to be used, then the "PANEL", MESSAGE" and "SKELETON" entries in the FILEDEFs would need to be changed to "PANELDEU", "MSGDEU" and "SKELDEU", respectively.

Figure 18. ISPF/PDF Files and Their Names.

File Contents	MACLIB	CMS Filename/Filetype
ISPF/PDF English messages	ISRMLIB	(filename ID) MESSAGE
German	ISRMLDEU	(filename ID) MSGDEU
Swiss German	ISRMLDES	(filename ID) MSGDES
Japanese	ISRMLJPN	(filename ID) MSGJPN
Traditional Chinese	ISRMLCHT	(filename ID) MSGCHT
ISPF/PDF English panels	ISRPLIB	(panel ID) PANEL
German	ISRPLDEU	(panel ID) PANELDEU
Swiss German	ISRPLDES	(panel ID) PANELDES
Japanese	ISRPLJPN	(panel ID) PANELJPN
Traditional Chinese	ISRPLCHT	(panel ID) PANELCHT
ISPF/PDF English tables	ISRTLIB	(table ID) TABLE
ISPF/PDF English Skeletons	ISRSLIB	(skeleton ID) SKELETON
German	ISRSLDEU	(skeleton ID) SKELDEU
Swiss German	ISRSLDES	(skeleton ID) SKELDES
Japanese	ISRSLJPN	(skeleton ID) SKELJPN
Traditional Chinese	ISRSLCHT	(skeleton ID) SKELCHT

If multiple languages are installed, the users must have a separate private profile table for each national language that will be run.

- If your installation uses MACLIBs or does NOT use CMS file defaults for ISPPROF, copy the user's current profile MACLIB or CMS files (once for each additional national language) and modify the ISPPROF FILEDEF for each language's setup EXEC.

- If your installation uses the defaults for ISPPROF (no FILEDEFs for ISPPROF in the setup exec), any additional languages will require FILEDEFs for ISPPROF in the setup EXEC.

Using the same private profile tables for multiple languages can cause unexpected results.

ISPF/PDF is invoked by either the PDF or ISPF EXECs. The PDF and ISPF EXECs, shown (once) in Figure 19, are identical. The EXECs issue the necessary LINK, ACCESS, and FILEDEF commands to run ISPF/PDF using MACLIBs and user-modified CMS files. The EXECs assume the ISPF and ISPF/PDF files are on the same minidisk. If the files are not on the same minidisk, you must make the appropriate changes to the EXECs; specifically you must LINK and ACCESS any additional disks as well as making the appropriate changes to the FILEDEF statements. For more information about FILEDEFs, refer to the *ISPF Dialog Management Guide and Reference*. The EXECs must be changed to reflect the userid of the ISPF disconnected machine if the default name, ISPVM, is not used.

If you do not use the default names for the ISPF or the ISPF/PDF DCSS, ISPDCS invocation statement must be replaced with the command as shown below. See the "ISPDCS Command" in the *ISPF and ISPF/PDF Planning and Customizing* manual for further information.

'ISPDCS xxxxxxx yyyyyyy PANEL(ISR@PRIM) NEWAPPL(ISR) PDFDCSS(bbbbbbb) DMMODE(T)' ISPFPARM

where:

xxxxxxx   ISPF shared segment

yyyyyyy   ISPF's disconnected machine's userid

bbbbbbb   ISPF/PDF shared segment

You can follow these suggestions to improve ISPF/PDF's performance:

- Do not use "*" as the filemode in the FILEDEF statements. Use the actual mode letter of the minidisk containing the file.

- After you tailor the start-up EXECs to fit your installation's requirements, remove all comments from them.

- If users will invoke ISPF/PDF repeatedly using the same LINKs and FILEDEFs, isolate the initialization commands (LINK, ACCESS, and FILEDEF) in a separate EXEC that can be run once. The user's PROFILE EXEC is one place to store these commands.

Note: To use VS/FORTRAN Interactive Debug, you must modify the ISPF and PDF EXECs to include the FORTRAN libraries. See *VS/FORTRAN Version 2 Installation and Customization for VM, SC26-4339*.

Figure 19 shows the contents of the ISPF EXEC.

```
/*                         */
TRACE ERROR
PARSE UPPER ARG ISPFPARM
/***********************************************************************/
/* THIS IS THE ISPF (SYSTEM PRODUCTIVITY FACILITY) COMMAND EXEC USED  */
/* TO RUN THE PROGRAM DEVELOPMENT FACILITY.  BEFORE INVOKING THIS     */
/* EXEC YOU MUST INSERT FILEDEFS FOR ANY ADDITIONAL PANEL, MESSAGE,   */
/* TABLES AND/OR SKELETON LIBRARIES FROM WHICH YOU PLAN TO OPERATE,   */
/* AS WELL AS FOR THE FILE TO BE USED FOR ISPPROF.  THE ISPDCS        */
/* COMMAND HAS AN OPTIONAL KEYWORD PARAMETER (KEYWORD IS "PDFDCSS")   */
/* WHICH SPECIFIES THE PDF DCSS NAME (IF OMITTED THEN THE DEFAULT PDF */
/* DCSS NAME OF "ISRDCSS" IS USED).                                   */
/*                                                                    */
/* CHANGE ACTIVITY-                                                   */
/*      VM26404 - CHANGE THE WORD "ISSUE" TO THE WORD "INSERT" IN     */
/*                SECOND SENTENCE ABOVE. ISG GT4045 WLK               */
/*                                                                    */
/*      VM27268 - THE PDF EXEC WAS SHIPPED WITH A LINK TO ISPF AND    */
/*                THE 191 DISK.  IT SHOULD BE ISPVM AND THE 192.      */
/*                                  ISG GT4045 WLK                    */
/*                                                                    */
/*      VM29458 - 'INVALID CLEAR REQUEST' MSG RECEIVED DUE TO         */
/*                'FILEDEF CLEAR' COMMANDS.                           */
/*                                  ISG GT4046 WLK                    */
/*                                                                    */
/* $P1= ADDLOGO  V310     900131   169002 : PTR 108 - ADD IBM LOGO    */
/* $P2= SCLM     V310     910108   021799 : MAKE SCLM CHANGES         */
/* $P3= SCLM     V310     910122   021799 : ADD PASRTLIB TXTLIB GLO   */
/* $P4= SCLM     V310     910201   021799 : ADD SCLM SWITCH           */
/***********************************************************************/


/***********************************************************************/
/* LINK TO ISPF AND PDF DISK(S)                                       */
/***********************************************************************/
/*'CP LINK ISPF 191 396 RR'              LINE REMOVED FOR  VM27268*/
'CP LINK ISPVM 192 396 RR'              /* LINE ADDED FOR     VM27268*/
'ACC 396 T'

SCLM_SWITCH = YES                       /* CHANGE TO NO IF SCLM IS  */
                                        /* NOT GOING TO BE INSTALLED*/
/***********************************************************************/
/* PERFORM FILEDEFS                                                   */
/* NOTE: PRIVATE PANELS, MSGS, SKELS, TABLES AND PROFILE FILES        */
/*       SHOULD BE PLACED AHEAD OF THE PDF AND ISPF SUPPLIED FILES.   */
/*       THE FILEMODE MAY NEED TO BE CHANGED DEPENDING ON HOW DISK    */
/*       WAS ACCESSED.                                                */
/***********************************************************************/
```

