ISOGON® SPIFFY for ISPF

Installation Guide

Release 5.8

ISOGON®

CONTENTS

1. ABOUT THIS MANUAL

This guide describes how to install and configure SPIFFY. It is intended for the system administrator and operation personnel.

ASSUMPTIONS

This guide assumes that you are familiar with the basic ISPF functions. Subjects that are discussed in an ISPF manual are explained briefly in this guide. For detailed information about ISPF, see the appropriate IBM documentation.

ORGANIZATION OF THIS GUIDE

This guide is divided into the following chapters:

Chapter 1- *About This Manual* - provides information about the guide, such as the text conventions and contact information.

Chapter 2 - *An Overview of SPIFFY* - describes the features and capabilities of SPIFFY and introduces the new features in the current release.

Chapter 3 - *SPIFFY Installation and Customization* - provides the installation procedures and explains how to configure SPIFFY.

Chapter 4 - *Install and Uninstall Considerations* - explains the issues you must consider when you install SPIFFY and provides the instructions for uninstalling SPIFFY.

Chapter 5- *Appendixes*- covers the installation-related topics and options.

OTHER INFORMATION RESOURCES

In addition to this guide, you can use the online tutorials, Help panels, Assist windows, and the structured Action Bar.

To invoke the SPIFFY tutorial, enter SPFHELP or SPFE on any ISPF panel.

To invoke the Online Help, press the HELP key (usually PF1) on any SPIFFY panel.

To display the Assist window, which is available in both the Member List and Object List, type ASSIST on the command line.

TEXT CONVENTIONS IN THIS GUIDE

This guide uses the following conventions when referring to syntax:

UPPERCASE TYPE	Indicates commands or syntax that you must enter exactly as shown, e.g., **CUT, PASTE**.
Lowercase type	Indicates a variable that you must substitute with an appropriate value.
. . . (horizontal ellipsis)	Indicates that you can enter a parameter multiple times.
. (vertical ellipsis)	Indicates that there are (or could be) intervening or additional commands.

CONTACTING ISOGON

Isogon welcomes any comments, questions, and suggestions you have about Isogon products and manuals. You can contact Isogon at:

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2. AN OVERVIEW OF SPIFFY

This chapter introduces SPIFFY's technology and discusses PEL tool functions and SPIFFY data set naming conventions. It also highlights the new features of SPIFFY in Release 5.8.

AUTOMATIC INTEGRATION INTO ISPF

SPIFFY integrates tightly into ISPF whether you change the main menu or not. This tight integration ensures that the performance and productivity improvements that SPIFFY offers are not limited to a specific option, but they are available throughout ISPF. Note that this tight integration does not allow activation of SPIFFY via LIBDEFs. You should follow the installation instructions carefully and accurately.

SPIFFY controls ISPF via a "front-end". The front-end is conveniently named as ISPF, PDF, and ISPSTART, so that SPIFFY gains control whenever you start ISPF. Internally, SPIFFY invokes ISPF, and provides access to both ISPF and SPIFFY services. The SPIFFY installation procedures will illustrate how to activate SPIFFY on a selected group of users without impacting other ISPF users, and how to widen the group of users having access to SPIFFY.

The SPIFFY front-ending ISPF does not require linking into the ISPF product modules or renaming the ISPF modules. With SPIFFY, the original ISPF is left intact. SPIFFY does not run authorized, and adheres to all MVS security standards.

The SPIFFY front end to ISPF automatically deactivates itself when ISPF is run in batch. Other methods of bypassing the SPIFFY front end are described in "Bypassing SPIFFY (Invoking Standard ISPF)" on page 4-8 in this manual.

THE CUSTOMIZATION WIZARD

The customization of SPIFFY options is an automated process controlled by the Customization Wizard. Information is presented in ISPF panels and is remembered across sessions. The Customization Wizard is also used to register other products to work with SPIFFY. It may be invoked any time.

OBJECT ORIENTATION AND REGISTERING OTHER PRODUCTS WITH SPIFFY

One of the important SPIFFY concepts is its object-oriented technology. The following sections explain how important to understand its role in enabling SPIFFY to take advantage of other products installed in your system.

Objects and Object Classes

The most common object is a data set. With SPIFFY, the object class "data set" has several subclasses—different types of data sets, such as PDS, PDSE, VSAM, SEQ, Panvalet, Librarian, etc. SPIFFY supports other object classes as well— DB2™ tables, TSO commands, catalog levels, OpenEdition™ files, and others.

SPIFFY expands the concept of data set to objects so that ISPF functions and new SPIFFY functions that work on data sets can be used to work on other object classes.

Identifying Objects

SPIFFY includes an automatic object identifier for the data set class. For example, SPIFFY automatically identifies VSAM files and knows which method to invoke for these files.

For other object classes, SPIFFY uses special notation to identify the object class. For example, DB2 tables are denoted by a leading hyphen. MVS Open-Edition files are specified by a leading slash, and workstation (PC) files are specified by enclosing them in double quotes.

Note that the leading dash, leading slash, and surrounding quotes are not considered part of the object name, and are stripped off before the object name is passed on for processing by the object method.

A list of supported objects, their notation, and function is provided in "Appendix G: Supported Objects" on page 5-11.

Methods, OLE, and Interfacing to Other Products

Each class is internally associated with a method that acts on the object based upon the action you specify. For example, when you browse a sequential file, the SPIFFY registered method for that operation is to invoke the ISPF browse function.

For the end user, the environment resembles Microsoft® Windows OLE where by clicking on an object, the appropriate application is invoked and requested to perform the appropriate function. In a similar manner, what is invoked by SPIFFY is controlled by a registration process. This process is defined when you customize SPIFFY.

SPIFFY comes with many built-in methods for different classes of objects. For example, the method for displaying a member list is the powerful SPIFFY MSL (Member Selection List).

SPIFFY provides an interface to third party products that can handle DB2 files. When you customize SPIFFY, you are presented with a list of database administration tools that SPIFFY supports and you will register the one that is installed. This allows SPIFFY to transparently interface to the DB2 database. You can specify the name of a database file right from option 2 (edit), or use the E(dit) line command in a data set list (DSLIST—option 3.4).

Similar to registering the VSAM editor/browser you have in your installation, the Customization Wizard will let you register other products—one for each object class.

The SPIFFY open architecture lets you register your own method—a CLIST or REXX exec that would automatically gain control whenever an object is selected.

Therefore you can write your own interface to support objects for which you do not have the appropriate third-party product. A typical example might be someone who wrote their own CA-Librarian interface instead of using the SPIFFY supported CA-ELIPS product.

WHAT'S NEW IN RELEASE 5.8

SPIFFY is enhanced and upgraded in Release 5.8 with the following new features:

- A dynamically allocated Persistent Table Library is created to serve as a repository for SPIFFY persistent objects.
- SPIFFY supports a maximum of 200 CUT/PASTE clipboards. You can name the clipboards as numbers or names. You can copy, edit, browse, save, restore, and rename the clipboards.
- The SPIFFY TSO command shell (IPITSO) allows up to 999 entries of History Command List and 999 entries of Permanent Command List. You can edit, browse, save, and restore from a persistent table library.
- OLIST administration is enhanced with the following features:
  - You can edit and save the SPIFFY Object History List (OLIST @H)
  - OLIST @LISTSYS supports PARMLIB key word to list z/OS PARMLIB libraries
  - From the main command, you can select a range of line entries <from#>-<to#> to process the command.
  - To avoid displaying certain entries, you can exclude a range of entries by using the **/XX** line command at the beginning and end of the entry range.
  - You can use **SAVE** command to save any temporary list as a permanent list.
- The SPIFFY MSL group copy and move by pattern functions are enhanced to ensure the preservation of alias association.
- The SPIFFY catalog search is simplified and restricted to three levels:
  - Unlimited access to the SPIFFY catalog
  - No "wild card" in the first character (e.g., A*)
  - No "wild cards" in the high level qualifier.
- ISPF Compatibility:
  - SPIFFY Release 5.8 supports z/OS 1.6
  - The functionality of "Preserve VB Record Length on EDIT" is enhanced to provide the user with full control of the blank truncation process. A warning message is provided to remind you of your current status of preservation before any truncation occurs.
- The SPIFFY load modules are reorganized, separating between below-16MB line resident modules and above-16MB line resident modules. Following ISPF's conventions, SPIFFY programs are installed into two libraries:
  - LPA eligible
  - non-LPA
- SPIFFY PRINT engine supports datasets with logical record length of up to 256 bytes.
- Accumulated maintenance has been "sourced" and included.

3. SPIFFY INSTALLATION AND CUSTOMIZATION

This chapter describes the requirements to install SPIFFY, the installation procedures, and customization of SPIFFY. SPIFFY can be installed from CD through the PC installation programs, or from tape cartridge through the mainframe.

INSTALLATION REQUIREMENTS

The following system software is required for the installation and operation of SPIFFY Release 5.8:

- z/OS Version 1 Release 1 or later operating system
- ISPF Version 4 Release 1 or later

Installing SPIFFY does not require an IPL or authorized mode. Since SPIFFY is invoked through libraries pointed to by the LOGON procedure or CLIST, you can install it on a system-wide basis or only for selected programmers.

SPIFFY code is fully reentrant. Most of SPIFFY code resides above the 16-megabyte line. Most working storage that SPIFFY uses is also acquired above the line.

DATA SET NAMING CONVENTIONS

The names assigned to SPIFFY libraries have the following structure:

- A first-level qualifier (**Project**). The default value used throughout this manual is **SPFE**. You can change this value during the installation process.
- A middle-level qualifier (**Group**) specifying the ISPF release for which SPIFFY is installed. The default used throughout this manual is **V5R6M0**.
- A library qualifier (**Type**) specifying the SPIFFY major release and library type. For example, the qualifier for the panel library for release 5.8 of SPIFFY is **V58PLIB**.

Using these naming conventions (**Project.Group.Type**), the name for the SPIFFY message library for ISPF release 5.6 is **SPFE.V5R6M0.V58MLIB**.

INSTALLING SPIFFY FROM CD

Before you start the automated PC installation program, you must accept the license agreement. You should have the following information available:

- Host name or IP address
- Your TSO ID and TSO Password
- Job card
- Dataset allocation information, including Unit Name and Volume Serial Number or SMS Storage and Data classes
- High-level and secondary dataset qualifiers
- Dataset name of the ISPF Panel Library containing the ISPF Main menu and the member name of the menu
- Dataset name of the TSO Procedure Library containing the TSO Logon Proc to be modified and the member name of that Proc

Note: You must have FTP access to your mainframe.

You should contact Isogon to obtain a password. To get the password, you need to supply the following information to Isogon:

- Company name
- Physical locations of the CPU(s)
- CPU serial numbers

Perform the following procedures to install SPIFFY through the PC wizard:

Step 1   Insert the CD. The Welcome screen is displayed. Click **Next**.

Step 2   A User Agreement is displayed. Accept the agreement to continue the installation. Click **Next**.

Step 3   Specify a location to extract the files. ***This is not where SPIFFY is installed***. It is only a working directory. Click **Install**.

Step 4   When the extraction is finished, the ***Installation Complete*** window is displayed. An installation folder is created and it includes a shortcut named ***SPIFFY_V5R8***. An uninstall icon is provided in the installation folder if you need to remove this software from your system.

Click **Finish**.

Step 5   Double-click the *SPIFFY_V5R8* shortcut in the explorer window and select **Install.** Click **Next**.

Step 6   An Install Builder window displays. It allows you to choose "Install" or "Uninstall". Select **Install**. Click **Next**.

Step 7   Enter your TSO logon information in the following input window:
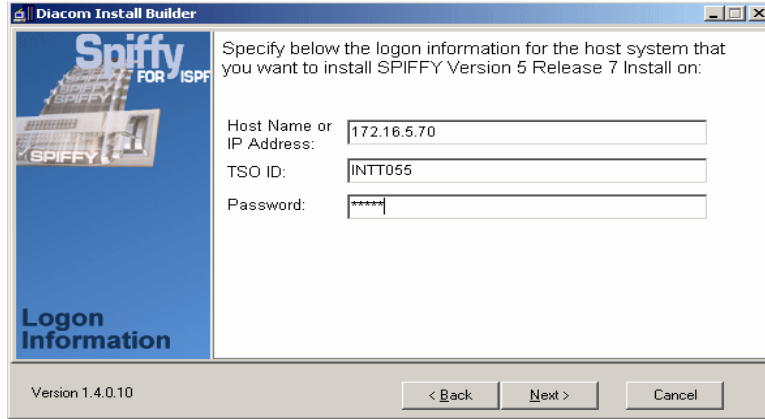
Click **Next**.

Step 8   Enter your job card and dataset information specific to your installation. The information shown in the following example is for demonstration purpose only.

For general information on this, refer to *Step 1* and *Step 2* of *"Installing SPIFFY from Tape Cartridge" on page* 3-9.
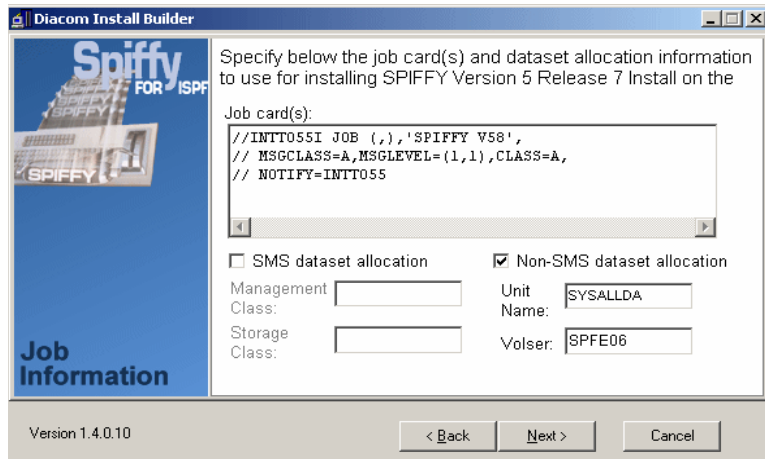
Where:

Parameter	Explanation
JOBNAMEX	Job name Check with your system administrator for your specific requirements.
Accounting Information	Check with your system administrator for your specific values and sub-parameters.
NOTIFY	Specifies the TSO userid in the TSO ID field: this is TSO logon ID to be notified when the JOB completes.

Parameter	Explanation
CLASS	Job class, used to schedule the job. This batch job should execute in 30 seconds or less. Check with your system administrator for your specific values.
MSGLEVEL	(Stmt, Msg)
	Required: Stmt = 1, print only JCL Statements including those from procedures.
	Required: Msg = 1, print all messages
MSGCLASS	Required: Message class to have job output in 'Held Classes' Check with your system administrator for your installation procedure's values.

Click **Next**.

Step 9 Prior to starting the installation on your CPU, the ***Installation Overview*** window is displayed. Click **Install**.

Step 10 You are asked to specify the high-level qualifier for temporary files and the high-level/secondary qualifier for the SPIFFY libraries. The specifications in the following screen imply that all SPIFFY product libraries begin with INTT055.SPIFFY.V5R6M0.