Figure 19 (Part 1 of 3). ISPF EXEC for Invoking ISPF/PDF

```
'SET CMSTYPE HT'                          /*                    VM29458*/
'FILEDEF ISPPROF CLEAR'
'FILEDEF ISPPLIB CLEAR'
'FILEDEF ISPMLIB CLEAR'
'FILEDEF ISPSLIB CLEAR'
'FILEDEF ISPLLIB CLEAR'                         /* @P2A */
'FILEDEF ISPTLIB CLEAR'
'FILEDEF ISPTABL CLEAR'
'SET CMSTYPE RT'                          /*                    VM29458*/

'FILEDEF ISPPROF DISK TABLES MACLIB A (PERM '

'FILEDEF ISPPLIB DISK ISRNULL PANEL  T (PERM CONCAT'
'FILEDEF ISPPLIB DISK ISRPLIB MACLIB T (PERM CONCAT'
'FILEDEF ISPPLIB DISK ISPPLIB MACLIB T (PERM CONCAT'

'FILEDEF ISPMLIB DISK ISRNULL MESSAGE T (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISRMLIB MACLIB T (PERM CONCAT'
'FILEDEF ISPMLIB DISK ISPMLIB MACLIB T (PERM CONCAT'

'FILEDEF ISPSLIB DISK ISRNULL SKELETON T (PERM CONCAT'
'FILEDEF ISPSLIB DISK ISRSLIB MACLIB T (PERM CONCAT'

'FILEDEF ISPTLIB DISK ISRNULL TABLE A (PERM CONCAT'
'FILEDEF ISPTLIB DISK TABLES MACLIB A (PERM CONCAT'
'FILEDEF ISPTLIB DISK ISRTLIB MACLIB T (PERM CONCAT'
'FILEDEF ISPTLIB DISK ISPTLIB MACLIB T (PERM CONCAT'

'FILEDEF ISPTABL DISK TABLES MACLIB A (PERM'

IF SCLM_SWITCH = YES THEN
 DO
  'FILEDEF ISPXLIB DISK VSPASCAL TXTLIB * (PERM CONCAT'
  'FILEDEF ISPXLIB DISK PASRTLIB TXTLIB * (PERM CONCAT'     /* @P3A */

  'FILEDEF ISPLLIB DISK PASRTLIB LOADLIB * (PERM CONCAT'    /* @P2A */


 /*********************************************************************/
 /*  FIND OUT IF THE SCLM VSAM FILE IS ALREADY ALLOCATED      @P2A   */
 /*********************************************************************/
 SET CMSTYPE HT
 DDNAME_FOUND_SWITCH = 0              /* SET FOUND SWITCH OFF         */
 MAKEBUF                              /* GET A BUFFER                 */
 BUFFER_NUMBER = RC                   /* SAVE BUFFER NUMBER           */
 'QUERY DLBL ( LIFO '                 /* LOOK FOR DLBL STATEMENTS     */
 SENTRIES                             /* COUNT NUMBER OF LINES        */
 ENTRIES = RC                         /* SAVE LINE COUNT              */
```

Figure 19 (Part 2 of 3). ISPF EXEC for Invoking ISPF/PDF

```
/******************************************************************/
/*  LOOK FOR A MATCH ON DDNAME OR END OF FILE           @P2A     */
/******************************************************************/
DO INDEX = 1 TO ENTRIES WHILE DDNAME_FOUND_SWITCH = 0
   PARSE PULL DDNAME .
   IF DDNAME = 'IJSYSCT' | DDNAME = 'SLMVS1' THEN
     DDNAME_FOUND_SWITCH = 1         /* SET DLBL DDNAME FOUND FLAG  */
   ELSE
     NOP                            /* NOT FOUND YET - DO IT AGAIN */
END
IF INDEX < ENTRIES THEN
  DROPBUF BUFFER_NUMBER            /* REMOVE BUFFER IF NECESSARY  */
ELSE
  NOP
IF DDNAME_FOUND_SWITCH = 0 THEN
  DO                               /* SET UP DLBL STATEMENTS       */
   'DLBL IJSYSCT E DSN MASTCAT (PERM'
   'FILEDEF SLMVS1  DISK FILE SLMVS1 E DSN XXX.YYY.ZZZ ( PERM'
   'FILEDEF SLMVS1  DISK FILE SLMVS1 E DSN XXX.YYY.ZZZ ( PERM'
   'DLBL SLMVS1  E DSN XXX.YYY.ZZZ (PERM VSAM'
  END
ELSE
  NOP                              /* DLBL ALREADY DEFINED        */
 'GLOBAL LOADLIB PASRTLIB' /*@P2A*/
 'GLOBAL TXTLIB  PASRTLIB' /*@P3A*/
END
SET CMSTYPE RT
'ISPDCS ISPDCSS ISPVM PANEL(ISR@PRIM) NEWAPPL(ISR) DMMODE(T)' ISPFPARM
                                                      /* @P2C*/
/* 5684-123 (C) COPYRIGHT IBM CORP 1980, 1990 */
```

Figure 19 (Part 3 of 3). ISPF EXEC for Invoking ISPF/PDF

6.5.2 Step 4B - Run the PDF EXEC

The storage size of your virtual machine is set below the ISPF and ISPF/PDF DCSSs. After reviewing section 4A, and making the appropriate changes, issue:

PDF

6.6 STEP 5: Check Link and Access Conventions for Batch Processing

When the user selects ISPF/PDF option 5 (batch processing), commands are punched to the CMS batch machine's virtual reader to perform the requested processing function. The source file to be processed is **not** punched to the batch machine. Instead, it is linked and accessed using the following conventions:

- The ISPF/PDF batch processing program ISRJB2, operating in the user's machine, determines the user ID and virtual device address of the source file and invokes EXECs to punch appropriate LINK and ACCESS statements to the batch machine.

- The punch commands cause the batch machine to link to the source file using virtual device addresses in the range 391 to 395, inclusive, and to access the file(s) using mode letters B, E, F, G, and Z.

- The punch commands also cause the batch machine to link to the ISPF/PDF disk and three system disks. This allows the batch machine to access the compilers and other processing programs to be executed. The disks are accessed as follows:

USERID	DISK	linked as DISK	MODE
ISPVM	192	396	T
MAINT	19E	19E	Y/S
MAINT	31A	31A	X

USERID	DISK	linked as	DISK	MODE
MAINT	319		319	P

If the link and access conventions for your CMS batch machine are in conflict with the ISPF/PDF conventions, you must either define a new batch machine for ISPF/PDF use or modify the ISPF/PDF batch skeletons and/or panels.

- The virtual device addresses used for the source file(s) can be changed in skeleton ISRJSLA. Change all ACCESS and RELEASE commands for addresses 391 thru 395 to the addresses you want to use.

- The filemodes used for these disks can be changed on panel ISRJPA. Change the setting of variables ZLMODE1 thru ZLMODE5 in the)PROC section of the panel to the modes you want to use.

- The LINK and ACCESS commands for the ISPF/PDF disk and the system disks can be changed in skeleton ISRJSJB. The minidisk onto which the ISPF/PDF tape was loaded must be accessed in order to use the member expansion/member parts list module.

  You can modify the system LINK and ACCESS commands to match your system configuration, or, if the links are performed as part of the batch machine start-up procedure, you can delete them from the skeleton.

6.7 STEP 6: Convert LMF Control File

An LMF utility is provided to reformat the disk resident control file which will be used by the LMF portion of the ISPF/PDF product. The utility performs a conversion from three byte disk address format to four byte disk address format. This utility must only be used to migrate the control file from ISPF/PDF Version 2.2 for VM, or from ISPF/PDF Version 2.2 for VM/XA, to ISPF/PDF Version 3.2.0.

Do not use this utility if you do not use LMF or you are generating a new LMF application. This utility is only to convert existing LMF projects.

6.7.1 LMF Utility Execution

To execute this utility, ISRLMFU, you must be logged onto the LMF virtual machine and have all LMF virtual disks linked in write mode and accessed (you may choose any access modes available).

You must be operating out of ISPF/PDF option 6 (CMS COMMAND AND EXEC PROCESSING).

To run the utility enter ISRLMFU on your console. Any error messages will be displayed on your terminal.

6.8 Installing the Library Management Facility (LMF)

The Library Management Facility (LMF) allows you to control your development process. With LMF, you can limit access to your files and prevent more than one person from updating the same member of a file at the same time.

To install the Library Management Facility, follow these steps:

6.8.1 Step 1 - Create and Set Up a Project Machine ID

Each project LMF controls must have a project machine. A project machine is an ID that maintains all the information about the LMF library controls as well as the controlled libraries themselves. The project machine should be a class G machine with 2 megabytes of virtual storage. A virtual printer should be defined, but a virtual reader and punch are optional and are not required for LMF.

STEP 1A - Assign Minidisks

Each project machine needs the following minidisks:

- An A(191) disk with enough space to hold the LMF control file. When running LMF, the project administrator must be linked, in read mode, to this disk. The following calculation can be used to determine the control file size, and therefore the required disk space for each project being controlled by the project machine. The space calculated is in 1K blocks.

```
SPACE = 10 + ((number of groups x number of members) / 20)
```

    This is an approximate calculation. Projects with large numbers of groups or types may need more space.

- Additional minidisks for the controlled libraries. These disks should be large enough to hold the data that is in the controlled libraries. These disks must each have a read password. All of the controlled disks, with the exception of the A(191) disk, should have the same read password. The A(191) disk need not, but can, have the same read password. It is recommended that no write password be established for any of the project machine's minidisks. Libraries with different Project/Group names cannot reside on the same controlled minidisk. Libraries with the same Project/Group can reside on the same disk or on different disks.

STEP 1B - Assign Project Machine ID with the Correct Directory Entry

The project machine ID must have a directory entry with IUCV ALLOW and OPTION MAXCONN 1 specified. The project machine must be linked to all of its disks in write mode. In addition, there should be no multi-write password specified for any of the controlled disks and therefore no multi-write links. A sample directory entry for an LMF machine is shown below.

```
 USER LMF PW 2M 8M G
  ACCOUNT 1 SYSPROG
  SPOOL 00E 1403 A
  MDISK 191 3380 144 010 VMSRES W SPLMF
  MDISK 189 3380 502 037 VMSRES W OSPLMF
  IUCV ALLOW
  MAXCONN 00001
```

Figure 20. Sample Directory Entry for the LMF Machine

6.8.2 Step 2 - Run the ISRLXFIN EXEC

Run the ISRLXFIN EXEC to set up the LMF control file. If the EXEC is run outside of ISPF, the FILEDEF statements in the EXEC must be modified to provide access to the ISPF panels and messages. This step only needs to be done once to prepare a project machine.

6.8.3 Step 3 - Modify the ISPFLMF EXEC

Modify the ISPFLMF EXEC as specified in the EXEC comments to ensure all controlled disks are linked and accessed. Use any disk for the controlled libraries *except* as follows:

- The A-disk: Reserved for the LMF control file
- The S-disk: Reserved by CMS for the system
- Any disks the system requires: Includes additional disks needed by your installation.

In addition, leave some free filemodes for ISPF to issue access commands.

Ensure that all FILEDEF statements provide access to the ISPF panels and messages. Run the ISPFLMF EXEC to ensure that LMF starts successfully. The following message should be displayed when the LMF machine is successfully started:

```
*** PROJECT MACHINE xxxxxxxx AVAILABLE FOR COMMUNICATIONS ***
```

You can stop the project machine by any of the following methods:

- You enter the HX command; the SPF log is saved.
- You enter the #CP I CMS command; the SPF log can be lost.
- The system is shut down; the SPF log can be lost.

Before starting the project machine again, you need to IPL CMS. To set up the project machine for production use, the project machine should be set up so that it is automatically logged on. Also, modify the PROFILE EXEC to run the ISPFLMF EXEC to start LMF whenever the system is IPLed. A sample PROFILE EXEC is in Figure 21.

Note: Each time the project machine is stopped, the console file is sent to the project machine's virtual printer. Because this could be a large file, you should purge the virtual printer periodically to save spool space. You can add a PURGE PRT command to the PROFILE EXEC that will automatically purge the virtual printer file each time the project machine is autologged or IPLed.

```
/*                                             */
/* PROFILE EXEC for an LMF project machine      */
/*                                             */
/*                                             */

If linesize()=0 then    /* project machine is disconnected */
  'EXEC ISPFLMF'
Else
  Do
    ...                 /* set up for interactive use       */
  End
```

Figure 21. Sample PROFILE EXEC for the LMF Project Machine

6.8.4 Performance Considerations

To improve the performance of ISPF/PDF and LMF, create a disk that contains only the ISPF panels, messages, skeletons, and tables. Copy these files from the ISPF system disk onto the new disk, putting the new files into MACLIBS. This decreases the time ISPF uses to retrieve these files.

To improve performance during IUCV processing, when the system is generated, place DMKIUA, DMKIUC, and DMKIUE in resident storage. All DMK modules can be placed in resident storage, but the three listed above will have the greatest impact on performance.

Appendix A. INSTALLATION EXEC MESSAGES

The following prompts and messages may be displayed during the installation, from the BASIC tape or cartridge of the ISPF/PDF 3.2.0 product, using MACLIB files on a minidisk with virtual address 5FF. Your minidisk address and file type selection may be different.

```
*************************************************************************
***      5684-123 --Interactive System Productivity Facility-- 5684-123
***               Program Development Facility
***            Version 3 Release 2 Modification 0 for VM
***                    Installation Exec
***
***         Contains restricted material of IBM
***         Copyright (C) I B M  Corporation 1991
***         Licensed Materials - Property of I B M
***         Refer to Copyright instructions: Form G120-2083
*************************************************************************
***      Do you want to install the product now? (Y|N)


***       Do you want to install SCLM? (Y|N)


*************************************************************************
***         ----- Installation Options for ISPF/PDF System minidisk ------
***                  (EXECs, TEXTs, MODULEs)
***
***         Enter the virtual device address of the minidisk where
***         you want to load the ISPF/PDF System files:
***
***            Note:  The minidisk MUST be LINKed in WRITE mode. ===>


*************************************************************************
***    The minidisk selected to load System files on is your 5FF disk.
***            Is this selection correct? (Y|N)  ===>


*************************************************************************
***         ------ Installation Options for ISPF/PDF SCLM minidisk -------
***                  (EXECs, TEXTs, MODULEs)
***
***         Enter the virtual device address of the minidisk where
***         you want to load the ISPF/PDF SCLM files:
***
***            Note:  The minidisk MUST be LINKed in WRITE mode. ===>
```

```
*************************************************************************
***    The minidisk selected to load SCLM files on is your 5FF disk.
***            Is this selection correct? (Y|N)  ===>

*************************************************************************
***        Installation Options for ISPF/PDF Table files
***
***        Tables can be loaded as a Maclib, CMS file or BOTH
***          (Maclib & CMS files).
***
***              For TABLES Enter one of the following:
***
***                M to install as MACLIB,
***                C to install as CMS files,
***        - OR -    B to install as BOTH Maclib & CMS files
***
***        Enter selection for TABLES    ===>

*************************************************************************
***        Installation Options for ISPF/PDF Table files
***
***        Tables can be loaded as a Maclib, CMS file or BOTH
***          (Maclib & CMS files).
***
***              For TABLES Enter one of the following:
***
***                M to install as MACLIB,
***                C to install as CMS files,
***        - OR -    B to install as BOTH Maclib & CMS files
***
***        Enter selection for TABLES    ===>  M

***            Are these selections correct? (Y|N)  ===>
*************************************************************************
***        ISPF/PDF system file will be loaded on your 5FF disk
***
***
***            Do you wish to continue with this installation?
***
***        (Reply Y to continue or N to cancel installation) ===>


*************************************************************************
***        Now loading ISPF/PDF system file to your 5FF disk...
***                (This process takes a few moments)
*************************************************************************


***        Load of ISPF/PDF System file completed successfully
```

```
**************************************************************************
***        ISPF/PDF SCLM file will be loaded on your 5FF disk
***
***
***           Do you wish to continue with this installation?
***
***        (Reply Y to continue or N to cancel installation) ===>
**************************************************************************
***        Now loading ISPF/PDF SCLM file to your 5FF disk...
***              (This process takes a few moments)
**************************************************************************


***        Load of ISPF/PDF SCLM file completed successfully


**************************************************************************
***        All ISPF/PDF Product files have been loaded successfully.
***        The ISRDCSS must be manually saved.
***        Refer to the Program Directory for
***        information on saving the DCSS ( ISRSAVE EXEC ).
**************************************************************************
***        Exiting from 5684-123 Installation Exec.

***           Press ENTER to exit ...
```