For general information on this, refer to *Step 2* of *"Installing SPIFFY from Tape Cartridge" on page 3-9*.
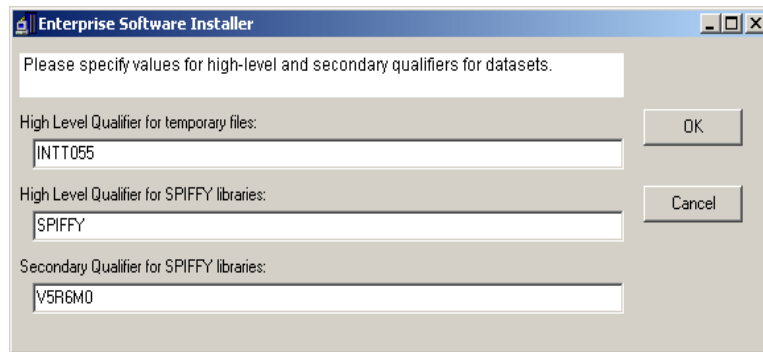
Click **OK**.

Step 11 You are informed that any files from a previous installation will be cleaned up. Click **OK**.

Step 12 The files are now copied from the working directory to the host computer.

Step 13 When the upload is finished, the installer will analyze the data.

Step 14 When the analysis is done, SPIFFY has been installed and you begin the process of customizing SPIFFY. The following window is displayed:
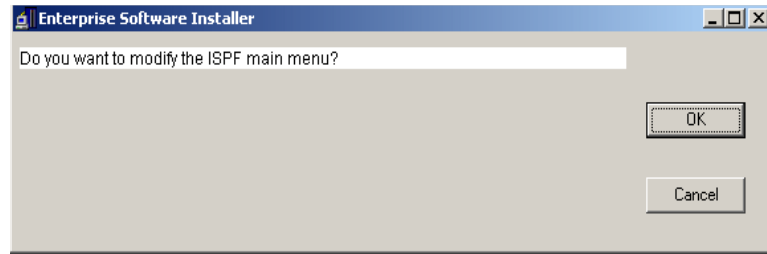
Step 15   Click **OK** to perform the installation configuration steps through the automated Installation PC program.

Note: If you click **Cancel***, you can manually configure the ISPF Main Menu using the procedure described in Step 4 of "Installing SPIFFY from Tape Cartridge" on page 3-11.*

Note: *The next steps modify the ISPF Main Menu and the TSO Logon Procedure. Both modifications are optional.*

Modifying the ISPF Main Menu

Step 16   Customize the ISPF Main Menu. Enter the dataset name of your ISPF Panel Library and the member name of your ISPF Main Menu:
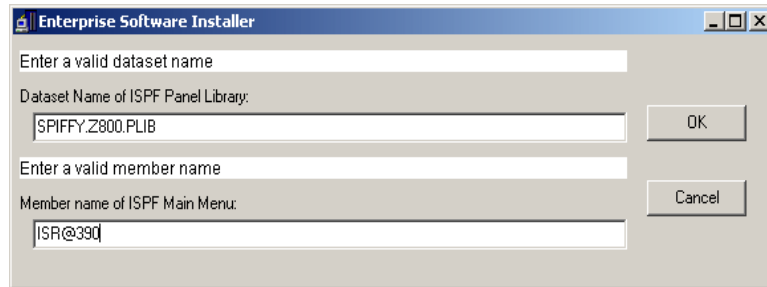
Click **OK**.

Step 17   The Installation Wizard downloads your panel.

Step 18   After the panel is downloaded, the following window is displayed.
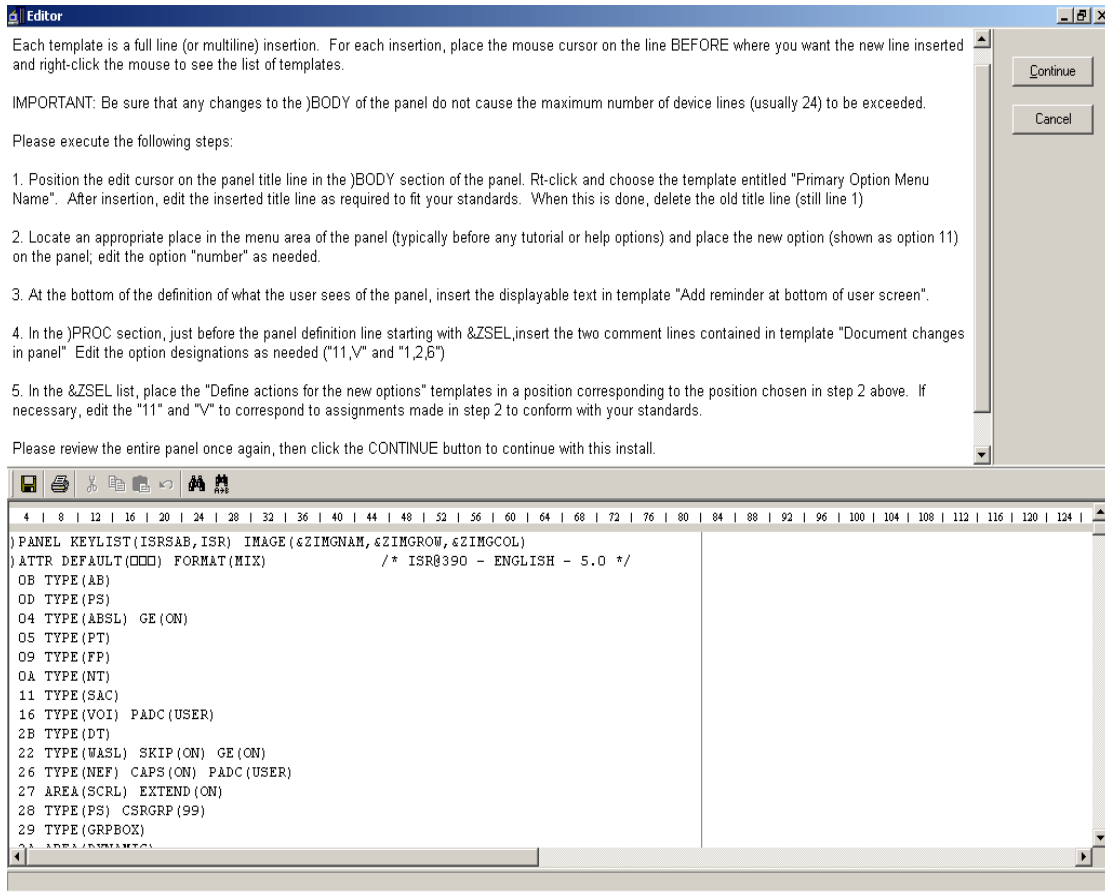
Perform the steps in the top panel of this screen. Each step of the instructions applies to an existing code template. For example: Step 1 instructs:

> 1. Position the edit cursor on the panel title line in the)BODY section of the panel. Rt-click and choose the template entitled "Primary Option Menu Name". After insertion, edit the inserted title line as required to fit your standards. When this is done, delete the old title line (still line 1)

Locate the following section of code, where the line starts with `)BODY`:

```
.ZVARS=PRIMHELP
)BODY   CMD(ZCMD)
▯▯ Menu▯ Utilities▯ Compilers▯ Options▯ Status▯ Help▯
```

Place your cursor at the beginning of the line **)Body** and right-click your mouse. The following menu is displayed:
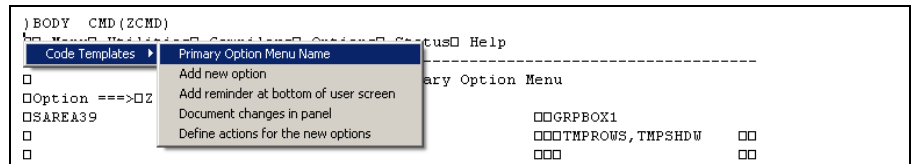
When you select the item, the following code is inserted:

```
)BODY  CMD(ZCMD)
 Menu Utilities Compilers Options Status Help
%SPF/E---------------- SPIFFY/ISPF PRIMARY OPTION MENU ----------------------
 -----------------------------------------------------------------------------
                              OS/390 Primary Option Menu
```

Follow the same sequence of steps for the remainder of the steps.

When it is done, click **Continue**.

Modifying the TSO Logon Procedure

Step 19   Customize the TSO Logon Procedure. You must have UPDATE authority for the procedure library that contains your TSO Logon Procedure. Click **OK** if you want to modify the TSO Logon Procedure.

If you do not want to customize the TSO Logon procedure at this time, you can always do it later. Refer to Step 5 of "Installing SPIFFY from Tape Cartridge" on page 3-12 for customizing the TSO Logon procedure.

Step 20   Enter the dataset name of your Procedure Library containing your TSO Logon procedure and its member name. Click **OK**.

Step 21   Once the Logon procedure is downloaded, the following window is displayed. Perform the steps in the top panel of this screen.
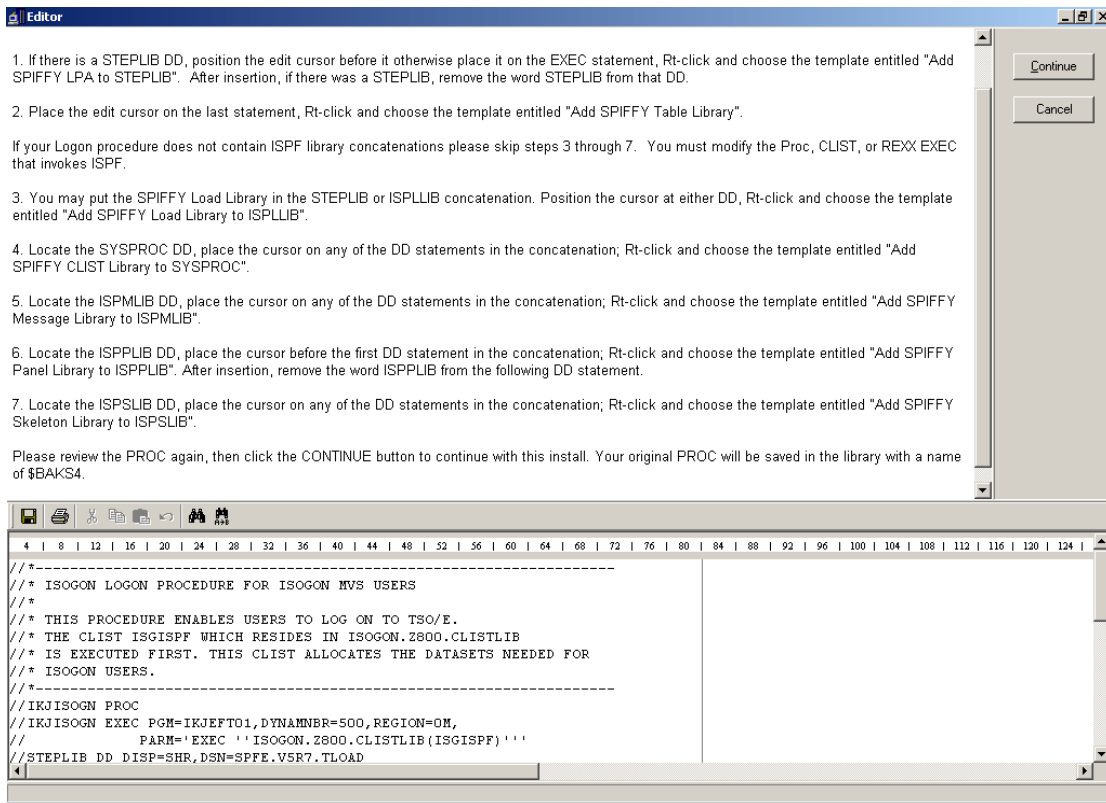
Step 22 When it is finished, click **Continue**. The following window is displayed:
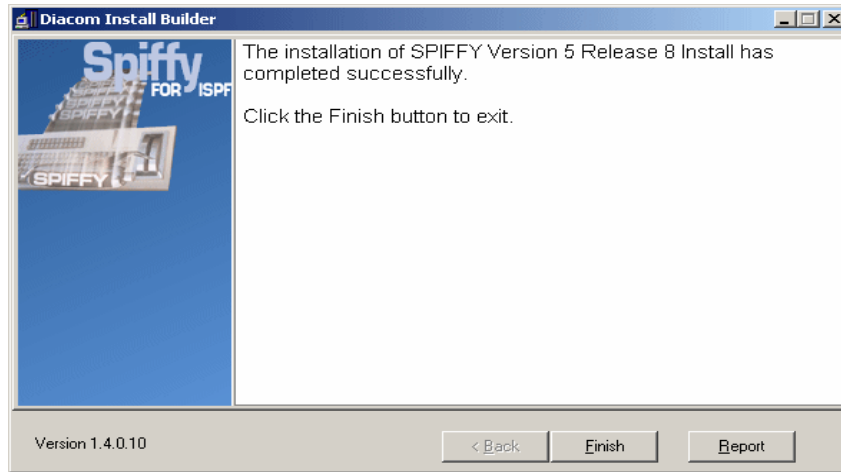
This part of the installation is finished. You should now go to the section *"Customizing SPIFFY"* on page 3-15 to finish the full installation.

INSTALLING SPIFFY FROM TAPE CARTRIDGE

The SPIFFY installation process can be performed while ISPF users are active. Perform the following procedures to install SPIFFY from tape cartridge through the mainframe:

Step 1   Allocate and load the SPIFFY JCL Library. Refer to the following graphic sample.

1. Change the JOB card to meet your installation requirements. Some installations require a SETUP statement for jobs that need a tape drive.

2. Specify the tape device-type name for your installation.

    Note: The term "tape" refers to cartridges. The tape is non-labeled, therefore, the security system in your site may require that you have proper authority to use this tape.

3. Perform the following:
    *   Define the first-level qualifier in the catalog. It is assumed that the first-level qualifier (Project) is SPFE. You may use another first-level qualifier.
    *   Change the middle-level qualifier appropriately if you are installing SPIFFY for a different version or release of ISPF. It is assumed that the middle-level qualifier (Group) is V5R6M0, indicating that SPIFFY is being installed for use with ISPF Version 5, Release 6.

4. Specify the volume serial number where you want the JCL library to reside.

```
//SPFEJCL   JOB   ..........                          ◄─────────────── 1
//COPYJCL   EXEC PGM=IEBCOPY
//SYSPRINT DD   SYSOUT=×
//SYSUT1    DD   UNIT=                   ◄─────────────── 2
//   DSN=V58JCL,DISP=(OLD,KEEP),VOL=SER=ISOSPF,LABEL=(1,NL)
//SYSUT2    DD   DSN=SPIFFY.V5R6M0.V58JCL, ◄─────────── 3
//   UNIT=SYSALLDA,VOL=SER=        ◄─────────────── 4
//   RECFM=FB,LRECL=80,BLKSIZE=3120,
//   DISP=(NEW,CATLG,DELETE),SPACE=(TRK,(2,2,3),RLSE)
//SYSIN   DD   ×
   COPY OUTDD=SYSUT2,INDD=SYSUT1
/×
```

After you run this job stream, the SPIFFY JCL library will contain these members:

Member	Description
ALOCSPFE	Job stream to allocate SPIFFY libraries
LOADSPFE	Job stream to load all SPIFFY libraries
COPYCTL	IEBCOPY control statements for LOADSPFE
COPYLPA	SPIFFY LPA-eligible load modules
COPYNLPA	SPIFFY non-LPA load modules
IPIDB2PR	Member used for modifying a DB2 editor entry panel
FOCEXEC	A FOCUS EXEC to invoke SPIFFY under FOCUS

Step 2   Allocate the SPIFFY libraries:

1. Modify the job card in ALOCSPFE to conform to your installation standards.

2. Modify the IDX (Project) variable to change the first-level qualifier of the SPIFFY data sets as necessary. The default value is SPFE.

3. Modify the ISPFVER (Group) procedure variable to match the version of ISPF as necessary. The default value is V5R6M0.

4. Modify the UNIT procedure variable as necessary to indicate a valid direct access device type for your installation. The default is SYSALLDA.

5. Modify the VOL procedure variable to indicate the volume serial number of the direct-access device on which you wish the libraries created.

6. Submit the ALOCSPFE job stream.

Note: If you have a security package, you must provide your users with READ access to these libraries. The installation process must have ALTER authority to these library.

The following libraries are required by SPIFFY:

Libraries	Version required for this release (5.8)
CLIST library	SPFE.V5R6M0.V58CLIB [fixed-length] or SPFE.V5R6M0.V58CLIBV [variable-length])
STEPLIB or LPA load library	SPFE.V5R6M0.V58LPA Note: This is new. It replacesVxxTLOAD in the previous release.
Load module library non-LPA	SPFE. V5R6M0.V58LOAD Note: This is new. It replacesVxxLLIB in the previous release.
Message library	SPFE. V5R6M0.V58MLIB
Panel library	SPFE. V5R6M0.V58PLIB
Skeleton library	SPFE. V5R6M0.V58SLIB
Table library	SPFE. V5R6M0.V58TLIB

Note: The CLIST library is provided in both fixed-blocked and variable-blocked format. You may use either of them depending on your installation standards or preferences. In either case, SPIFFY uses CLISTs only very rarely. You should expect no performance degradation due to their use.

For a listing of the member ALOCSPFE, refer to Appendix B: JCL to Create SPIFFY Libraries.

Step 3 Load the SPIFFY libraries:

1. Modify the job card in LOADSPFE to conform to your installation standards.

2. Modify the IDX (Project qualifier) procedure variable to change the first-level qualifier of the SPIFFY data sets as necessary. The default value is SPFE.

3. Modify the ISPFVER (Group qualifier) procedure variable to match the version of ISPF as necessary. The default value is V5R6M0.

4. Modify the TAPE procedure variable, indicating a valid tape device-type for your installation.

5. Submit the LOADSPFE job stream.

Note: A listing of LOADSPFE is provided in Appendix C: JCL to Copy SPIFFY Libraries.

Step 4   Modify the ISPF main menu. See "Appendix D: Sample Modified Main Menu Panel" on page 5-5 for a sample illustration. Changes to the main panel are made to a copy of your installation's main ISPF menu stored in the SPIFFY panel library. In this way, the original panel is left intact and other users currently logged-on to SPIFFY are not affected while the changes are being made. Perform the following procedure to modify the ISPF main menu:

1. Change the panel title to indicate that SPIFFY is installed.

2. Add a new menu option for OLIST (The Object List). The OLIST function is a full replacement for the previous SPIFFY version function called PLIST. The upgrading installation may elect to maintain the term "PLIST".

3. Optionally add VIEW or BROWSE to the main menu. This optional change depends on the version of ISPF you are using:

    Note: With ISPF Version 4, the view function replaced the browse function on the main menu. While the view entry screen provides access to the browse function, the users do not have an implied default from the main menu.

    With SPIFFY you may elect to add a separate option for browse and view on the main menu. Users can override the main menu implied default of browse, edit, and view by changing the default action on the data set entry panel. Also, while in the member list, they actually have access to these three functions, as well as many other options.

4.   Add a line informing users that the SPIFFY general commands (BROWSE, EDIT, VIEW, OLIST, and SPFEHELP) are available on every ISPF panel. The SPIFFY general commands are accessible from every panel without having to set up command table entries.

Note: Some installations use the standard ISR@PRIM panel as their main menu. Others may have an upper level menu (usually named ISR@MSTR) that calls ISR@PRIM as a sub-menu. We suggest that you perform changes 1 through 3 on the sub-menu or main-menu that contains the browse/edit/utilities options, while performing the change 4 on whatever the top menu in your installation (if your topmost menu does contain the browse/edit/utilities options, then all changes apply to the same panel).

If you are not sure of the name of your PDF main menu, perform the following steps:

1. Start an ISPF session.

2. On the first selection menu that offers the options EDIT, BROWSE or VIEW, and UTILITIES, enter the command:
    PANELID ON

The name of the panel to be modified is displayed in the upper left-hand corner.
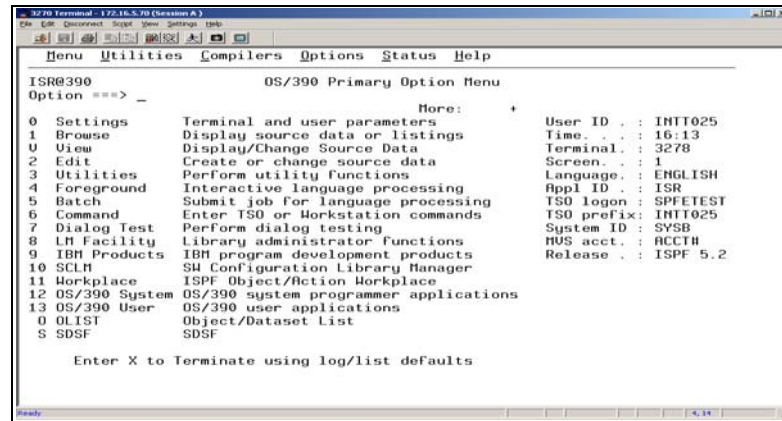
Note: All SPIFFY panel IDs start with the prefix IPI.

You can also call any panel by the panel ID if you know it. From any OLIST panel, enter PANEL 'X' where X is the panel name, such as '**PANEL ISR@390**'. The panel represented by that panel name is displayed.

Step 5   Create or modify the TSO Logon Procedure.

The following illustration assumes that your installation uses DD cards in the LOGON procedure to access the SPIFFY libraries. You can install SPIFFY on a system-wide basis or only for selected programmers.

Note: Some installations prefer to use a CLIST to perform the same task. However, unless you have a dynamic STEPLIB capability (such as IBM product 5798-DZW), you cannot allocate STEPLIB through a CLIST or REXX EXEC. If you want to use a CLIST or REXX EXEC to allocate the SPIFFY libraries, you will have to place the SPIFFY LPA load library in LPALIB. Before doing so, see the discussion of that subject in "Converting to a Licensed Installation" on page 4-9.

All the allocations required for SPIFFY must be active before SPIFFY is started. LIBDEFs can be used for applications called within SPIFFY, but not for SPIFFY itself.

Note: Some of the DDNAMEs required for SPIFFY are new DDNAMEs. Do not confuse them with existing ISPF DDNAMEs.

The following JCL example illustrates the changes you should make to a copy of your LOGON procedure or you can incorporate the changes into a new LOGON procedure that you create.

```
//STEPLIB  DD DISP=SHR,DSN=SPFE.V5R6M0.V58LPA   ◄─────────────  1
//         DD DISP=SHR,DSN=SPFE.V5R6M0.V58LOAD  ◄─────────────  2
//         DD .
//SYSPROC  DD DISP=SHR,DSN=SPFE.V5R6M0.V58CLIB  ◄─────────────  3
//         DD .
//ISPMLIB  DD DISP=SHR,DSN=SPFE.V5R6M0.V58MLIB  ◄─────────────  4
//         DD .                          1
//ISPPLIB  DD DISP=SHR,DSN=SPFE.V5R6M0.V58PLIB  ◄─────────────  5
//         DD .
//ISPSLIB  DD DISP=SHR,DSN=SPFE.V5R6M0.V58SLIB  ◄─────────────  6
//         DD .
//ISPTLIB  DD DISP=SHR,DSN=SPFE.V5R6M0.V58TLIB  ◄─────────────  7
//         DD .
//IPIUTIN  DD DISP=NEW,UNIT=VIO,                ◄─────────────  8
//    SPACE=(CYL,(1,1)),DCB=(RECFM=FB,LRECL=80,BLKSIZE=4080)
//IPIUTOT  DD DISP=NEW,UNIT=VIO,                ◄─────────────  8
//    SPACE=(CYL,(2,2)),DCB=(RECFM=FBA,LRECL=121,BLKSIZE=3872)
//IPIUT03  DD DISP=NEW,UNIT=VIO,                ◄─────────────  8
//    SPACE=(CYL,(3,1))
//IPIUT04  DD DISP=NEW,UNIT=VIO,                ◄─────────────  8
//    SPACE=(CYL,(3,1))
//IPIPANEL DD DUMMY,DSN=SPFE.V5R6M0.V58PLIB(ISR@PRIM)◄────────  9
//IPISCLM  DD DUMMY                            ◄─────────────  10
```

1. **The LPA Load Library**: This library *must be* in STEPLIB or installed in the LPA. If you do not change the logon procedure, use a dynamic STEPLIB utility for the LPA load library. *Do not* put this library in ISPLLIB.

    The SPIFFY load modules can be moved to LPALIB or any other system library. For performance reasons, LPALIB is recommended. See "SPIFFY's Performance" on page 4-1. Since most of SPIFFY resides above the line, extended LPA can be used.

2. **SPIFFY Load Library:** This library can be placed in ISPLLIB or STEPLIB.

3. **CLIST Library:** Add the CLIST library SPFE.V5R6M0.V58CLIB (or V58CLIBV, if your CLIST libraries are variable length) to the SYSPROC DD concatenation. It is recommended that the SPIFFY CLIST library be placed first in the concatenation.

4. **Message Library:** Add the message library SPFE.V5R6M0.V58MLIB to the ISPMLIB DD concatenation.

5. **SPIFFY panel library:** The first panel library concatenated to the ISPPLIB DDNAME *must be* the SPIFFY panel library (SPFE.V5R6M0.V58PLIB). It should be followed by the same panel libraries you currently have allocated to ISPPLIB in the LOGON procedure.

    Note: SPIFFY performs its own panel processing optimization. However, you can pre-process other panel libraries in the concatenation.

    If you have software packages that simulate allocations (like TSOPLUS, TSORX), do not use these to simulate the SPIFFY panel library allocation to ISPPLIB.

6. **Skeleton Library**: Add the skeleton library SPFE.V5R6M0.V58SLIB to the ISPSLIB DD concatenation. The DD statement may be placed anywhere in the concatenation.

7. **Table Library**: *Add a new statement* for the table library (SPFE.V5R6M0.V58TLIB) with the DDNAME **IPITLIB**. Do not confuse this DD name with ISPF's ISPTLIB.

8. **Utility Files**: These statements are optional. If you need them, add these four DD statements to your LOGON procedure. If you omit them, SPIFFY will

dynamically allocate these files as temporary files (allocated to the UNIT name specified for allocating a new OLIST library). If you include them, you can change the unit type keyword in the DD statement.

9. **Main panel**: IPIPANEL is an optional DD statement. If specified, it provides the installation the ability to designate the name of the main panel that ISPF will use when ISPF, PDF, or ISPSTART is invoked without parameters. If any parameter [such as PANEL(name), PGM(xx), or CMD(xxx)] is specified, the IPIPANEL statement is ignored.

Example:

```
ALLOC DD(IPIPANEL) SHR DA('SPFE.V5R6MO.V58PLIB(MYPRIM)')
```

SPIFFY uses the member name specified with the DDNAME "IPIANEL" as the name of the main panel to use, and MYPRIM as the default main panel name.The library used in the IPIPANEL DD is ignored; only the member name is inspected. The panel itself must reside a library in the standard ISPPLIB concatenation.

In a common setup, the installation may have different main panels for different groups of users stored in one library concatenated to ISPPLIB. The installation would then have a different IPIPANEL allocation for these groups, each having the appropriate member specified in the IPIPANEL allocation.

A special variation of IPIPANEL is a DDNAME "IPIPANxx" where xx stands for the current version of ISPF (namely IPIPAN42 for ISPF Version 4.2 and IPIPAN52 for ISPF Version 5.2 and above). If SPIFFY finds an IPIPANxx allocation, it overrides the IPIPANEL allocation. The purpose of the IPIPANxx allocation is to allow use of the same panel concatenation for different versions of ISPF

10. **SCLM activation DD name (optional)**: SPIFFY provides integrated SCLM support. If your choose to activate the SPIFFY SCLM support for selected users, you will need to allocate the IPISCLM DDNAME for each user. The IPISCLM DDNAME can be allocated to DUMMY as follows:

```
//IPISCLM DD DUMMY
```

or

```
ALLOC DD(IPISCLM) DUMMY
```

Step 6   If the security package in use (e.g., RACF™, ACF2, Top Secret, etc.) restricts the TSO commands that users are allowed to issue, you need to add the following entries to the list of the TSO commands:

- IPIEXPN
- SPIFFY
- ISRPCP
- ISPICP
- IPIQUERY
- OBROWSE
- OEDIT
- IPIQUIT

Note: A list of TSO commands is maintained under ISPF in CSECT ISPTCM. If you move SPIFFY to LPALIB, add 'IPIEXPN' to this CSECT and set the flag byte to X'42.

Installing SPIFFY is not complete at this point. To finish the full installation, you must customize SPIFFY. The next section "Customizing SPIFFY" on page 3-15 provides the detailed instructions.

CUSTOMIZING SPIFFY

You must customize SPIFFY after you install it from the CD or tape cartridge. Perform the following steps to customize your SPIFFY:

Step 1   Invoke the Customization Wizard and set your authorization password.

Note: To run the Customization Wizard, you must have access to the SPIFFY libraries. Refer to Step 6 on page 3-2 in "Installing SPIFFY from Tape Cartridge". In addition, you must have write access authority to the SPIFFY table and panel libraries.

1. Logon to TSO using the modified LOGON procedure on page 3-12.

2. While in TSO READY mode, run the Customization Wizard by entering the following command:
    %SPFEWIZ

    Make sure that you have the following information available:
    - The name of the SPIFFY table library (e.g., SPFE.V5R6M0.V58TLIB).
    - The name of the SPIFFY panel library (e.g., SPFE.V5R6M0.V58PLIB).
    - The configuration password provided by Isogon Corporation or your authorized SPIFFY distributor.
      Note: The configuration password is required only the first time you run the Customization Wizard, or if you have been given a new configuration password.

    If you want PANVALET support using the PANVALET interface supplied with SPIFFY:
    - The name of the CA-PANVALET/ISPF source (not preprocessed) panel library.

3. The SPFEWIZ CLIST prompts for the name of your SPIFFY table and panel libraries. A panel is presented where you can select processing options. Available options are:

    a. Customizing SPIFFY
    b. Entering a SPIFFY Product Password
    c. Both of the above

    If this is the first time you are installing this version of SPIFFY, you must select the option marked "Both of the above".

    For the most part, the panels displayed by the Customization Wizard are self-explanatory. However, certain options require discussion. You can read about those options in the following sections or, if you prefer, you can proceed to the next step on page 3-18.

    ### SPIFFY TSO SHELL

    The SPIFFY TSO shell keeps a history of TSO commands, CLISTs, or REXX EXECs issued by the user (up to 999) and displays them in the TSO Command Shell. For security reasons, you may want to exclude some commands from being recorded, e.g., you may want to exclude commands that accept passwords in a visible form ("in the clear"). During customization, you are given a chance to add entries to a list of commands on which you specify whether recording is to be excluded. This allows you to turn recording on and off without removing entries

from the list. If you turn off the recording, the list contains the RACF PASSWORD command with recording turned off when it is shipped.

The SPIFFY TSO shell can be activated or deactivated by each user.

SPIFFY Enhanced View Functionality

SPIFFY offers enhancements to the VIEW function. You have a choice of SHARED VIEW and EXCLUSIVE VIEW modes, with the ability to enforce one of the two modes.