The following prompts and messages may be displayed during the installation of the NLS tapes or cartridges. English, Japanese and Traditional Chinese were installed as CMS files for demonstration purposes.

```
***************************************************************************
***      5684-123 --Interactive System Productivity Facility-- 5684-123
***                  Program Development Facility
***                Version 3 Release 2 Modification 0 for VM
***                        Installation Exec
***
***           Contains restricted material of IBM
***           Copyright (C) I B M  Corporation 1991
***           Licensed Materials - Property of I B M
***           Refer to Copyright instructions: Form G120-2083
***************************************************************************


***      Do you want to install the languages now? (Y|N)

***************************************************************************
***      ---- Installation Options for ISPF/PDF Language minidisk -----
***            (Panels, Messages, Skeletons)
***
***      Enter the virtual device address of the minidisk where
***      you want to load the ISPF/PDF Language files:
***
***         Note:  The minidisk MUST be LINKed in WRITE mode. ===>

***************************************************************************
***   The minidisk selected to load Language files on is your 5FF disk.
***            Is this selection correct? (Y|N)  ===>

***************************************************************************
***      Installation Options for ISPF/PDF Language files
***
***      Panels, Messages, Skeletons can EACH be loaded
***        as Maclibs, CMS files or BOTH (Maclibs & CMS files).
***
***            For EACH of the following, Enter:
***
***              M to install as MACLIBS,
***              C to install as CMS files,
***      - OR -    B to install as BOTH Maclibs & CMS files
***
***      Enter selection for PANELS    ===>
c
***      Enter selection for MESSAGES  ===>
c
***      Enter selection for SKELETONS ===>
c
```

```
***************************************************************************
***      Installation Options for ISPF/PDF Language files
***
***      Panels, Messages, Skeletons can EACH be loaded
***         as Maclibs, CMS files or BOTH (Maclibs & CMS files).
***
***            For EACH of the following, Enter:
***
***               M to install as MACLIBS,
***               C to install as CMS files,
***    - OR -     B to install as BOTH Maclibs & CMS files
***
***    Enter selection for PANELS    ===>  C
***    Enter selection for MESSAGES  ===>  C
***    Enter selection for SKELETONS ===>  C


***         Are these selections correct? (Y|N)  ===>


***************************************************************************
***           Installation of National Language Support
***
***         ISPF/PDF Version 3 Release 2 Modification 0
***         supports the following National Languages:
***
***            -  ENGLISH
***            -  JAPANESE
***            -  TRADITIONAL_CHINESE
***
***         Which languages do you want to install?
***
***         Enter "ALL" to load all the languages,
***         Enter "<LANGUAGE ID>" to load just one language,
***            or  ENTER (null) for a selection menu ===>


***************************************************************************
***         Installation Options for National Language Support
***
***             For each language listed, reply (Y | N)
***
***    Do you want to install  ENGLISH              ===>  Y
***    Do you want to install  JAPANESE             ===>  Y
***    Do you want to install  TRADITIONAL_CHINESE  ===>  Y
***
***
***
***
***         Are these selections correct? (Y|N)  ===>
```

```
**************************************************************************
***          ISPF/PDF Language files will be loaded on your 5FF disk
***
***
***          Do you wish to continue with this installation?
***
***        (Reply Y to continue or N to cancel installation) ===>


***          Now loading ISPF/PDF Language files to your 5FF disk...


***              Installing:   ENGLISH

***              Installing:   JAPANESE

***              Installing:   TRADITIONAL_CHINESE


***          Load of ISPF/PDF Language files completed successfully


**************************************************************************
***        All ISPF/PDF Product files have been loaded successfully.
***        The ISRDCSS must be manually saved.
***        Refer to the Program Directory for
***        information on saving the DCSS ( ISRSAVE EXEC ).
**************************************************************************

***        Exiting from 5684-123 Installation Exec.

***          Press ENTER to exit ...
```

The following error messages may be displayed from the I5684123 EXEC:

Message

```
*************************************************************
*** Error occurred while performing LISTFILE command on
*** the Product Identifier file.  Return code = < rc >
*************************************************************
*** Exiting from 5684-123 Installation EXEC
```

Explanation   The Product Identifier file - I5684123 031005 could not be found on the read/write disk.

User Action   Ensure you have the minidisk containing the Product Identifier file accessed in write mode. If the Product Identifier file does not exist on any minidisk, Read it in from the first two tape files of the installation tape by issuing: VMFPLC2 LOAD * * (EOF 2. This will position the tape at tape file #3, where it should be prior to running the Installation EXEC.

Return Code   12 from I5684123 Installation EXEC.

Message

```
*************************************************************
*** ERROR occurred while attempting to link to < vaddr >
*** The return code from the LINK command = < rc >
*** ISPF Installation terminated abnormally
*************************************************************
*** Exiting from 5684-123 Installation EXEC
```

Explanation   A disk could not be linked to during the VM/IS installation procedure.

User Action   Consult the CMS Command and Macro Reference manual for an explanation of the LINK return code. Correct the problem and re-execute the Installation EXEC.

Return Code   16 from I5684123 Installation EXEC.

Message

```
*************************************************************
*** An ERROR occurred while attempting to access
*** your < vaddr > disk as < fm >.
*** The return code from the ACCESS command = < rc >
*** ISPF Installation terminated abnormally
*************************************************************
*** Exiting from 5684-123 Installation EXEC
```

Explanation   A disk could not be accessed during the installation procedure.

User Action   Consult the CMS Command and Macro Reference manual for an explanation of the ACCESS return code. Correct the problem and re-execute the Installation EXEC.

Return Code   16 from I5684123 Installation EXEC.

Message

```
*************************************************************
*** An ERROR occurred while loading the ISPF/PDF
*** System files to your < vaddr > as < fm >
*** The return code from the VMFPLC2 command = < rc >
*************************************************************
*** Exiting from 5684-123 Installation EXEC
```

Explanation   The disk may be full or a tape error has occurred.

User Action   Consult the CMS Command and Macro Reference manual for an explanation of the VMFPLC2 return code. Define more disk space or correct the tape error and re-execute the Installation EXEC.

Return Code   25 from I5684123 Installation EXEC.

Message

```
*************************************************************
*** An ERROR occurred during a MOVEFILE operation on the
*** ISPF/PDF language minidisk (your < vaddr >) disk.
*** The return code from the MOVEFILE command = < rc >
*************************************************************
*** Exiting from 5684-123 Installation EXEC
```

Explanation   The panels, messages, or tables were requested to be loaded as either MACLIBS or CMS files, or as both MACLIBs and CMS files. Since they reside on tape as MACLIBs only, MOVEFILE is performed to create the CMS files. It is most likely that the disk is full.

User Action   Consult the CMS Command and Macro Reference manual for an explanation of the MOVEFILE return code. Correct the problem and re-execute the Installation EXEC.