- **Shared VIEW:** VIEW that permits several users to work with the same file at the same time. Although this VIEW disables the SAVE command, a user can still save via the REPLACE command by using the same name of the member as a parameter to the REPLACE command.
- **Exclusive VIEW**: A VIEW that does ENQ on the file. Exclusive VIEW supports the SAVE command.

After choosing which view type to use as a default, you indicate whether users are permitted to override the default. If they can, the browse/edit/view entry panels as well as the options displayed by the SET command will include an option that allows the user to select his own view mode.

For more information about the differences between these two view modes, refer to the section "Shared and Exclusive VIEW" on page 3-25 of SPIFFY for ISPF User's Guide and Reference.

Registering Object Class Support

During the customization process you need to specify which object classes you want to support. For each object class, you must register the supporting product. The following table lists some of the supported objects and their registered products. See the Customization Wizard for the most updated list of objects and interfaces.

Object Class: VSAM files

VSAM files supports the following products:

FileManager: IBM's advanced data file browse/edit/report facility.

FileAid: The Customization Wizard provides support for FileAid Version 6 (and below), and for FileAid Version 7 through the DataXpert interface. The FileAid interface provides access to VSAM files through browse (option 1), edit (option 2), DSLIST (option 3.4), and from OLIST.

DataXpert: The DataXpert interface is similar to the FileAid interface.

Ditto: IBM's data file browse/edit/report facility.

MacKinney: SPIFFY interfaces to the MacKinney VSAM utility.

Sample: SPIFFY provides access to a sample VSAM browser that uses IDCAMS to browse VSAM files. This sample interface can be used to demonstrate the transparent interface to VSAM objects. The CLIST that is invoked for the sample VSAM browser can be used as template to write your own interface or provide support for a VSAM browsing product not listed here.

User-Written: In addition to the sample VSAM browser, you can request that SPIFFY invoke the IPIVSAM CLIST whenever a VSAM object is selected for

browse, edit, or view. This provides you with the ability to create your own interface, or interface to a product not listed above.

Object Class: Panvalet. It supports Panvalet/ISPF.

Panvalet/ISPF: Two types of interfaces are provided—a program interface, and a CLIST interface. The program interface is faster, but the CLIST interface provides the ability to modify the interface (for example add LIBDEF statements) or to support other products that interface to Panvalet libraries.

Object Class: Librarian. Librarian supports CA-ELIPS.

CA-ELIPS: Similar to Panvalet ISPF, the librarian support provides a CLIST and a program interface.

Object Class: DB2. DB2 supports the following products:

CA-Pro-Edit: An interface to CA-Pro-edit is provided.

CA-Pro-Alter: SPIFFY uses the same interface used for CA-Pro-Edit.

RC/UPDATE: Support for the Platinum Technology RC/UPDATE.

FileAid/DB2: An interfaces to this product is provided.

CDB/EDIT: An interface to this product is supported.

Object Class: User-Objects. User-Objects supports User-Written.

User-Written: User-objects are installation defined. SPIFFY will invoke the CLIST/REXX exec or program of your choice to handle the user objects.

User-defined objects are specified with a leading greater-than sign (e.g., >MYOBJECT)

A sample user-defined object interface is provided in CLIST IPI$OUT. The defined object is a jobname, where the browse command is defined as browsing the held output, editing as editing the held output, and view is mapped into the job-status command. Another typical use is to define mail/messages as objects and provide interfaces to the mail system, where browse is defined as browsing the mail, and edit as creating/responding to mail.

Specifying SESSION EXIT

The Customization Wizard lets you specify a SESSION EXIT. The purpose of this exit is to provide you with the ability to invoke programs (or CLISTs, or REXX execs) at the time ISPF starts, or whenever a new split is started. Unlike ISPF's initialization exit, the SPIFFY session exit supports dialog manager commands (ISPLINK/ISPEXEC). A typical exit may be used to invoke an e-mail program to retrieve user's messages. Another possibility is to use the session exit to allocate the OLIST library.

COMPRESS Function Serialization Support

The Customization Wizard offers two types of serialization for the COMPRESS function. SPIFFY supports the mode of operation called EXCLUSIVE CONTROL, which means it locks the user's access to the library to prevent any overlay when compressing a file.

SPIFFY also supports an alternative approach called SHARED-WRITE. It allows compression of libraries shared among multiple ISPF users and avoid the MVS ENQ propagation problem.

4. When the Customization Wizard completes processing, it displays the message
INSTALLATION DEFAULTS WERE SAVED

If SPIFFY is already activated, the changes will affect all users who log on to SPIFFY from this point on. Users already logged on will not be affected until they log off and log on again.

Note: The installation defaults are kept in the SPIFFY panel and table libraries. If you use any caching mechanisms for these libraries (e.g., VLF), you may have to refresh the look-aside buffers (e.g., VLFNOTE) to reflect the changes.

Step 2   Use SPIFFY to find and change additional main menus. This step is optional.

Most installations have one main menu. In some cases, multiple main menus are useful. If you want to add the SPIFFY options to all or any of main menus, follow the steps below:

1. Start SPIFFY from TSO READY mode. Ensure you are logged on to the modified logon procedure. On the main menu enter:
OLIST @DD ISPPLIB

2. SPIFFY opens a temporary OLIST showing all the libraries concatenated to ISPPLIB. Enter the main command:
SET GLOBAL

The global option panel is displayed:

```
SPF/E ----------------------- SPIFFY OPTIONS -----------------------------
COMMAND ===>

Member Selection List GLOBAL command options:

STOP AFTER   ===> 9999 (Number of members to process successfully)
PROMPT AFTER ===> 9999 (Number of members to process before a prompt is issued)

Specify Y (Yes) or N (no) for the following options:

AUTOMATIC   ===> Y (Process without manually editing successful members?)
LINK        ===> N (Process each command only if previous command succeeds?)
PRINT       ===> N (Generate listing of each member changed and saved?)
EXCLUDE     ===> Y (Exclude failing members from selection list?)
LOCK        ===> N (LOCK each saved member under LMF?)

            Press ENTER for more options or the END key to exit.
```

3. Make sure that STOP AFTER is set to 9999, PROMPT AFTER is set to 9999, AUTOMATIC MODE is set to Y, and EXCLUDE is set to Y. Press the END key to return to the OLIST screen.

4. Note the short message at the upper right corner of the screen indicating "Row 1 of n". The SPIFFY panel library should be first, so enter 2-N B, where N is the total number of rows indicated in the short message on the OLIST command line.

5. The SPIFFY enhanced member selection list (MSL) panel is displayed. On the MSL panel, enter the following command:
GLOBAL FIND 'PGM(ISREDIT)'

SPIFFY will scan each member of the library. Those that do not contain the string PGM(ISREDIT) will be excluded from the listing.

Note: When GLOBAL finishes processing, if no members are listed and the library contains no main menus, go to item 9.

6. Copy the found panels into the SPIFFY panel library by entering the following main command:
    `COPY *`

7. On the Copy/Move Prompt panel, ensure that the "REPLACE like-named library members" option is set to "N". Specify the SPIFFY panel library as the target and press ENTER. (Instead of specifying the full name of the SPIFFY panel library, you can specify @DD.ISPPLIB, assuming SPIFFY is the first panel library in the concatenation. Otherwise, specify @DD.ISPPLIB.#n where "n" is the number of the library in the concatenation).

8. The next prompt panel displays the list of members to be copied and provides a chance to rename them. Press **ENTER** without modifying anything. All the selected main panels will be copied.

9. Press **END**. If there are more libraries to process, a new member list will be displayed. Return to item 6 above to finish the process. When all libraries are processed, you are returned to the OLIST screen.

10. Once the modified panels have been copied into the SPIFFY panel library, you need to edit each copied panel and apply the modifications in Step 4 on page 3-11.

    Select the SPIFFY panel library from the OLIST by entering 1, or the line number of the SPIFFY panel library. To show only the copied panels and exclude the SPIFFY panel names from the list, enter the following main command:
    `EXCLUDE IPI*`

Note: If you want to defer modifying other main panels until you have finished evaluating the product, you can leave the copied panels intact until later.

Step 3   SPIFFY supports a large number of products from other vendors. You need to review environmental requirements to see if you need to make any adjustments. Refer to "Appendix E: SPIFFY and Other Products" on page 5-6 for details.

Step 4   Make SPIFFY available to users. To provide the LOGON procedure to users, copy or move the modified LOGON procedure back into the library from which users will access it.

Note: If you add a new LOGON procedure for existing users, you may have to use the TSO ACCOUNT command and/or your installation's security product to authorize the use of a new LOGON procedure.

SPIFFY installation is complete. A TSO user who logs on to the modified LOGON procedure and enters ISPF will operate under SPIFFY. A new user of SPIFFY sees the SPIFFY tutorial displayed before the main ISPF panel. You can press END (PF 3) to exit the tutorial. If you have modified the main menu panel, the modified panel is displayed.

When SPIFFY starts, it checks for the presence of the "IPITLIB" DD. If that DD is missing, SPIFFY will invoke standard ISPF and SPIFFY functions will not be available.

CONFIGURATION OPTIONS

This section explains the options that you have to configure SPIFFY after its installation.

ISPF APPLICATIONS AND SPIFFY GENERAL COMMANDS

If an ISPF application invokes a main command with the name EDIT, BROWSE, VIEW, OLIST, QUIT or TSO, the SPIFFY general command of that name will normally be executed, rather than the command of the application with the same name. You may handle this conflict in one of the following ways:

- Precede the command with a greater than (">") sign.

Example:

To have the command "EDIT" processed by an application rather than by SPIFFY, enter the command:

```
>EDIT
```

- Disable the SPIFFY command or commands within the application or applications in conflict.

Each SPIFFY general command is controlled by a Dialog Manager variable:

Command	Variables
EDIT	&IPIGCOED
BROWSE	&IPIGCOBR
VIEW	&IPIGCOVI
OLIST	&IPIGCOPL
TSO	&IPIGCOTS
QUIT	&IPIGCOQT

If the variable is set to null (&Z), the general command is processed by SPIFFY. If the variable is set to 'PASSTHRU', the general command is disabled, and will be processed by the application.

To completely disable the SPIFFY EDIT, BROWSE, and VIEW general commands, you must edit the first ISPF panel of the application as shown in the following examples:

```
)BODY
%COMMAND ===>  _ZCMD                                                    +

  Select one of the commands

  ADD          - Add a new employee record
  DEL          - Remove an employee record
  BROWSE       - Browse an employee record

)PROC
  VER(&ZCMD,LIST,ADD,DEL,BROWSE)
)END
```

To disable BROWSE as a SPIFFY general command, modify the panel by entering
the string:

)INIT
    &IPIGCOBR = 'PASSTHRU' /* DISABLE SPIFFY BROWSE COMMAND
    FOR THIS PANEL */

```
)BODY
%COMMAND ===>  _ZCMD                                                    +

  Select one of the commands

  ADD          - Add a new employee record
  DEL          - Remove an employee record
  BROWSE       - Browse an employee record

)INIT
  &IPIGCOBR = 'PASSTHRU' /* Disable SPIFFY BROWSE command for this panel */
)PROC
   VER(&ZCMD,LIST,ADD,DEL,BROWSE)
)END
```

To re-enable the BROWSE general command, modify the panel by entering the
string:

)INIT
    &IPIGCOBR = 'PASSTHRU' /* DISABLE SPIFFY BROWSE COMMAND
    FOR THIS PANEL */:

```
)BODY
%COMMAND ===>  _ZCMD                                                      +

  Select one of the commands

  ADD          - Add a new employee record
  DEL          - Remove an employee record
  BROWSE       - Browse an employee record

)INIT
  &IPIGCOBR = 'PASSTHRU' /* Disable SPIFFY BROWSE command for this panel */
)PROC
  &IPIGCOBR = &Z          /* Enable SPIFFY BROWSE command               */
   VER(&ZCMD,LIST,ADD,DEL,BROWSE)
)END
```

The SPIFFY CLIST library contains an edit macro that automatically adds the control
variables to the)INIT section of a panel. To disable one or more SPIFFY general
commands automatically, bring up the panel you want to modify in an EDIT session.
On the command line, enter the command:

    %SPFEGCMD

This command will insert statements disabling all five SPIFFY general commands into the)INIT section of the panel. You can delete any of the statements corresponding to commands that do not need to be disabled, and then save the panel.

To enable one or more SPIFFY commands, follow the same procedure, but enter the command:

```
%SPFEGCMD ENABLE
```

If you want the commands to be enabled on exit rather than on entry to the panel, move the inserted statements from the)INIT section to the)PROC section. Delete the unneeded statements and then save the panel.

Note: If an application invokes ISPF EDIT or BROWSE (called by the ISPEXEC EDIT or ISPEXEC BROWSE service), the commands EDIT, BROWSE and VIEW are passed to the application, whose responsibility is to process these commands. If an application explicitly invokes SPIFFY EDIT, BROWSE, or VIEW from an Application or CLIST"), the commands EDIT, BROWSE, and VIEW are processed by SPIFFY.

ADDING SPIFFY FUNCTIONS TO THE ISPF COMMAND TABLES

While SPIFFY automatically provides general commands to invoke BROWSE, EDIT, VIEW, OLIST and QUIT, you may want to take advantage of the different interface SPIFFY provides to add more commands to the ISPF command tables. SPIFFY allows you to create your own general commands. To add commands to the ISPF command tables, you can use the ISPF COMMAND utility (option 3.9).

The following table contains the columns to fill in using the 3.9 utility. The action column can contain any of the interface calls. Since there are so many call types, the table demonstrates just a few of them:

Verb	T	Action
PANELS	5	SELECT SUSPEND NEWAPPL(ISR) PASSLIB PGM(IPIPLST) PARM(@DD ISPPLIB)
		Description: Display an OLIST showing libraries allocated to ISPPLIB
LISTA	5	SELECT SUSPEND NEWAPPL(ISR) PASSLIB PGM(IPIPLST) PARM(@LISTA &ZPARM)
		Description: Displays an OLIST of allocated DDNAMEs. If a DDNAME parameter is supplied, the list is restricted to the specified DDNAME. Example: LISTA STEPLIB
MIGRATED	8	SELECT SUSPEND NEWAPPL(ISR) PASSLIB PGM(IPIPLST) PARM('@LISTM &ZPARM')
		Description: Display an OLIST listing migrated/archived data sets based on the supplied parameter Example: MIGRATED TEST.*.COBOL
DSL	3	SELECT SUSPEND NEWAPPL(ISR) PASSLIB PGM(IPIUDL) PARM(-,&ZPARM)

Verb	T	Action (Continued)
		Description: Display a DSLIST based on the supplied level (and optional volume) Example: DSL SYS1.A*LIB IPOTS1
VTOCINFO	8	SELECT SUSPEND NEWAPPL(ISR) PASSLIB PGM(IPIUDL) PARM(-,'&ZDLDSNLV',&ZPARM,V)
		Description: Display VTOC information for the supplied VOLSER Example: VTOCINFO SYS002

4. INSTALL AND UNINSTALL CONSIDERATIONS

This section explains the issues you must consider when you install SPIFFY. It also provides the instructions on how to uninstall SPIFFY from your system.

SPIFFY's PERFORMANCE

SPIFFY performance can be significantly improved if you follow these suggestions:

- When you convert the SPIFFY trial version to a licensed version, it is recommended that you move SPIFFY modules to LPALIB. This will improve system performance and eliminate redundant loading of SPIFFY code.
- You should use SPIFFY's edit recovery since it has better performance in both reduced I/O operations and faster response time.
- When you run the Customization Wizard to set the options, select the "BROWSE" option as the default process instead of "VIEW" since "VIEW" offers more functions than "BROWSE" at the cost of more system resources.
- In MSL, it is recommended that you set automatic preview off to reduce I/O. To display a preview window manually, use the W line command.
- Installation and third-party products that use the LMxxx services of the ISPF Dialog Manager (LMGET, LMPUT, etc.) to access files or to perform BROWSE or EDIT services will provide better response time and consume fewer system resources under SPIFFY than under native ISPF. You can take advantage of this by changing the LOGON procedures of users using these products to invoke SPIFFY even if the application does not explicitly provide PDF-like menus (a menu that contains BROWSE, EDIT, VIEW, QUIT and OLIST).
- Deactivate the update option in the ISPF Version 4 reference lists since SPIFFY's history lists do not require I/O.
- Action bars and pull-down menus increase the resources required to process panels. Deactivate these facilities to improve performance. SPIFFY provides the option via the INTERFACE option of the SET command.
- SPIFFY provides integrated SCLM support. If only a selected group of users in your installation uses SCLM, it is recommended that SCLM integration support be active only for selected users. Note that the ISPF provided SCLM interface is always available.
- ISPF Version 4.2 and later allows up to 32 splits per user. It is recommended that you control the maximum number of splits via ISRCONFG. The ability of SPIFFY to invoke nested OLIST and MSL functions is more efficient than starting up a new split screen.

SPIFFY'S MAINTENANCE

The SPIFFY installation tape includes all current maintenance. From time to time, Isogon Corporation may distribute a tape (CD or downloadable web package) containing SPIFFY maintenance. Downloadable SPIFFY "fixes" are available on Isogon's Support web site.

Maintenance can be applied in one of two ways:

- Reinstall SPIFFY, using the maintenance tape with a new first-level qualifier. This procedure has two advantages:
  - Using a different set of libraries allows you to perform the entire installation process while other SPIFFY users are active.
  - Using a new set of libraries lets you easily return to the current version of SPIFFY.

  Reinstall SPIFFY with a new first-level qualifier (see Step 10 on page 3-4 or Step 2 on page 3-9 in the chapter "SPIFFY Installation and Customization"), then perform the steps described in "Converting to a Licensed Installation" on page 4-9.
- Use member LOADSPFE in the SPIFFY JCL library (SPFE.V5R6M0.V58JCL) to load the various SPIFFY libraries off the tape and into the existing SPIFFY libraries.

  The advantages of this procedure are:
  - You do not have to create any new libraries.
  - You only have to run one job.

    The disadvantage is that the job cannot complete until all users allocated to the SPIFFY libraries are logged off.
- If you placed user-modified panels in the current SPIFFY panel library, back them up before running LOADSPFE since they may be replaced. If you moved modules into LPA or other system libraries, the maintenance you have applied may not be reflected immediately.

To determine the maintenance level of SPIFFY at your installation, enter the following command on any SPIFFY panel:

```
SPFE VER
```

The scrollable screen displays the date and maintenance level of each SPIFFY module, as well as a header line showing the lowest and highest maintenance levels installed.

MAINTENANCE-SPECIFIC COMMANDS

SPIFFY Release 5.8 has a set of diagnostic commands that can help you and Isogon support personnel perform problem investigations. You can also call Isogon support to get the problem resolved.

The commands related to maintenance are as follows:
- MAINT
- VER
- DIAG
- SNAP

These commands are invoked from any main command line of any panels. Each of them is prefixed with SPIFFY, SPIFF, or SPFE.

Example:

```
SPFE MAINT
```

The following explains each of these commands and how to use them.

SPFE MAINT

`MAINT` creates a report that contains information such as installed zaps, current SPIFFY version levels, and module versions. It is a good starting point to investigate maintenance situations.

1. Enter the command `SPFE MAINT` from any main command line of any panel. A message displays that a SPIFFY maintenance report is created and placed in the IPILOGPR data set.

```
 Menu  Utilities  Compilers  Options  Status  Help
 ─────────────────────────────────────────────────────────────
                      OS/390 Primary Option Menu
 Option ===> _____
                             More:     +
   0  Settings    Terminal and user parameters       User ID . : INTT055
   1  Browse      Display source data or listings     Time. . . : 14:30
   V  View        Display/Change Source Data          Terminal. : 3278
   2  Edit        Create or change source data        Screen. . : 1
   3  Utilities   Perform utility functions           Language. : ENGLISH
   4  Foreground  Interactive language processing     Appl ID . : ISR
   5  Batch       Submit job for language processing  TSO logon : IKJISOGN
   6  Command     Enter TSO or Workstation commands   TSO prefix: INTT055
   7  Dialog Test Perform dialog testing              System ID : SYSB
   8  LM Facility Library administrator functions     MVS acct. : ACCTN
   9  IBM Products IBM program development products    Release . : ISPF 5.2
  10  SCLM        SW Configuration Library Manager
  11  Workplace   ISPF Object/Action Workplace
  12  OS/390 System OS/390 system programmer applications
  13  OS/390 User   OS/390 user applications
   0
   S    ┌──────────────────────────────────────────────────────┐
        │ IPIT057 SPIFFY maintenance report placed in DD(IPILOGPR) dataset. │
        └──────────────────────────────────────────────────────┘
        Enter X to Terminate using log/list defaults
```

Note: The following instructions are specific to IBM's SDSF product. Other products, e.g., Triangle Systems, Inc. IOF have similar capabilities.

2. From the `Primary Option Menu`, enter `S` (or `SDFS`), then `DA` (Active users) and locate your login ID (INTT055) as shown in the following sample:

```
   Display  Filter  View  Print  Options  Help
--------------------------------------------------------------------------------
SDSF DA SYSA  SYSA      PAG    0 SIO     0 CPU   8/  8 LINE 20-38 (47)
COMMAND INPUT ===>                                          SCROLL ===>
NP    JOBNAME  StepName ProcStep JobID    Owner      C Pos DP Real Paging    SIO
      SMF      SMF      IEFPROC                       NS FF   33T  0.00   0.00
      LLA      LLA      LLA                           NS FE 1737  0.00   0.00
      JES2AUX  JES2AUX                                NS FE  186  0.00   0.00
      VLF      VLF      VLF                           NS FE 4121  0.00   0.00
      DLF      DLF      DLF                           NS FE  208  0.00   0.00
      RMF      RMF      IEFPROC  STC05319 ++++++++    NS FE  458  0.00   0.00
      AOPD     STEP1             STC05329 IBMUSER     NS FB  877  0.00   0.00
      EPWFFST  FFST     EPWFFST                       NS FE  218  0.00   0.00
      VTAM     VTAM     VTAM     STC05309 VTAM        NS FE 2375  0.00   0.00
      TCPIP    TCPIP    TCPIP    STC05310 TCPSTC      NS FE 5264  0.00   0.00
      VMCF     VMCF     IEFPROC                       NS FE  171  0.00   0.00
      XDCCDF   XDCCDF   XDCCDF   STC05307 INTT009     LO FF 7877  0.00   0.00
      SMS      SMS      IEFPROC                       NS FE  278  0.00   0.00
      JES2     JES2     IEFPROC                       NS FE 2263  0.00   0.00
      RACF     RACF     RACF     STC05311 RACF        NS FE  387  0.00   0.00
      CATALOG  CATALOG  IEFPROC                       NS FE 1273  0.00   0.00
      INTT011  IKJISOGN SC0TCP05 TSU09955 INTT011     LO FF 1438  0.00   0.00
      INTT055  IKJISOGN SC0TCP02 TSU09952 INTT055     IN F7 1462  0.00   0.00
      TNF      TNF      IEFPROC                       NS FE  153  0.00   0.00
```

3. Place a question mark to the left of the job name and press **ENTER**. The **IPILOGPR Maintenance Report** is listed as follows:

```
   Display  Filter  View  Print  Options  Help
--------------------------------------------------------------------------------
SDSF JOB DATA SET DISPLAY - JOB INTT055  (TSU09952)      DATA SET DISPLAYED
COMMAND INPUT ===>                                          SCROLL ===>
NP    DDNAME    StepName ProcStep DSID Owner     C Dest             Rec-Cnt PAGE
      JESMSGLG JES2               2 INTT055  K                           2
      JESJCL   JES2               3 INTT055  K                          28
      JESYSMSG JES2               4 INTT055  K                         625
      IPILOGPR IKJISOGN IKJISOGN 103 INTT055  X LOCAL                  123
_     IPILOGPR IKJISOGN IKJISOGN 104 INTT055  X                          0
      IPITRSNP IKJISOGN IKJISOGN 105 INTT055  X LOCAL                  601
      IPITRSNP IKJISOGN IKJISOGN 106 INTT055  X LOCAL                  794
```

4. Place an **S** (Select) to the left of the Maintenance Report (**IPILOGPR**) and press **ENTER**. The log report is displayed:

```
   Display  Filter  View  Print  Options  Help
--------------------------------------------------------------------------------
SDSF OUTPUT DISPLAY INTT055  TSU05241  DSID    103 LINE 0        COLUMNS 02- 81
COMMAND INPUT ===> _                                         SCROLL ===> PAGE
********************************* TOP OF DATA **********************************
09:30:24 ======================================================================
09:30:24  S P I F F Y   LVL:5008 01/27/05 - 16.24
09:30:24  THE FOLLOWING ZAPS/PTMS HAVE BEEN APPLIED:
09:30:24  58001   58002   58003   58004   58005   58006   58007   58008
09:30:24  58009   58010   58011   58012   58013   58014   58015   58016
09:30:24  58017   58018   58019   58020   58021   58022   58023   58024
09:30:24  58025
09:30:24 ======================================================================
09:30:24 ======================================================================
09:30:24  SPIFFY MODULE LIST - 03/14/05 (05.073) 09:30
09:30:24          USERID:ISOGON55 LOGON PROC:IKJISOGN ISPF VERSION:5.2
09:30:24          CPU SERIAL NUMBER:1AD8A MODEL:2066 GROUP:00 OS:MVS SP7.0.4 (
09:30:24          This installation has SPIFFY maintenance level 5008
09:30:24
09:30:24                      IPI$RCUD LVL:5008 01/27/05 - 16.09
09:30:24                      IPIBMARK LVL:5008 01/27/05 - 16.09
09:30:24                      IPICDG   LVL:5008 02/09/05 - 20.12
09:30:24                      IPICLIP  LVL:5008 01/27/05 - 16.09
09:30:24                      IPICLIPM LVL:5008 01/27/05 - 16.21
```

5. You can capture a screen shot or send the report to a printer or via email.

SPFE VER

If the only requirement is to find out the version status of the SPIFFY modules and maintenance level, enter **SPFE VER** at any main command line of any panel. A report similar to the following is displayed:

```
SPF/E ------- SPIFFY MODULE LIST - 02/23/05 (05.054) 09:24 Row 1 to 13 of 116
COMMAND ===> _                                         SCROLL ===> PAGE
Commands: CONFIG, DOWN, END, FIND, REPORT, SORT, UP
          USERID:ISOGON55 LOGON PROC:IKJISOGN ISPF VERSION:5.2
          CPU SERIAL NUMBER:1AD8A MODEL:2066 GROUP:00 OS:MVS SP7.0.4 (HBB7707 )
          This installation has SPIFFY maintenance level 5008
ZAP580xx: 01 02 03 04 05 06 07 08 09 10 11 12 13 14 15 16 17 18 19 20 21 22 23
ZAP580xx: 24 25

COMMENTS              MODULE      LEVEL D A T E    TIME      FIX-MARKER
-------------------- --------    ---- -------- - -----    ----------
                     IPI$RCUD LVL:5008 01/27/05 - 16.09
                     IPIBMARK LVL:5008 01/27/05 - 16.09
                     IPICDG   LVL:5008 02/09/05 - 20.12
                     IPICLIP  LVL:5008 01/27/05 - 16.09
                     IPICLIPM LVL:5008 01/27/05 - 16.21
                     IPICOPY  LVL:5008 01/27/05 - 16.09
                     IPICUT   LVL:5008 01/27/05 - 16.10
                     IPIDCNFG LVL:5008 01/27/05 - 16.10
                     IPIDCPU  LVL:5008 01/27/05 - 16.10
                     IPIDMEM  LVL:5008 01/27/05 - 16.10
                     IPIDSNMX LVL:5008 01/28/05 - 10.57
                     IPIDSPX  LVL:5008 01/27/05 - 16.21
                     IPIDTSC  LVL:5008 01/27/05 - 16.10
```

You can capture a screen shot or send the report to a printer or via email.

SPFE DIAG

The **SPFE DIAG** command lets you turn on the tracing facility and generate a report. By default SPIFFY runs with the tracing facility off.

At times ISOGON may ask you to turn TRACE on for diagnostic purpose. Follow the steps below to turn on the tracing facility:

1. Enter the following command from the main command line of any panel:
    SPIFFY DIAG TRACE ON

    or
    SPIFFY DIAG TR

    where ON is the default. The message will change as follows:

```
   Menu  Utilities  Compilers  Options  Status  Help

                      OS/390 Primary Option Menu
   Option ===> _____
                                  More:        +
   0  Settings     Terminal and user parameters      User ID . : INTT055
   1  Browse       Display source data or listings    Time. . . : 09:23
   U  View         Display/Change Source Data         Terminal. : 3278
   2  Edit         Create or change source data       Screen. . : 1
   3  Utilities    Perform utility functions          Language. : ENGLISH
   4  Foreground   Interactive language processing    Appl ID . : ISR
   5  Batch        Submit job for language processing TSO logon : IKJISOGN
   6  Command      Enter TSO or Workstation commands  TSO prefix: INTT055
   7  Dialog Test  Perform dialog testing             System ID : SYSB
   8  LM Facility  Library administrator functions    MVS acct. : ACCT#
   9  IBM Products IBM program development products    Release . : ISPF 5.2
   10 SCLM         SW Configuration Library Manager
   11 Workplace    ISPF Object/Action Workplace
   12 OS/390 System OS/390 system programmer applications
   13 OS/390 User  OS/390 user applications

   IPIT058  *** SPIFFY diagnostics: TRACE(ON/2K) LOGPR(YES) SNAP(NO) DEBUG(NO)

        Enter X to Terminate using log/list defaults
```

You have now activated logging **LOGPR(YES)** with a default limit of 2K lines and are recording an entry to the trace log for every action. When you reach the 2K line limit, the oldest lines are rolled off.