Return Code   28 from I5684123 Installation EXEC.

Message

```
*************************************************************
*** An error occurred while loading the ISPF/PDF
*** Language files for languages < current language > on the
*** ISPF/PDF language minidisk (your < vaddr >) disk.
*** The return code from the VMFPLC2 command = < rc >
*** Exiting from 5684-123 Installation EXEC
*************************************************************
```

Explanation   The disk may be full or a tape error has occurred.

User Action   Consult the CMS Command and Macro Reference manual for an explanation of the VMFPLC2 return code. Define more disk space or correct the tape error and re-execute the Installation EXEC.

Return Code   25 from I5684123 Installation EXEC.

Message

```
************************************************************
*** The number of tape files specified by the Product
*** Identifier file is NON-numeric
*** Exiting from 5684-123 Installation EXEC
************************************************************
```

Explanation   The Product Identifier file was found to have non-numeric characters in the filetype field. The filetype should be "031005".

User Action   The Product Identifier file resides on the installation tape in the first tape file. Make sure it has been loaded onto disk and not renamed. Correct the problem and re-execute the Installation EXEC.

Return Code   12 from I5684123 Installation EXEC.

Message

```
************************************************************
*** Error forward spacing the tape to the end of the
*** ISPF/PDF product.  The tape position is UNKNOWN.
*** Exiting from 5684-123 Installation EXEC
************************************************************
```

Explanation   A tape error has occurred. Probable cause: tape medium error.

User Action   Correct the tape error if possible and re-execute the Installation EXEC.

Return Code   20 from I5684123 Installation EXEC.

Message

```
************************************************************
*** Error forward spacing the tape when skipping over
*** the language: < language >.
*** The tape position is UNKNOWN.
*** Exiting from 5684-123 Installation EXEC
************************************************************
```

Explanation   A tape error has occurred. Probable cause: tape medium error.

User Action   Correct the tape error if possible and re-execute the Installation EXEC.

Return Code   20 from I5684123 Installation EXEC.

Message

```
***********************************************************
*** ISPF/PDF Installation terminated abnormally.
*** Virtual address 181 is missing or invalid.
*** Exiting from 5684-123 Installation EXEC
***********************************************************
```

Explanation	The tape is not attached to the virtual machine as 181.
User Action	Attach the tape to the virtual machine as 181 and re-execute the Installation EXEC.
Return Code	20 from I5684123 Installation EXEC.

Message

```
***********************************************************
*** Error in product tape. <filename> EXEC not found.
*** Mount the correct tape and restart installation.
*** Exiting from 5684-123 Installation EXEC
***********************************************************
```

Explanation	The installation EXEC file was not found on the first tape file. An incorrect tape was probably mounted.
User Action	Mount the correct tape and re-execute the installation EXEC.
Return Code	32 from I5684123 Installation EXEC.

Message

```
****************************************************************
***  An ERROR occurred while attempting to FORMAT:
***            <vaddr>
***  The return code from the FORMAT command = <rc>
****************************************************************
```

Explanation:	An error occurred while attempting to format the VM/IS installation minidisk.
User Action:	Correct the error and re-execute the installation EXEC.
Return Code:	35 from I5684123 Installation EXEC.

Message

```
*****************************************************************
*** An ERROR occurred while loading the ISPF/PDF SCLM files to
*** your <vaddr> disk as <fm>
*** The return code from the VMFPLC2 command = <rc>
*****************************************************************
```

Explanation: The disk may be full or a tape error has occurred.

User Action: Consult the CMS Command and Macro Reference manual for an explanation of the VMFPLC2 return code. Define more disk space or correct the tape error and re-execute the installation EXEC.

Return Code: 25 from I5684123 Installation EXEC.

Message

```
*****************************************************************
*** Error forward spacing the tape when skipping over
*** the SCLM file.
*** The tape position is UNKNOWN.
*** Exiting from 5684-123 Installation Exec.
*****************************************************************
```

Explanation: A tape error has occurred. Probable cause: tape medium error.

User Action: Correct the tape error if possible and re-execute the installation EXEC.

Return Code: 20 from I5684123 Installation EXEC.

Appendix B. ISRSAVE EXEC MESSAGES

The following prompts and messages may be displayed during the execution of the ISRSAVE EXEC. A shared segment named "ISRDCS1" was saved beginning at address 5M for the purpose of demonstration. The name and address of the shared segment that you use may be different.

```
**************************************************************************
***   ISPF/PDF DCSS Name   : < ISRDCS1 >
***   Starting address : < 00900000 >
***   Ending address   : < 00A8FFFF >
**************************************************************************
***   Do you wish to continue? (Y|N) ===>


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


***   Do you wish to include LMF? (Y|N) ===>


**************************************************************************
*** ISPF/PDF 3.2 supports the following National Languages:
***
***           - ENGLISH
***           - JAPANESE
***           - GERMAN
***           - SWISS_GERMAN
***           - TRADITIONAL_CHINESE
***
***        Which languages do you want to install?
***
***
***        Enter "ALL" to load all the languages,
***        Enter "<LANGUAGE ID>" to load just one language,
***          or  ENTER (null) for a selection menu ===>


**************************************************************************
***        For each language listed, reply (Y | N)
***
*** Do you want to install ENGLISH             ===> Y
*** Do you want to install JAPANESE            ===> N
*** Do you want to install GERMAN              ===> N
*** Do you want to install SWISS_GERMAN        ===> N
*** Do you want to install TRADITIONAL_CHINESE  ===> N
***
***
***    Are these selections correct? (Y|N)  ===>


**************************************************************************
***   The Language Options Selected are:
***
***     ENGLISH            ===> Y
***     JAPANESE           ===> N
***     GERMAN             ===> N
***     SWISS_GERMAN       ===> N
***     TRADITIONAL_CHINESE  ===> N
**************************************************************************
***   You have chosen to include LMF ===> Y
```

```
*************************************************************************
***   ISPF/PDF DCSS Name   : < ISRDCS1 >
***   Starting address : < 00900000 >
***   Ending address   : < 00A8FFFF >
*************************************************************************
***   Do you wish to continue? (Y|N) ===>

***  Loading ISPF/PDF DCSS < ISRDCS1 > at address < 00900000 >.

SYSTEM SAVED
*************************************************************************
***  ISPF/PDF DCSS  < ISRDCS1 > Saved at Address < 00900000 >.
***  Return Code = < 0 >.
***  DCSS MAP Saved in ISRDCS1 MAP A
*************************************************************************
```

The following error messages may be displayed during the execution of the ISRSAVE EXEC.

   *** Only the DCSS name is a valid parameter

Explanation   The only parameter allowed is the DCSS name. If no DCSS name is given, the default DCSS name ISRDCSS is used.

User Action   Re-execute the ISRSAVE EXEC with the DCSS name as the only parameter, or re-execute the ISRSAVE EXEC with no parameters to get the default DCSS name, ISRDCSS.

Return Code   1024 from ISRSAVE EXEC.

Message

```
************************************************************
*** Unexpected return code from SEGMENT RESERVE.
*** SEGMENT RESERVE return code was < return code >
*** Save of ISPF/PDF aborted
************************************************************
```

Explanation   An unrecoverable error occurred in the SEGMENT RESERVE command.

User Action   Consult the System Programmer's Guide for an explanation of the SEGMENT RESERVE return code.

Return Code   1064 from ISRSAVE EXEC.

Message

```
************************************************************
*** Either not enough virtual storage to load ISPF/PDF
*** or the storage required to load the DCSS is
*** already in use.
*** Save of ISPF/PDF aborted
************************************************************
```

Explanation   Either the virtual machine does not have enough virtual storage to include the entire DCSS area, or the storage required to load the DCSS is already in use.