Note: To change the default limit of 2k lines, first turn off the tracing facility by entering:
SPIFFY DIAG TRACE OFF

then enter the following command:
SPIFFY DIAG TRACE ON/N

where **N** *is the multiplier of K (1024) in the range from 2 through 9.*

2. From the Primary Option Menu, enter **S** (or **SDSF**), then **DA** (Active users) and locate your login ID.

```
   Display  Filter  View  Print  Options  Help
 ---------------------------------------------------------------------------
 SDSF DA SYSA  SYSA    PAG    0 SIO    0 CPU   8/ 8  LINE 20-38 (47)
 COMMAND INPUT ===>                                        SCROLL ===>
 NP    JOBNAME  StepName ProcStep JobID    Owner    C Pos DP Real Paging    SIO
       SMF      SMF      IEFPROC                     NS  FF  33T  0.00   0.00
       LLA      LLA      LLA                         NS  FE 1737  0.00   0.00
       JES2AUX  JES2AUX                              NS  FE  186  0.00   0.00
       VLF      VLF      VLF                         NS  FE 4121  0.00   0.00
       DLF      DLF      DLF                         NS  FE  208  0.00   0.00
       RMF      RMF      IEFPROC  STC05319 ++++++++  NS  FE  458  0.00   0.00
       AOPD     STEP1             STC05329 IBMUSER   NS  FB  877  0.00   0.00
       EPWFFST  FFST     EPWFFST                     NS  FE  218  0.00   0.00
       VTAM     VTAM     VTAM     STC05309 VTAM      NS  FE 2375  0.00   0.00
       TCPIP    TCPIP    TCPIP    STC05310 TCPSTC    NS  FE 5264  0.00   0.00
       VMCF     VMCF     IEFPROC                     NS  FE  171  0.00   0.00
       XDCCDF   XDCCDF   XDCCDF   STC05307 INTT009   LO  FF 7877  0.00   0.00
       SMS      SMS      IEFPROC                     NS  FE  278  0.00   0.00
       JES2     JES2     IEFPROC                     NS  FE 2263  0.00   0.00
       RACF     RACF     RACF     STC05311 RACF      NS  FE  387  0.00   0.00
       CATALOG  CATALOG  IEFPROC                     NS  FF 1273  0.00   0.00
       INTT011  IKJISOGN SC0TCP05 TSU09955 INTT011   LO  FF 1438  0.00   0.00
       INTT055  IKJISOGN SC0TCP02 TSU09952 INTT055   IN  F7 1462  0.00   0.00
       TNF      TNF      IEFPROC                     NS  FE  153  0.00   0.00
```

3. Place a question mark (?) to the left of the job name and press **ENTER**. The diagnostic reports are listed as follows:

```
   Display  Filter  View  Print  Options  Help
 ---------------------------------------------------------------------------
 SDSF JOB DATA SET DISPLAY - JOB INTT055  (TSU09952)     DATA SET DISPLAYED
 COMMAND INPUT ===>                                        SCROLL ===>
 NP    DDNAME    StepName ProcStep DSID Owner    C Dest            Rec-Cnt PAGE
       JESMSGLG  JES2                2 INTT055  K                        2
       JESJCL    JES2                3 INTT055  K                       28
       JESYSMSG  JES2                4 INTT055  K                      625
       IPILOGPR  IKJISOGN IKJISOGN 103 INTT055  X LOCAL                123
 _     IPILOGPR  IKJISOGN IKJISOGN 104 INTT055  X                        0
       IPITRSNP  IKJISOGN IKJISOGN 105 INTT055  X LOCAL                601
       IPITRSNP  IKJISOGN IKJISOGN 106 INTT055  X LOCAL                794
```

4. Place an **S** (Select) to the left of the desired report (**IPILOGPR**, **IPITRSNP**) and press **ENTER**. The report is displayed.

SPFE SNAP

SNAP gives you a snapshot of the current state of SPIFFY (and by extension, ISPF). Perform the following procedure to take a snapshot:

1. From the main command line of any panel, enter the command:
SPFE SNAP [ALL]

where **SNAP** dumps the **SPIFFY** in-core trace table, and **SNAP ALL** dumps the entire current user address space. The following message is displayed:

```
About to snap trace-table into IPITRSNP. Press ENTER and wait for completion.
*** _
```

2. Press **ENTER** and you are returned to the Primary Option Menu panel.

```
   Menu  Utilities  Compilers  Options  Status  Help

                       OS/390 Primary Option Menu
Option ===> _____
                                More:     +
0  Settings      Terminal and user parameters        User ID . : INTT055
1  Browse        Display source data or listings      Time. . . : 10:40
V  View          Display/Change Source Data           Terminal. : 3278
2  Edit          Create or change source data         Screen. . : 1
3  Utilities     Perform utility functions            Language. : ENGLISH
4  Foreground    Interactive language processing      Appl ID . : ISR
5  Batch         Submit job for language processing   TSO logon : IKJISOGN
6  Command       Enter TSO or Workstation commands    TSO prefix: INTT055
7  Dialog Test   Perform dialog testing               System ID : SYSA
8  LM Facility   Library administrator functions      MVS acct. : ACCTH
9  IBM Products  IBM program development products     Release . : ISPF 5.0
10 SCLM          SW Configuration Library Manager
11 Workplace     ISPF Object/Action Workplace
12 OS/390 System OS/390 system programmer applications

 IPIT060  SNAP-ID=001 with TRACE-ID=SPFE_SNAP completed. Resume normal
 operation.

     Enter X to Terminate using log/list defaults

```

From the Primary Option Menu, enter **S** (or SDFS), then **DA** (Active users) and locate your login ID.

3. Place a question mark to the left of the job name and press **ENTER**. A list of job files with IPILOGPR is displayed as follows:

```
   Display  Filter  View  Print  Options  Help
 -------------------------------------------------------------------------------
 SDSF JOB DATA SET DISPLAY - JOB INTT055  (TSU09952)     DATA SET DISPLAYED
 COMMAND INPUT ===>                                      SCROLL ===>
 NP   DDNAME   StepName ProcStep DSID Owner    C Dest          Rec-Cnt PAGE
      JESMSGLG JES2               2 INTT055  K                      2
      JESJCL   JES2               3 INTT055  K                     28
      JESYSMSG JES2               4 INTT055  K                    625
      IPILOGPR IKJISOGN IKJISOGN 103 INTT055  X LOCAL             123
 _    IPILOGPR IKJISOGN IKJISOGN 104 INTT055  X                     0
      IPITRSNP IKJISOGN IKJISOGN 105 INTT055  X LOCAL             601
      IPITRSNP IKJISOGN IKJISOGN 106 INTT055  X LOCAL             794
```

4. Place an **S** (Select) to the left of the SNAP (**IPITRSNP**) and press **ENTER**. The SNAP report is displayed:

```
   Display  Filter  View  Print  Options  Help
 -------------------------------------------------------------------------------
  SDSF OUTPUT DISPLAY INTT055  TSU09952  DSID   105 LINE 0      COLUMNS 02- 81
  COMMAND INPUT ===> _                                        SCROLL ===>
 *********************************** TOP OF DATA ********************************
 JOB INTT055         STEP IKJISOGN         TIME 110115   DATE 04021   ID = 001

   PSW AT ENTRY TO SNAP     078D1000  8003FA50  ILC  02  INTC  0033
 SP 019
 000F3000 00003108 000F3EF8 000F3000 00000000    C9D7C9E2 D7C6C540 000F3000 00000
 000F3020 00000EB6 000F8E98 000DEBD0 88BD6BCA    000B7CC8 000B4B00 88BD6BC0 00000
 000F3040 000F8B64 00000003 00000000 00000000    000B9000 00000000 000B4B00 000F4
 000F3060 08BD2218 08BD68C8 D9E6C1E2 D7C6C5C9    88BD1B3C C9D7C9E2 D7C6C540 00000
 000F3080 00000000 000D5098 000B4B00 000B8100    000B9000 00000000 00003000 000F8
 000F30A0 D561C140 40404040 D561C140 40404040    D561C140 40404040 40404040 40404
 000F30C0 40404040 40404040 40404040 40404040    40404040 40404040 E9C5D9D9 D4E2C
 000F30E0 7E7E7E6E 40404040 00000000 00000000    00000000 00000000 0000004C 00000
 000F3100 00000000 000F31A0 00000000 00000015    D200E000 F0004040 08BD5628 08BD5
 000F3120 000F3C82 08BD5630 88BD565C 800F3118    00000000 00000000 00000000 00000
 000F3140 00000000 00000000 00000000 00000000    00000000 00000000 40404040 40404
 000F3160 40404040 404040F0 00E4C000 800F8B62    000F8B64 00000003 FFFFFFFF 00000
 000F3180 000B9000 00000000 000B4B00 000F4020    08BD2218 08BD1218 000F3020 88BD1
 000F31A0 00404040 40404040 40404040 40404040    40404040 40404040 40404040 40404
 000F31C0 40404040 40404040 40404040 40404040    40404040 00404040 40404040 40404
```

Provide this information for Isogon Technical Support to solve the problems.

BYPASSING SPIFFY (INVOKING STANDARD ISPF)

When SPIFFY executes in batch, it automatically passes control to ISPF as if SPIFFY were not installed.

Sometimes you may want to invoke ISPF directly without the SPIFFY environment. There are several ways to invoke standard ISPF without SPIFFY. Use one of the following methods to accomplish this task:

- Invoke ISPF (or PDF or ISPSTART) with the additional parameter STDISPF.

Example:

```
ISPF STDISPF
```

or

```
ISPF 2 STDISPF
```

- If you want to restrict a user to standard ISPF automatically, do not allocate IPITLIB to the user. If IPITLIB is not allocated, standard ISPF is invoked.
- If a group of users are sharing a procedure that allocates IPITLIB, you can still restrict a particular user to standard ISPF by adding a dummy DD name to the user's LOGON procedure. Add the DD name STDISPF as follows:

```
ALLOC DD(STDISPF) DA('NULLFILE')
```

SPIFFY ignores the data set name and inspects only the DD name.

- Standard ISPF can also be invoked through its entry points ISRPCP or ISPICP:

```
ISPICP PANEL(ISR@PRIM)
```

or

```
ISRPCP
```

INSTALLATION OPTIONS

SPIFFY can be installed under the following scenarios:
- Install a new release
- Convert a trial version to a licensed version
- Upgrade SPIFFY from an earlier version

Isogon provides a SPIFFY Product Password that enables SPIFFY at a given site. The following explains some specific processes when installing SPIFFY.

INSTALLING A NEW RELEASE

Follow the installation procedures described in "SPIFFY Installation and Customization" on page 3-1. You need to change the low-level qualifier of the JCL library. Use the new configuration password for the new release.

If you intend to run the new release while running the existing release, you need to save the changed versions of panels made for the previous release in a library so that they will not be overlaid. Previous modifications to main menus may be outdated. You must modify the ISPF main menu (see Step 4 of "Installing SPIFFY from Tape Cartridge" on page 3-11.) and customize SPIFFY as described in Step 1of "Customizing SPIFFY" on page 3-15.

The two sets of release libraries cannot both reside in LPA or system libraries. One set of the release libraries must use STEPLIB and ISPLLIB. To run both releases of SPIFFY concurrently, you must use two different TSO LOGON procedures or CLISTs.

CONVERTING TO A LICENSED INSTALLATION

Follow the steps below to convert the SPIFFY trial version to a licensed version:

Step 1   From TSO READY mode, invoke the Customization Wizard to specify your SPIFFY configuration password:

```
%SPFEWIZ
```

Step 2   Select the password setting option and follow the displayed instructions.

WHEN YOU INSTALL A NEW VERSION OF ISPF

Each new ISPF version uses a different ISPF library set. In general, the two ISPF versions can share one of the SPIFFY libraries with little or no risk of incompatibility. Perform the following procedure after you install a new ISPF version:

Step 1   Modify the ISPF main menu (see Step 4 of "Installing SPIFFY from Tape Cartridge" on page 3-9) if needed.

Step 2   If you have copied the LPA load library to LPALIB or another system LINKLIST library, ensure that the new installation of ISPF does not overlay the SPIFFY replacements.

Step 3 After you migrate all your users to the new version of ISPF, you can delete the SPIFFY panel library related to the previous version of ISPF.

Step 4 Run the Customizaton Wizard each time you install a new ISPF version (see Step 1 of "Customizing SPIFFY" on page 3-15 in Chapter "SPIFFY Installation and Customization").

Note: Since the customization changes the SPIFFY panel and table libraries, you may want to keep separate versions of the panel and table libraries especially if you decide to customize SPIFFY to behave differently on different ISPF versions.

UNINSTALLING SPIFFY

To remove SPIFFY from your system, perform the following procedure:

- Remove any reference to the SPIFFY libraries in all LOGON procedures and CLISTs that use the SPIFFY libraries.
- When no more users are logged on with these LOGON procedures, delete the SPIFFY libraries. Standard ISPF will start to function. Note that the "Uninstall" option in the automated PC installation program will delete the SPIFFY product libraries.
- If you moved SPIFFY modules into LPALIB or the LINKLIST, delete these copied modules from the system libraries. If they were copied to LPALIB, the next you IPL with CLPA, the modules will be removed from the LPA.
- If you moved the TSO LPA library into a system library to replace the original ISPF, PDF, and ISPSTART modules, you should reinstall the IBM originals.

5. APPENDIXES

This chapter covers the issues related to the SPIFFY installation. It provides the sample panel screen and reference data to further illustrate how to customize SPIFFY. It also explains how SPIFFY works with other products.

APPENDIX A: THE INSTALLATION TAPE

The installation tape is an unlabeled tape containing the following files in IEBCOPY unload format. The file attributes are those of the resulting files when loaded onto disk.

File	Library
File 1	JCL library: JCL and other members required to install and maintain SPIFFY File name: V58JCL (RECFM=FB, LRECL=80, BLKSIZE=3120)
File 2	CLIST library: CLISTs used by SPIFFY in fixed-length format File name: V58CLIB (RECFM=FB, LRECL=80, BLKSIZE=3120)
File 3	CLIST library: same as File 2, but in variable-length format File name: V58CLIBV (RECFM=VB, LRECL=251, BLKSIZE=3120)
File 4	Load module library: SPIFFY load modules and TSO commands File name: V58LLIB (RECFM=U, BLKSIZE=19069)
File 5	Message library File name: V58MLIB (RECFM=FB, LRECL=80, BLKSIZE=3120)
File 6	SPIFFY panel library File name: V58PLIB (RECFM=FB, LRECL=80, BLKSIZE=3120)
File 7	Skeleton library File name: V58SLIB (RECFM=FB, LRECL=80, BLKSIZE=3120)
File 8	Table library File name: V58TLIB (RECFM=FB, LRECL=80, BLKSIZE=3120)