User Action   Re-define the virtual machine size to increase virtual storage or IPL CMS

Return Code   1104 from ISRSAVE EXEC.

Message

```
***********************************************************
*** The < DCSSname > DCSS is too small to hold ISPF/PDF
*** ISPF/PDF code ends at address < address >.
*** The < DCSSname > DCSS is defined between <start-addr>
*** and <end-addr>. Redefine the DCSS to the appropriate
*** size.
*** Save of ISPF/PDF is aborted
***********************************************************
```

Explanation   The ISPF/PDF DCSS was not defined large enough to contain the ISPF/PDF product.

User Action   Redefine the ISPF/PDF DCSS to an area large enough to contain the ISPF/PDF product.

Return Code   1088 from ISRSAVE EXEC.

Message

```
***********************************************************
*** Error loading < include_file >. Return code = < rc >
*** Save of ISPF/PDF is aborted
***********************************************************
```

Explanation   An error occurred attempting to CMS LOAD a file or INCLUDE a file. The virtual machine storage may be too small. The return code is 1000 plus the LOAD/INCLUDE return code.

User Action   Re-define the virtual machine size to insure that the virtual machine has enough virtual storage to include the entire DCSS area, or change the location of the DCSS.

Return Code   1XXX from ISRSAVE EXEC.

Message

```
***********************************************************
*** Error encountered loading ISPF/PDF TEXT files.  One or
*** more TEXT files were not found.  Verify the ISPF
*** System Disk is accessed in WRITE mode.  Check the
*** LOAD MAP for undefined TEXT files.  The ISPF/PDF DCSS
*** < DCSSname > has not been saved.
***********************************************************
```

Explanation   An error occurred attempting to CMS LOAD a file or INCLUDE a file. One or more TEXT files were not found; the LOAD MAP indicates which TEXT files were missing.

User Action   Verify that the System Disk is accessed in WRITE mode.

Return Code   1004 from ISRSAVE EXEC.

Message

```
************************************************************
*** Error issuing CP < SAVESYS or SAVESEG > command.
*** Return code from < savesys or saveseg > = < rc >.
*** The ISPF/PDF DCSS < DCSSname > has not been saved.
************************************************************
```

Explanation   An error occurred issuing the CP SAVESYS or SAVESEG command. The return code = 1000 plus the SAVESYS/SAVESEG return code.

User Action   Consult the CP Command Reference manual for an explanation of the SAVESYS (370) or SAVESEG (XA) return code.

Return Code   1XXX from ISRSAVE EXEC.

Message

```
*** Save of ISPF/PDF is aborted
```

Explanation   You elected to abort the load and save of the ISPF/PDF DCSS.

Return Code   1000 from ISRSAVE EXEC.

Message

```
************************************************************
***  <filename> not found
***  This file is required to continue with the installation.
***  Please verify that ISPF has been previously installed
***  and rerun the ISRSAVE exec.
************************************************************
```

Explanation: ISPF is required but has not been installed prior to running ISRSAVE exec or the ISPF mini disk has not been accessed.

User Action: Install ISPF and verify that the ISPF mini disk has been accessed.

Return Code: None

Message

```
**************************************************************
```
***   DCSS Name <sysname> not found.
***   Enter a new DCSS Name or "Q" to Quit.

Explanation: Shared segment has not been defined, or incorrect name was used.

User Action: Define shared segment, or use the correct name.

Return Code: None

Message

```
**************************************************************
```
***   Unexpected return code from DIAGNOSE 64.
***   DIAGNOSE 64 Return code was <rc>.
***   Save of ISPF/PDF SCLM aborted.
```
**************************************************************
```

Explanation: DIAGNOSE 64 indicates that linkage mechanism to the shared segment is not working.

User Action: Consult a **CP Programming Services** manual for your operating system.

Return Code: 1064 from the ISRSAVE EXEC

Appendix C. FLMSAVE EXEC MESSAGES

The following prompts and messages may be displayed during the execution of the FLMSAVE EXEC: For demonstration purposes a shared segment named "ISLDCS" was saved at address 5M. Your shared segment name and address may differ.

```
************************************************************************
***   ISPF/PDF SCLM DCSS Name   : < ISLDCS1 >
***   Starting address : < 00500000 >
***   Ending address   : < 006C1FFF >
************************************************************************


***   Do you wish to continue? (Y|N) ===>

************************************************************************
*** ISPF/PDF 3.2 SCLM supports the following National Languages:
***
***           - ENGLISH
***           - JAPANESE
***           - GERMAN
***           - SWISS_GERMAN
***           - TRADITIONAL_CHINESE
***
***        Which languages do you want to install?
***
***
***        Enter "ALL" to load all the languages,
***        Enter "<LANGUAGE ID>" to load just one language,
***          or  ENTER (null) for a selection menu ===>


************************************************************************
***          For each language listed, reply (Y | N)
***
*** Do you want to install ENGLISH             ===> Y
*** Do you want to install JAPANESE             ===> N
*** Do you want to install GERMAN              ===> N
*** Do you want to install SWISS_GERMAN          ===> N
*** Do you want to install TRADITIONAL_CHINESE  ===> N
***
***
***    Are these selections correct? (Y|N)  ===>

************************************************************************
***   The Language Options Selected are:
***
***       ENGLISH              ===> Y
***       JAPANESE              ===> N
***       GERMAN              ===> N
***       SWISS_GERMAN         ===> N
***       TRADITIONAL_CHINESE  ===> N
************************************************************************


************************************************************************
***   ISPF/PDF SCLM DCSS Name   : < ISLDCS1 >
***   Starting address : < 00500000 >
***   Ending address   : < 006C1FFF >
************************************************************************
```

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***   Do you wish to continue? (Y|N) ===>

***   Loading ISPF/PDF SCLM DCSS < ISLDCS1 > at address < 00500000 >.

SYSTEM SAVED

****
***   SCLM DCSS < ISLDCS1 > Saved at Address < 00500000 >.
***   Return Code = < 0 >.
***   DCSS MAP Saved in ISLDCS1 MAP A
****

The following error messages may be displayed during the execution of the FLMSAVE EXEC.

Message

    *** Only the DCSS name is a valid parameter

Explanation   The only parameter allowed is the DCSS name. If no DCSS name is given, the default DCSS name FLMDCSS is used.

User Action   Re-execute the FLMSAVE EXEC with the DCSS name as the only parameter, or re-execute the FLMSAVE EXEC with no parameters to get the default DCSS name, FLMDCSS.

Return Code   1024 from FLMSAVE EXEC.

Message

    ****
    *** Unexpected return code from SEGMENT RESERVE.
    *** SEGMENT RESERVE return code was < return code >
    *** Save of ISPF/PDF aborted
    ****

Explanation   An unrecoverable error occurred in the SEGMENT RESERVE command.

User Action   Consult the System Programmer's Guide for an explanation of the SEGMENT RESERVE return code.

Return Code   1064 from FLMSAVE EXEC.

Message

    ****
    *** Either not enough virtual storage to load ISPF/PDF SCLM
    *** or the storage required to load the DCSS is
    *** already in use.
    *** Save of ISPF/PDF SCLM aborted
    ****

Explanation   Either the virtual machine does not have enough virtual storage to include the entire DCSS area, or the storage required to load the DCSS is already in use.

User Action   Re-define the virtual machine size to increase virtual storage or IPL CMS.

Return Code   1104 from FLMSAVE EXEC.

Message

```
************************************************************
*** The < DCSSname > DCSS is too small to hold SCLM
*** ISPF/PDF SCLM code ends at address < address >.
*** The < DCSSname > DCSS is defined between <start-addr>
*** and <end-addr>. Redefine the DCSS to the appropriate
*** size.
*** Save of ISPF/PDF SCLM is aborted
************************************************************
```

Explanation The SCLM DCSS was not defined large enough to contain SCLM.