APPENDIX B: JCL TO CREATE SPIFFY LIBRARIES

The following is a listing of the member ALOCSPFE in the SPFE.V5R6M0.V58JCL library. It is used to allocate the SPIFFY libraries. Modify it as appropriate.

```
//ALOCSPFE JOB   ***** FILL IN APPROPRIATE JOB CARD INFORMATION
//*
//*   THIS JOB ALLOCATES NEW SPIFFY LIBRARIES
//*
//*==================================================================
//ALOCSPFE PROC IDX=SPFE, ---- SPIFFY HIGH-LEVEL DATASET QUALIFIER
//    ISPFVER=V5R5M0,   ---- CURRENTLY INSTALLED ISPF VERSION
//*               (ISPF LIBRARIES SECOND LEVEL QUALIFIER)
//    UNIT=SYSALLDA,   ---- UNIT-TYPE WHERE LIBRARIES RESIDE
//*               (E.G. UNIT=3390)
//    VOL=XXXXXX       ---- VOLSER WHERE LIBRARIES RESIDE
//*==================================================================
//*
//ALLOC EXEC PGM=IEFBR14
//*
//*   ALLOCATE CLIST LIBRARY (FIXED BLOCKED)
//CLIST   DD DISP=(,CATLG,DELETE),UNIT=&UNIT,VOL=SER=&VOL,
// DSN=&IDX..&ISPFVER..V58CLIB,
// DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3120),SPACE=(TRK,(25,1,20))
//*
//*   ALLOCATE CLIST LIBRARY (VARIABLE BLOCKS)
//CLISTV DD DISP=(,CATLG,DELETE),UNIT=&UNIT,VOL=SER=&VOL,
// DSN=&IDX..&ISPFVER..V58CLIBV,
// DCB=(DSORG=PO,RECFM=VB,LRECL=251,BLKSIZE=3120),SPACE=(TRK,(25,1,20))
//*
//*   ALLOCATE LPA-ELIGIBLE AND TSO COMMAND LOAD LIBRARY     *V5R8*
//IPILPA DD DISP=(,CATLG,DELETE),UNIT=&UNIT,VOL=SER=&VOL,     *V5R8*
// DSN=&IDX..&ISPFVER..V58LPA,                *V5R8*
// DCB=(DSORG=PO,RECFM=U,LRECL=0,BLKSIZE=19069),SPACE=(TRK,(120,5,25))
//*
//*   ALLOCATE NON-LPA LOAD LIBRARY                *V5R8*
//IPILOAD DD DISP=(,CATLG,DELETE),UNIT=&UNIT,VOL=SER=&VOL,     *V5R8*
// DSN=&IDX..&ISPFVER..V58LOAD,                *V5R8*
// DCB=(DSORG=PO,RECFM=U,LRECL=0,BLKSIZE=19069),SPACE=(TRK,(30,2,25))
//*
//*   ALLOCATE MESSAGE LIBRARY
//IPIMLIB DD DISP=(,CATLG,DELETE),UNIT=&UNIT,VOL=SER=&VOL,
// DSN=&IDX..&ISPFVER..V58MLIB,
// DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3120),SPACE=(TRK,(4,1,10))
//*
```

```
//*    ALLOCATE PANEL LIBRARY
//IPIPLIB DD DISP=(,CATLG,DELETE),UNIT=&UNIT,VOL=SER=&VOL,
// DSN=&IDX..&ISPFVER..V58PLIB,
// DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3120),
// SPACE=(TRK,(120,5,180))
//*
//*    ALLOCATE SKELETON LIBRARY
//IPISLIB DD DISP=(,CATLG,DELETE),UNIT=&UNIT,VOL=SER=&VOL,
// DSN=&IDX..&ISPFVER..V58SLIB,
// DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3120),SPACE=(TRK,(2,1,2))
//*
//*    ALLOCATE TABLE LIBRARY
//IPITLIB DD DISP=(,CATLG,DELETE),UNIT=&UNIT,VOL=SER=&VOL,
// DSN=&IDX..&ISPFVER..V58TLIB,
// DCB=(DSORG=PO,RECFM=FB,LRECL=80,BLKSIZE=3120),SPACE=(TRK,(8,1,20))
//*
//     PEND
//*================================================================
//ALLOC EXEC ALOCSPFE
//*
```

APPENDIX C: JCL TO COPY SPIFFY LIBRARIES

The following is a listing of the member LOADSPFE in the SPFE.V5R6M0.V58JCL library. It is used to load the SPIFFY libraries. Modify it as appropriate.

```
//LOADSPFE JOB <<<< FILL IN THE APPROPRIATE JOBCARD PARAMETERS >>>>
//*
//*   THIS JOB COPIES SPIFFY MEMBERS OF THE TAPE AND INTO ALREADY
//*   ALLOCATED SPIFFY LIBRARIES.
//*
//*   IF YOU HAVE CHANGED ANY VARIABLES DURING THE ORIGINAL INSTALL,
//*   OR IN THE "ALOCSPFE" JOB, APPLY THE SAME CHANGES HERE.
//*
//*---------------------------------------------------------------------
//COPYMEM PROC IDX=SPFE, ---- SPIFFY HIGH-LEVEL DATASET QUALIFIER
//     ISPFVER=V5R5M0, ---- CURRENTLY INSTALLED ISPF VERSION (ISPF LIBRARIES SECOND LEVEL QUALIFIER)
//     FL=,            ---- TAPE FILE SEQUENCE NUMBER
//*
//     TAPE=TAPE,      ---- TAPE DEVICE TYPE (MUST HANDLE 6250 BPI)
//*
//     STMT=COPYCTL    ---- MEMBER CONTAINING IEBCOPY STATEMENTS
//*
//*---------------------------------------------------------------------
//*
//COPY   EXEC PGM=IEBCOPY        COPY LIBRARIES
//SYSPRINT DD SYSOUT=*
//SYSUT3  DD UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSUT4  DD UNIT=SYSDA,SPACE=(CYL,(1,1))
//SYSUT1  DD UNIT=&TAPE,LABEL=(&FL,NL),VOL=(,RETAIN,SER=ISOSPF),
//        DISP=(OLD,KEEP),DSN=V58&IDS
//SYSUT2  DD DISP=OLD,DSN=&IDX..&ISPFVER..V58&IDS
//SYSIN   DD DISP=SHR,DSN=&IDX..&ISPFVER..V58JCL(&STMT)
//*
//      PEND
//*================================================================
//CLIST EXEC COPYMEM,IDS=CLIB,FL=2          CLIST (RECFM=FB)
//CLISTV EXEC COPYMEM,IDS=CLIBV,FL=3        CLIST (RECFM=VB)
//LPA   EXEC COPYMEM,IDS=LPA,FL=4,STMT=COPYLPA      LPA MODULES
//LOAD   EXEC COPYMEM,IDS=LOAD,FL=4,STMT=COPYNLPA     NON-LPA MODULES
//MSG   EXEC COPYMEM,IDS=MLIB,FL=5            MSGS
//PANEL EXEC COPYMEM,IDS=PLIB,FL=6            PANELS
//SLIB   EXEC COPYMEM,IDS=SLIB,FL=7          SKELETONS
//TABLE EXEC COPYMEM,IDS=TLIB,FL=8            TABLES
//*================================================================
```

APPENDIX D: SAMPLE MODIFIED MAIN MENU PANEL

During the SPIFFY installation process, you modified the ISPF main menu. The following sample shows the results of those changes:

```
%SPF/E----------------- SPIFFY/ISPF PRIMARY OPTION MENU -----------------------
%OPTION  ===>_ZCMD                                                            +
%                                                           +USERID   - &ZUSER
%   0 +ISPF PARMS  - Specify terminal and user parameters   +TIME     - &ZTIME
%   1 +BROWSE      - Display source data or output listings +TERMINAL - &ZTERM
%   2 +EDIT        - Create or change source data           +PF KEYS  - &ZKEYS
%   V +VIEW        - Display and optionally change source data
%   3 +UTILITIES   - Perform utility functions
%   4 +FOREGROUND  - Invoke language processors in foreground
%   5 +BATCH       - Submit job for language processing
%   6 +COMMAND     - Enter TSO Command, CLIST, or REXX exec
%   7 +DIALOG TEST - Perform dialog testing
%   8 +LM UTILITIES- Perform library administrator utility functions
%   9 +IBM PRODUCTS- Additional IBM program development products
%  10 +SCLM        - Software Configuration and Library Manager
%  11 +OLIST       - Object / Data Set List
%   C +CHANGES     - Display summary of changes for this release
%   T +TUTORIAL    - Display information about ISPF/PDF
%   X +EXIT        - Terminate ISPF using log and list defaults
%
+Enter%END+command to terminate ISPF.
%
+SPIFFY commands available on every panel:%EDIT, VIEW, BROWSE, OLIST, SPFEHELP+
)INIT
  .HELP = ISR00003
  &ZPRIM = YES        /* ALWAYS A PRIMARY OPTION MENU      */
  &ZHTOP = ISR00003   /* TUTORIAL TABLE OF CONTENTS        */
  &ZHINDEX = ISR91000 /* TUTORIAL INDEX - 1ST PAGE         */
  &ZSCLMPRJ = &Z      /* TUTORIAL INDEX - 1ST PAGE    @L1A*/
  VPUT (ZHTOP,ZHINDEX,ZSCLMPRJ) PROFILE /*            @L1C*/
)PROC
&WTRAIL=TRUNC(&ZCMD,'.') &WTRAIL=.TRAIL                    /*SPIFFY*/
&ZQ = &Z
IF (&ZCMD ¬= ' ')
  &ZQ = TRUNC(&ZCMD,'.')
  IF (&ZQ = ' ')
    .MSG = ISRU000
/* Options 11,V added for SPIFFY.                        SPIFFY*/
/* Options 1,2,6 are automatically trapped by SPIFFY.    SPIFFY*/
&ZSEL = TRANS( &ZQ
        0,'PANEL(ISPOPTA)'
        1,'PGM(ISRBRO) PARM(ISRBRO01)'
        2,'PGM(ISREDIT) PARM(P,ISREDM01)'
        3,'PANEL(ISRUTIL)'
        4,'PANEL(ISRFPA)'
        5,'PGM(ISRJB1) PARM(ISRJPA) NOCHECK'
        6,'PGM(ISRPTC)'
        7,'PGM(ISPYXDR) PARM(ISR) NOCHECK'
        8,'PANEL(ISRLPRIM)'
        9,'PANEL(ISRDIIS)'
       10,'PGM(ISRSCLM) NOCHECK'
       11,'PGM(IPIPLST) PARM(!,&WTRAIL) NEWAPPL(ISR) PASSLIB NOCHECK'
        V,'PGM(IPIMSL) PARM(V,<PROMPT>) NEWAPPL(ISR) PASSLIB'
        C,'PGM(ISPTUTOR) PARM(ISR00005)'
        T,'PGM(ISPTUTOR) PARM(ISR00000)'
      ' ',' '
        X,'EXIT'
        *,'?' )
&ZTRAIL = .TRAIL
)END
```

APPENDIX E: SPIFFY AND OTHER PRODUCTS

While SPIFFY enhances ISPF functions, it works with other products. This section explains how you should customize SPIFFY if you have other products in your system.

## SECURITY PACKAGES (RACF, ACF2, TOP SECRET)

SPIFFY uses only documented system interfaces and does not bypass any standard security mechanisms that may be used by your installation. As a general rule, SPIFFY does not require any change in the authorization rules you have already established for ISPF. Users should read authority for the libraries concatenated in the LOGON procedure.

Some security products e.g., ACF2, Top Secret, control the commands that TSO users or ISPF users are allowed to issue. If access to any SPIFFY command (e.g., SPIFFY, MSL,etc.)is denied, they must be added to the list of allowable commands.

PROGRAM PATHING

Some security packages offer the option of access to certain files only through restricted lists of programs, and sometimes only if the program names come from a particular library or calling path. The following describes the program structure in SPIFFY so that you can inform your security package appropriately.

If a user is invoking standard ISPF, the task structure is unchanged. If SPIFFY is active, ISPF, ISPSTART, and PDF are aliases of SPIFFY that are attached by the TMP. Internally, they reattach SPIFFY. SPIFFY then attaches ISRPCP (an entry point to ISPF itself). The following diagram illustrates this relationship:
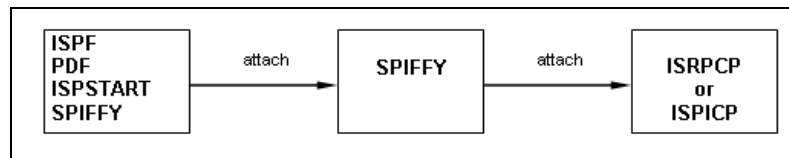
ISRPCP (an alias of the IBM-supplied ISPF) starts ISPF normally, and then links to module IPIITH, which in turn displays the main panel or invokes the program or CLIST entered on the ISPF/PDF/ISPSTART command line.

When the user selects option 1 (BROWSE), 2 (EDIT), or 6 (TSO), SPIFFY uses its own versions of ISRBRO, ISREDIT, and ISRPTC respectively as follows:

User Option	Original IFPF Module	SPIFFY Replacement
1 (BROWSE)	ISRBRO	IPIMSL
2 (EDIT)	ISREDIT	IPIMSL
6 (TSO)	ISRPTC	IPITSO

Note: None of the SPIFFY programs run in authorized mode.

ACF2

You need to customize SPIFFY under ACF2. Customization of SPIFFY depends on the following factors:

- The security features of ACF2 you use
- Where you want to place the SPIFFY load modules
- What level of ACF2 you have installed.

Perform the following procedure to customize SPIFFY as needed:

1. If your security specifications include a list of TSO commands that users are allowed to execute, add the following commands to that list: SPIFFY, MSL, IPIEXPN, OBROWSE, OEDIT, ISPICP and ISRPCP.

2. Determine whether your installation uses program pathing rules that apply to the ISPF environment. If not, your installation of SPIFFY under ACF2 is complete.

3. Consider whether it is acceptable to bypass some program path checking by specifying PATH(IGNORE) in the access rules. If you do so, your installation of SPIFFY under ACF2 is complete.

4. Determine the GEN level of your ACF2 installation. If you have a GEN level below 9208, apply APARs TW95948 and TW95931 to CSECT ACF99@RB.

5. Apply USERMOD UM95948 to ACF99@RB.

6. If you do not require that the SPIFFY load modules reside in a trusted library, add the NOSYSLIB keyword to the @RB macro definitions of the commands SPIFFY, ISPF, PDF, and ISPSTART in ACF99@RB. Once you do so, your installation of SPIFFY under ACF2 is complete.

7. If the SPIFFY load modules are not in LPALIB or another system library, specify both the SPIFFY LPA library and the SPIFFY LOAD library in IEAAPFxx (in PARMLIB).

   Note: MVS removes the authorization from the STEPLIB libraries if the STEPLIB includes the concatenation of any library that is not APF-authorized. If the SPIFFY libraries are in STEPLIB and you have not specified NOSYSLIB for the SPIFFY commands, make sure that all your STEPLIB libraries are marked as APF-authorized.

8. If the IBM commands ISPF, PDF, and ISPSTART are defined in member IKJTSOxx (in PARMLIB), define the command SPIFFY in the same way. (If you are using an older version of TSO that uses CSECTs IKJEFTE2 and IKJEFTE8 instead of IKJTSOxx, include the command SPIFFY in these CSECTs as you have included ISPF, PDF, and ISPSTART.) Once you do so, your installation of SPIFFY under ACF2 is complete.

SDSF

SDSF runs under its own application ID (ISF), and thus has its own set of PF key definitions and its own command table. The SDSF command table (member ISFCMDS) contains an entry for the command TSO, which is identical to the entry for TSO in the ISPF command table. Under native ISPF, this entry is simply redundant and unnecessary, but under SPIFFY it masks the enhanced SPIFFY TSO command. To remove the command from the SDSF command table (allowing the enhanced SPIFFY TSO support to be available under SDSF), go to the Commands Utility (ISPF option 3.9) and delete the entry for TSO. Make sure that the ISPTABL points to the ISPF table library that contains the command table ISFCMDS, and that you have WRITE access to the library.

TSO DYNAMIC STEPLIB FACILITY

The TSO Dynamic STEPLIB Facility (an IBM product offering [5798-DZW]) can be used instead of the DDNAME STEPLIB and ISPLLIB in the logon procedure to point to the SPIFFY LPA load library (SPFE.V5R6M0.V58LPA) and the SPIFFY load library (SPFE.V5R6M0.V58LOAD).

SMART-EDIT

If you are using Version 1.1 of ASG-SmartEdit, the following zap will ensure that SMART-EDIT will not override certain SPIFFY panels:

```
IF RUNNING VIA/CENTER R2.0 PTF LVL 157:
        NAME VIASEDM VIASEDM
        VER 1342 729C
        REP 1342 804C
IF RUNNING VIA/CENTER R2.1 PTF LVL 247:
        NAME VIASEDM VIASEDM
        VER 12D2 72FC
        REP 12D2 804C
```

SMART-EDIT Version 2.0 and above already accommodates SPIFFY and does not require any modifications.

SMART-EDIT uses the name 'PLIST' as an alias of the command PRINTLIST. For compatibility with previous versions of SPIFFY, SPIFFY uses PLIST as an alias to OLIST, and masks the SMART-EDIT command of that name. Users should be directed to enter either '>PLIST' or 'PRINTLIST' on the command line to invoke the SMART-EDIT command.