User Action Redefine the SCLM DCSS to an area large enough to contain SCLM.

Return Code 1088 from FLMSAVE EXEC.

Message

```
************************************************************
*** Error loading < include_file >. Return code = < rc >
*** Save of ISPF/PDF SCLM is aborted
************************************************************
```

Explanation An error occurred attempting to CMS LOAD a file or INCLUDE a file. The virtual machine storage may be too small. The return code is 1000 plus the LOAD/INCLUDE return code.

User Action Re-define the virtual machine size to insure that the virtual machine has enough virtual storage to include the entire DCSS area, or change the location of the DCSS.

Return Code 1XXX from FLMSAVE EXEC.

Message

```
************************************************************
*** Error encountered loading ISPF/PDF SCLM TEXT files.
*** One or more TEXT files were not found.  Verify the
*** ISPF/PDF SCLM System Disk is accessed in WRITE mode.
*** Check the LOAD MAP for undefined TEXT files.
*** The ISPF/PDF SCLM DCSS < DCSSname > has not been saved.
************************************************************
```

Explanation An error occurred attempting to CMS LOAD a file or INCLUDE a file. One or more TEXT files were not found; the LOAD MAP indicates which TEXT files were missing.

User Action Verify that the System Disk is accessed in WRITE mode.

Return Code 1004 from FLMSAVE EXEC.

Message

```
************************************************************
*** Error issuing CP < SAVESYS or SAVESEG > command.
*** Return code from < savesys or saveseg > = < rc >.
*** The ISPF/PDF SCLM DCSS < DCSSname > has not been saved.
************************************************************
```

Explanation   An error occurred issuing the CP SAVESYS or SAVESEG command. The return code = 1000 plus the SAVESYS/SAVESEG return code.

User Action   Consult the CP Command Reference manual for an explanation of the SAVESYS (370) or SAVESEG (XA) return code.

Return Code   1XXX from FLMSAVE EXEC.

Message

```
*** Save of ISPF/PDF SCLM is aborted
```

Explanation   You elected to abort the load and save of the ISPF/PDF DCSS.

Return Code   1000 from FLMSAVE EXEC.

Message

```
****************************************************************
***  <filename> not found
***  This file is required to continue with the installation.
***  Please verify that ISPF has been previously installed
***  and rerun the FLMSAVE exec.
****************************************************************
```

Explanation: ISPF is required but has not been installed prior to running FLMSAVE exec or the ISPF mini disk has not been accessed.

User Action: Install ISPF and verify that the ISPF mini disk has been accessed.

Return Code: None

Message

****
***   <filename> not found
***   This file is required to continue with the installation.
***   Please verify that PASCAL has been previously installed
***   and rerun the FLMSAVE exec.
****

Explanation: PASCAL Runtime Library is required but has not been installed prior to running FLMSAVE exec or the PASCAL mini disk has not been accessed.

User Action: Install PASCAL Runtime Library and verify that the PASCAL minidisk has been accessed.

Return Code: None

Message

****
***   DCSS Name <sysname> not found.
***   Enter a new DCSS Name or "Q" to Quit.

Explanation: Shared segment has not been defined, or incorrect name was used.

User Action: Define shared segment, or use the correct name.

Return Code: None

Message

****
***   Unexpected return code from DIAGNOSE 64.
***   DIAGNOSE 64 Return code was <rc>.
***   Save of ISPF/PDF SCLM aborted.
****

Explanation: DIAGNOSE 64 indicates that linkage mechanism to the shared segment is not working.

User Action: Consult a **CP Programming Services** manual for your operating system.

Return Code: 1064 from FLMSAVE EXEC

Appendix D. Check SCRIPT/VS Command Name

The ISPF SCRIPT/VS foreground option (option 4.9) provides an interface to the SCRIPT/VS Release 3.0 Document Composition Facility licensed program. ISPF uses the command name "SCRIPT" to invoke SCRIPT/VS. If your installation uses a different command name, you must change the variable '&LANG' in the ISRFX09 EXEC to the value your installation uses. If APAR VM35757 is installed then change 'LANG' instead of '&LANG' in the ISRFX09 EXEC to the value your installation uses.

If DCF APAR PL39478 has been installed, a new module DMSXTKSY will be available to limit/allow the use of .SY commands. ISPF/PDF uses .SY to perform STATE and CP SET commands. The following documentation explains how to use DSMXTKSY.

New module DSMXTKSY will be added to provide an interface point for processing .SY commands with user routines. DSMESKSY will be changed to call module DSMXTKSY.

Following is a description of the interface between DCF Release 3.2 and processing for system commands. For security reasons, the .SY control word is still obsolete meaning it is neither supported nor maintained. This interface was created to adhere to security requirements while allowing the user some flexibility in the extent of their security. CMS is one environment using this   interface.   Specific instructions for using the interface are included.

PROCESSING OF THE .SY CONTROL WORD: Currently, use of the .SY control word to issue system commands is allowed   only if the SYON   command option is specified. If the SYOFF command option is specified, or if neither SYON nor SYOFF is specified, any use of the .SY control word will cause a severe error.

INTERFACE   VIA DSMXTKSY: An interface has been created via the module DSMXTKSY which allows an installation to write a routine to determine the action to be taken when a .SY control word is encountered. The different actions possible are as follows:
 -process the .SY control word only if SYON is active
 -process the .SY control word even if SYOFF is active
 -ignore the .SY control word completely
 -disallow the .SY control word, even if SYON is active

DSMXTKSY is called by SCRIPT/VS CMS module DSMESKSY whenever a ".SY" control word is encountered. By default, DSMXTKSY will return indicating that the ".SY" control word should only be processed if SYON is active.

SYSTEM   COMMAND   INTERFACE: The   assembler-level programming interface presented to the system command   stub   routine by SCRIPT/VS   is described below.   Emphasis is given to register conventions, the parameter list sent to the system command routine and entry and exit protocols.

REGISTER CONVENTIONS: When SCRIPT/VS calls DSMXTKSY the following general registers contain significant information:

R1 - Register 1 contains the address of the parameter list sent to DSMXTKSY by SCRIPT/VS.

R11 - Register 11 contains the address of the SCRIPT command control block. This register should not be altered by your routine or by any subroutines your routine may invoke.

R12 - Register 12 is, by convention, the base register used by all SCRIPT/VS modules. Your routine should copy the contents of Register 15 into Register 12 and use it as a base register.

R13 - Register 13 contains the address of a preallocated, prechained register save area. This register should not be altered by your routine or by any subroutines your routine may invoke.

R14 - Register 14 contains the address to which your routine should return when finished.

R15 - Register 15 contains the entry point address of your routine. This value should be copied into Register 12.

THE PARAMETER LIST: The system command parameter list, which is addressed by Register 1 on entry to the routine contains the following fields:

bytes 1-60 - On entry, these 15 fullwords have not been filled in. DSMXTKSY should save the contents of 15 registers in this area. DSMXTKSY MUST ensure that the contents of the registers are the same upon exit from DSMXTKSY as they were upon entry.

bytes 61-64 - On entry, this fullword has been filled in with the address of a 256-byte work area which DSMXTKSY can use. All storage used by DSMXTKSY should be from this work area.

bytes 65-66 - On entry, this halfword has been initialized to zero. On exit, this halfword should contain the return code from DSMXTKSY to SCRIPT/VS, to tell SCRIPT/VS what action to take for the current .SY control word. The recognized return codes are:

0 = Process .SY control word according to SYON/SYOFF setting. If SYOFF is in affect, message 313S will be issued.

4 = Process .SY control word regardless of SYON/SYOFF setting.

8 = Ignore the .SY control word regardless of SYON/SYOFF setting. No further processing of the .SY control word will be done.

12 = Disallow .SY regardless of SYON/SYOFF setting. Message 313S will be issued, regardless of the SYON/SYOFF setting.

16 = Indicate an unexplainable condition has happened. DCF will issue message 400 and terminate.

bytes 67-68 - On entry this halfword contains the length of the .SY control word parameter list.

bytes 69-324 - On entry this field contains the .SY control word command line to be processed. The first four bytes, ".SY " have been stripped out and only the command remains.

ROUTINE ENTRY AND EXIT PROTOCOL: The following ENTRY protocol is suggested for the system command routine:

```
DSMXTKSY CSECT
USING PARMLIST,R1
STM   R14,R12,PARMRSV  SAVE ALL THE REGISTERS
USING DSMXTKSY,R12
LR    R12,R15
L     R2,PARMWA        GET ADDRESS OF THE WORK AREA
USING WORKA,R2
MVC   PARMRC,=H'0'    INITIALIZE RETURN CODE TO ZERO
```

   The above assumes the parameter list has been defined as:

```
PARMLIST DSECT
PARMRSV  DS   15F               SAVE AREA FOR REGISTERS
PARMWA   DS   F                 ADDRESS OF WORK AREA
PARMRC   DS   H                 RETURN CODE
PARMSYLG DS   H                 LENGTH OF PARMSY
PARMSY   DS   CL256             .SY CONTROL WORD TO PROCESS
```

   A WORKA DSECT has been defined. The following is an example:

```
WORKA    DSECT
WORK     DS   CL256
```

   The following EXIT protocol is suggested for the system command routine:

```
LM    R14,R12,PARMRSV  RESTORE REGISTERS
BR    R14              RETURN TO CALLER
```

SAMPLE DSMXTKSY PROCESSING: One possible use of the DSMXTKSY interface is to allow a certain subset of system commands even if SYOFF has been specified. To do this, a table of allowable system commands must be created, and DSMXTKSY must be used to search that table for the command given on the .SY control word.   In conjunction with suggested entry and exit protocol, the following shows sample logic for accomplishing this task:

- parse the system command from the .SY control word line in the parameter list pointed to by register 1
- translate the system command to uppercase
- look for the system command in a table of system commands which are allowed in SYOFF mode

- if the system command is found set return code to 4

Example DSMXTKSY procedure:

```
DSMXTKSY CSECT
DSMXTKSY AMODE 24
DSMXTKSY RMODE 24
USING PARMLIST,1          SET BASE FOR PARMS
STM   14,12,PARMRSV       SAVE CALLER'S REGISTERS
USING DSMXTKSY,12         SET BASE FOR CODE
LR    12,15               LOAD BASE FOR CODE
XR    15,15               SET UP TO OBEY SYON/SYOFF
CLC PARMSYLG,FIVELONG     IS THE COMMAND AT LEAST 5 BYTES LONG?
BL RETURN0                NO - JUST GET OUT
CLC STATE,PARMSY          IS THE COMMAND A STATE?
BE RETURN4                YES IT IS - GO TELL CALLER TO 'GO'
CLC CPSET,PARMSY          IS THE COMMAND A CP SET COMMAND?
BNE RETURN0               IF NOT - TELL CALLER OBEY SYON/SYOFF
RETURN4  LA    15,4       SET RETURN CODE TO 'DO IT REGARDLESS'
RETURN0  EQU   *
STH   15,PARMRC           SET RETURN CODE FOR CALLER
LM    14,12,PARMRSV       RELOAD CALLER'S REGISTERS
BR    14                  RETURN TO CALLER
*
FIVELONG DC    H'5'       LENGTH COMPARE TEST
STATE    DC    CL5'STATE' IS COMMAND A STATE?
CPSET    DC    CL6'CP SET' IS COMMAND A CP SET?
LTORG
*
PARMLIST DSECT            DCF DSECT FOR SAVE AREA AND PARMS
PARMRSV  DS   15F         CALLER'S SAVE AREA
PARMWA   DS   F           POINTER TO WORK AREA (NOT USED)
PARMRC   DS   H           RETURN CODE FROM THIS MODULE
PARMSYLG DS   H           LENGTH OF COMMAND TO CHECK
PARMSY   DS   CL256       COMMAND TO CHECK
END   DSMXTKSY
```

NOTE: If the system command is not found, the return code has already been initialized to zero to indicate to SCRIPT/VS to process the .SY control word according to the SYON/SYOFF setting.

Installation Instructions: The following procedure is recommended for replacing an IBM supplied stub routine with your routine in the CMS environment:

1. Compile or assemble DSMXTKSY to produce a TEXT file. If your routine calls any other modules, compile or assemble them also.

2. Link and access the SCRIPT/VS Release 3.2 installation minidisk in READ/WRITE mode as your A-disk.

3. Move the IBM-supplied DSMXTKSY to another disk to save it.

4. Copy your DSMXTKSY TEXT file onto the A-disk. If your routine calls any other modules, copy them also.

5. Issue the following CMS command: *DSMGND32* This EXEC creates a new DSM3 MODULE (disk resident SCRIPT MODULE).

6. If your installation has defined a shared segment named DSMSEG3 for SCRIPT/VS, make sure the new SCRIPT module will fit entirely within the defined shared segment. Then issue the following CMS command:

   DSMGNS32

   This EXEC reloads the DSMSEG3 shared segment.

7. Copy the new SCRIPT MODULE file onto the public minidisk where SCRIPT/VS normally resides at your installation.

Appendix E. Installing ISPF/PDF 3.2 Corrective Service

After the Service has been loaded from the Corrective Service tape and the 'RENAME EXEC' has been executed, you must move the renamed files to the disk that contains you PDF product maintenance. You should rename any like named files before you do the move; this will provide a file for backup purposes.

If your Corrective Service contains any of the following files you will have to run 'ISRINSXR EXEC' to rebuild the appropriate modules. See section 6.4.3 Step 3D titled 'Run the ISRINSXR EXEC', for information on the use of 'ISRINSXR EXEC'.

FLMCMD TEXT	ISRFXDAT TEXT	ISRLE* TEXT
ISRLMFI TEXT	ISRLMFZ TEXT	ISRS* TEXT
ISRV* TEXT	ISRW* TEXT	ISRX* TEXT

If your Corrective Service contains any 'ISR* TEXT' files other than those mentioned above, you will have to run 'ISRSAVE EXEC' to re-save your ISPF/PDF shared segment. See section 6.3.2 Step 2B titled 'Save the ISPF/PDF and SCLM DCSSs' for information on the use of 'ISRSAVE EXEC.

If your Corrective Service contains any 'FLM* TEXT' files other than those mentioned above, you will have to run 'FLMSAVE EXEC' to re-save your SCLM shared segment. See section 6.3.2 Step 2B titled 'Save the ISPF/PDF and SCLM DCSSs' for information on the use of 'FLMSAVE EXEC.

Any PANELS, MESSAGEs, SKELETONs OR TABLEs should be put into the correct maclib using the CMS 'MACLIB REP' command if the product was installed using MACLIBs. See 'CMS COMMAND REFERENCE' for the use of the 'MACLIB REP' command and particularly the filetype required. If the product was installed using CMS files, the new PANELs, MESSAGEs, SKELETONs and TABLEs should replace the existing PANELs, MESSAGEs, SKELETONs and TABLEs.

Appendix F. Reader's Comment Form

ISPF/PDF 3.2.0 for VM
Program Directory Response Form

To better enable us to reflect your needs in future program directories, please complete the following table, entering a number in the range of one (for very poor or very low) to five (for very good or very high).

Completeness
_____

Accuracy
_____

Clarity
_____

Format
_____

Usefulness

Please provide specific comments below. Attach additional sheets if necessary.
_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

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