The SMART-EDIT SET command is also masked by the SPIFFY general command of the same name. Users should be directed to enter '>SET' to invoke the SMART-EDIT command.

LAUNCHING SPIFFY FROM FOCUS OR OTHER TSO ENVIRONMENTS

SPIFFY can be made available automatically to users of FOCUS and other TSO environments, as long as FOCUS or the other TSO environment is invoked from within ISPF with SPIFFY, rather than from TSO READY mode.

Copy the member FOCEXEC from the SPIFFY JCL library (SPFE.V5R6M0.V58JCL) into the FOCUS FOCEXEC library, giving it another name (e.g., VWEXEC). Instruct users how to invoke FOCUS from Option 6 of the ISPF main menu. Using the LET command, you can provide a shorthand way of invoking the EXEC as follows:

```
LET VIEW = EXEC VWEXEC <>
```

For more information, see the documentation in the member FOCEXEC.

PRODUCTS WITH DIRECT DIRECTORY UPDATE PROTECTION

Some products (such as MIM-Multi-Image Manager) control which programs are allowed to update a library directory directly. The SPIFFY command EXPDIR (formerly EXPAND) invokes such a program. To permit EXPDIR to work, you must add the name of the module it invokes, IPIEXDIR, to the list of programs that are authorized to update directory entries.

PDSMAN

PDSMAN sometimes dynamically alters directory update requests in a nonstandard way. If you indicated during SPIFFY installation that PDSMAN is installed and also specified a member name to ignore (such as $$$SPACE), the EXPDIR command is handled by a CLIST named IPIXPDSM. See the documentation in the CLIST in the SPIFFY CLIST library for how to enable it to use the PDSMAN ALTERDIR statement, or to disable the EXPDIR command entirely.

FILE TRANSFER PROGRAMS

Some file transfer programs expect ISPF option 6 (TSO) to display a panel with only one input field. The SPIFFY TSO Command Shell enhances ISPF option 6 in a number of ways, modifying the panel in a way that causes some of these programs to fail. To access the original ISPF option 6 panel for use with a file transfer program, a user can enter the following command from any panel:

```
TSO /IS
```
or
```
TSO /SP
```
The user can also enter the command **/IS** on the command line of the TSO Command Shell. Users can turn off the SPIFFY TSO Command Shell and use the ISPF TSO shell instead.

If you have ISPF Version 4.2 or above, and have a workstation connection via the ISPF workstation program, you can use the OLIST XFER line command instead of your file transfer program.

APPENDIX F: OLIST REFERENCE LIST

You can get a reference list of OLISTs by blanking out the name of the OLIST currently on display and pressing **ENTER** or, on any panel entering the command

```
OLIST *
```

The OLIST reference list only contains OLISTs that the user has created or invoked. If users do not use a shared OLIST library, their OLIST reference lists will match the OLISTs in their libraries. OLISTs created on the shared OLIST library by other users (or the same user under another TSO user ID) do not automatically appear on the user's OLIST reference list. Other users can also rename or delete OLISTs on the shared OLIST library, and the user's OLIST would not automatically reflect such changes. To bring a OLIST reference list into synchronization with the current state of the shared OLIST library, a user can enter the following command when the OLIST reference list is on display:

```
VALIDATE
```

Once the user references a shared OLIST, it appears on that user's OLIST reference list.

Note: If the first line of the OLIST is a comment line (a line that starts with an exclamation mark), that comment will appear as the description of the OLIST in the OLIST reference list. For that reason, it is recommended that when users create shared OLISTs, they add a descriptive comment line as the first line.

APPENDIX G: SUPPORTED OBJECTS

The following table lists the objects supported by every SPIFFY function:

Object Type	Object Identification	Supported Product	Example
Sequential, PDS data sets	Standard data set syntax	None needed, Built-in support.	ACCOUNTS.PAYABLE.COBOL PAYROL.NORTEAST.TRANS
VSAM files	Standard data set syntax	FileManager, FileAid, Data-Xpert, Ditto, MacKinney VSAM utility, a sample browser. Open architecture supports installation written agents.	ACCOUNTS.MASTER.DATA
Panvalet or Librarian files	Standard data set syntax (requires OLE link during installation).	Panvalet-ISPF, Librarian ELIPS, and installation written interfaces.	TAXES.MASTER.SOURCE
DB2 tables	a leading hyphen (not part of the table name)	RC-UPDATE, PRO-EDIT, PRO-ALTER, CDB-EDIT, FileAid-DB2, and installation written interfaces.	-ACCOUNTS.PAYABLE.NORTH
DD NAMES	@DD. followed by a DDNAME	None needed, Built-in support.	@DD.STEPLIB @DD.ISPPLIB.#2
SCLM hierarchies	Leading less-than sign	None needed, Built-in support.	<PROJECT.DEVGROUP.TYPE
DSLIST or OLIST entries	Data set level with patterns (% or * included in the name)	None needed, Built-in support.	SYS1.*LIB
OpenEdition files	Leading forward slash (not part of the name)	Automatically supported for MVS system that support OpenEdition.	/ROOT/TEST/ACCOUNTS-PAY/AP.C
PC File names	Name enclosed in double quotes	Requires ISPF 4.2	"C:\WINDOWS\SYSTEM\SPFE5.DLL"
User Defined	Indicated by greater-than sign	User defined process through open architecture.	>MY-OBJECT_is/HERE

The SPIFFY OLIST also support these additional objects:

Object Type	Object Identification	Examples
Comments	Leading exclamation mark	! This is a comment
Dynamic OLIST	Leading :LISTX command	:LISTC sys1.*mac* :LISTV VOL001 ACCOUNTS.*COBOL* :LISTA ISPPLIB :LISTS LINKLIST :LISTS LPALIB
ISPF hierarchies	Leading equal sign	=PROJECT GROUP1 GROUP2 GROUP3 TYPE
Immediate commands	Leading plus sign (the command may include reference to another entry. Specify a slash followed by the entry number)	+LISTDS 'USER12.TEST.DATA' LABEL +RECEIVE +ISPEXEC SELECT PGM(MYPROG) PARM(A) +%MYTEST DSN(/2) TODSN(/3)
Prompt commands	Leading question mark (the command may include reference to another entry. Specify a slash followed by the entry number)	?LISTDS 'USER12.TEST.DATA' LABEL ?RECEIVE ?ISPEXEC SELECT PGM(MYPROG) PARM(A) ?%MYTEST DSN(/2) TODSN(/3)

APPENDIX H: MODIFYING THE ISPF MAIN PANEL

This section describes the procedures to modify the ISPF main menu panels for ISPF 4.1 and below and for ISPF 4.2 and above.

MODIFYING THE PANEL FOR ISPF 4.1 AND BELOW

If you are using ISPF 4.1 and below, you can modify the ISPF main menu panel by performing the following procedure:

1. Copy the panel to be changed (usually ISR@PRIM or ISR@MSTR) to the SPIFFY panel library (SPFE.V5R6M0.V58PLIB).

2. Invoke EDIT on the panel in the SPIFFY panel library.

3. Change the title line to indicate that SPIFFY is installed.

Example:

Change the title:
```
ISPF MAIN MENU
```

to

```
SPIFFY/ISPF PRIMARY OPTION MENU
```

4. For consistency with other SPIFFY panels, change the first five positions on the title line to the characters SPF/E.

    Note: If the / character is defined as an attribute character, you may have to change the attribute character in the)ATTR section to another unused value and change the panel accordingly.

5. In the)PROC section, add the following line immediately after the)PROC line, starting in column 1:
```
&WTRAIL=TRUNC(&ZCMD,'.') &WTRAIL=.TRAIL
```

6. Add OLIST as a new option to the panel. In the body section, add a description line:
```
O OLIST - OBJECT/DATA SET LIST
```

    In the)PROC section, add the following line to the options:
```
O,'PGM(IPIPLST) PARM(!,&WTRAIL) NEWAPPL(ISR) PASSLIB
NOCHECK'
```

    Note: Choose an unused option number or letter for `O`.

7. Add VIEW as a new option to the panel. This is optional for ISPF Version 4. In the body section, add a description line:
```
V  VIEW - DISPLAY AND OPTIONALLY CHANGE SOURCE DATA
```

    In the)PROC section, add the following line to the options:
```
V,'PGM(IPIMSL) PARM(V,<PROMPT>) NEWAPPL(ISR) PASSLIB'
```

    Note: Choose an unused option number or letter for `V`.

    The original ISPF function that invokes **BROWSE** *(or* **VIEW** *in ISPF Version 4) is invoked by the ìPGM(ISRBRO)î statement in the)PROC section. SPIFFY automatically traps this call and invokes either* **BROWSE** *or* **VIEW***. The choice taken by SPIFFY is defined by the Customization Wizard.*

---

8. Add the following information line to the body area of the panel:
    **COMMANDS AVAILABLE ON EVERY PANEL: EDIT, VIEW, BROWSE,
    OLIST, QUIT, SPFEHELP**

    *Note: When adding lines to the body of the panel, make sure that they do not
    exceed twenty-four lines unless you are using a scrollable menu. List the options
    available in two columns if necessary.*

9. Save the member. For a sample modified main menu panel, see the member
    SAMPPRIM in the SPIFFY panel library as shown in "Appendix D: Sample
    Modified Main Menu Panel" on page 5-5).

MODIFYING THE PANEL FOR ISPF 4.2 AND ABOVE

Beginning with ISPF 4.2, IBM distributes panels in a format different from prior
releases. ISPF 4.2 supplies the panel ISR@PRIM in both DTL source format in the
SISPGENU library and ISPF panel format in the SISPPENU library. You can modify
ISR@PRIM by changing either the generated panel or the DTL source.

Modifying the DTL Panel Source

If you are modifying the ISR@PRIM panel in the SISPGENU library, you must also
change the)PNTS section of the panel when the section is present. This section
specifies the values assigned to Point-and-Shoot variables within the panel. It appears
near the end of the panel and is generated by ISPDTLC when it processes DTL panel
source. The affected statements have the following format:

    FIELD(ZPS01NNN) VAR(ZCMD) VAL(XX)

where:

Nnn is a sequence number that starts with 1 and corresponds exactly to the order of
the main menu choices. **Xx** is the character string (1 or 2 characters) for the command
line option.

There must be one field assignment for each menu choice. When additional menu
choices are inserted, corresponding FIELD statements must be added, and the VAL
values adjusted accordingly.

Example:

If the original statements were:

    **FIELD(ZPS01001) VAR(ZCMD) VAL(0)
    FIELD(ZPS01002) VAR(ZCMD) VAL(1)
    FIELD(ZPS01003) VAR(ZCMD) VAL(2)
    FIELD(ZPS01004) VAR(ZCMD) VAL(3)**

and menu choice **V** is inserted between menu choice 1 and menu choice 2, the FIELD
statements should be changed to:

    **FIELD(ZPS01001) VAR(ZCMD) VAL(0)
    FIELD(ZPS01002) VAR(ZCMD) VAL(1)
    FIELD(ZPS01003) VAR(ZCMD) VAL(V) /*   NEW CHOICE
    */
    FIELD(ZPS01004) VAR(ZCMD) VAL(2) /*   PUSHED-DOWN CHOICE
    */
    FIELD(ZPS01005) VAR(ZCMD) VAL(3) /*   PUSHED-DOWN CHOICE
    */**

It is recommended that you insert a line of instructions indicating which commands are available on every screen. Be aware that the attribute bytes are non-displayable and non-printable. The line to be inserted should be placed following the panel's scrollable lines, in the vicinity of the line saying what to enter to terminate with log/ list defaults. The instruction line must begin with the NT attribute (normal text = X'0A'), and that attribute should also follow the last non-blank character on the line. Note that scrollable lines begin with the non-displayable attribute X'27' and lines beginning with that character should not be disturbed.

Modifying the DTL Source Panel

If you prefer to modify the ISR@PRIM DTL source rather than the generated ISR@PRIM panel, you must change ISRZPRIM in the SISPGMLI library. The ISPDTLC conversion utility must then be run, specifying ISR as the keylist application ID to generate the new ISR@PRIM panel. It is recommended that changes be made to copies of the panels supplied by IBM rather than the originals and that the option to suppress warning messages about ISPF extensions be specified when running ISPDTLC.

The source changes to ISR@PRIM must be made in three distinct places for each new main menu choice to be included.

1. Locate the comment tag containing the text "**part 1**" that heads a set of entity definitions for the short choice descriptions, and insert new definitions there. Be sure to pad the text that is enclosed in quotes so as to preserve the existing alignment.

Example:

```
<:ENTITY CHOICE_V_PNTS "VIEW          ">
<:ENTITY CHOICE_O_PNTS "OLIST         ">
```

2. Locate the comment tag containing the text "**part 2**" that heads a set of entity definitions for the long choice descriptions, and insert new definitions.

Example:

```
<:ENTITY CHOICE_V_TEXT "DISPLAY/CHANGE SOURCE DATA">
<:ENTITY CHOICE_O_TEXT "OBJECT/DATA SET LIST">
```

3. Locate the <**selfld** group, where the choices and corresponding actions are defined, and insert new choice definitions in exactly the order they are in the panel that ISPDTLC will generate. These definitions should be coded as the following example, except that the **selchar**= and **value**= assignments need not be **V** and **O**, but any single character or pair of characters not already used for another menu choice.

```
<CHOICE SELCHAR=V
  <PS VAR=ZCMD VALUE=V CSRGRP=99> &CHOICE_V_PNTS; </PS>
  &CHOICE_V_TEXT;
  <ACTION RUN=IPIMSL TYPE=PGM PARM='V,<PROMPT>'
NEWAPPL=ISR PASSLIB>
<CHOICE SELCHAR=O
  <PS VAR=ZCMD VALUE=O CSRGRP=99> &CHOICE_O_PNTS; </PS>
  &CHOICE_O_TEXT;
  <ACTION RUN=IPIPLST TYPE=PGM PARM='!,&AMP;WTRAIL'
          NEWAPPL=ISR PASSLIB NOCHECK>
```

For each of the other **<CHOICE** groups, explicitly specify that the **SELCHAR** has the same value as the value specified in the **<PS** group for that choice.

4. Locate where "**panel_instruct_2**" is defined and add a new entity definition.

Example:

```
<:ENTITY &PANEL_INSTRUCT_3
"COMMANDS AVAILABLE ON EVERY PANEL: EDIT, VIEW, BROWSE,
OLIST, SPFEHELP">
```

5. Locate the tag **<region dir=horiz ... >** near the end of the source. It is into this group that the definition of the line is placed. Insert the following line into an **<info> <lines>** ... **</lines> </info>** group:
```
&PANEL_INSTRUCT_3;
```

6. Change the ISRZPRIM source by inserting the following lines found at the beginning of the section headed by the **<source type=proc>** tag:
```
&WTRAIL = TRUNC(&ZCMD,'.')
&WTRAIL = .TRAIL
```

APPENDIX I: INVOKING ISPF THROUGH AN ALTERNATE PROGRAM

With SPIFFY installed, ISPF is invoked via its internal entry point ISRPCP. If you want SPIFFY to invoke a program other than ISRPCP, allocate a DD as follows (where NEWNAME is the name of the program you want to invoke):

```
//SPFPNAME DD DSN=DSNAME(NEWNAME)
```

or

```
ALLOC FILE(SPFPNAME) DA('DSNAME(NEWNAME)')
```

The DSNAME can be any data set, e.g., the panel library. SPIFFY only inspects the member name.

Note: The program name cannot be ISPF, PDF or ISPSTART.