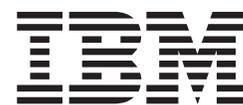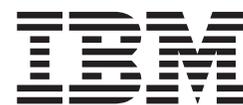IBM ISPF Productivity Tool for z/OS

User's Guide

Version 6 Release 1 Modification 1

IBM ISPF Productivity Tool for z/OS

User's Guide

Version 6 Release 1 Modification 1

> **Note!**
>
> Before using this information and the product it supports, be sure to read the general information under "Notices" on page 239.

Contents

Figures

Chapter 1. About this manual

This guide gives you an overview of the features and capabilities of ISPF Productivity Tool. The reference section provides the command information you need to implement ISPF Productivity Tool.

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.

Summary of changes, second edition (SC14-7221-01)

A new chapter, Chapter 12, "Panel Extension Language," on page 199, has been added to describe the Panel Extension Language (as supplied by APAR OA31365). Changes are marked with a vertical change bar in the left margin.

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 how to read syntax diagrams.

Chapter 2, "An overview of the ISPF Productivity Tool," on page 5 describes the features and capabilities of ISPF Productivity Tool and introduces the new features in the current version.

Chapter 3, "Using ISPF Productivity Tool," on page 11 explains how to use ISPF Productivity Tool.

The next seven chapters provide information about using commands in ISPF Productivity Tool:

Chapter 4, "An introduction to commands," on page 49 provides a general description to the detailed information about commands that follows.

Chapter 5, "General commands," on page 53 explains the use of the general commands (commands that are generally available anywhere within ISPF Productivity Tool).

Chapter 6, "Command shortcuts," on page 69 tells you about the command shortcuts that you can use in ISPF Productivity Tool.

Chapter 7, "EDIT/VIEW/BROWSE commands," on page 73 lists the commands that are available from EDIT, VIEW, and BROWSE panels—though some are only applicable to EDIT and VIEW panels.

Chapter 8, "MSL commands," on page 81 lists the commands that are available when an MSL is displayed.

Chapter 9, "OLIST commands," on page 133 lists the commands that are available when an OLIST is displayed.

Chapter 10, "TSO command shell," on page 191 explains how to use the TSO Command Shell to enter TSO commands, CLISTs, REXX EXECs, and ISPEXECs from within ISPF.

Chapter 11, "Browsing, viewing, and restoring deleted members of a PDS using the MAP list," on page 195 explains how you can use the MAP list with members of a PDS.

1

Chapter 12, "Panel Extension Language," on page 199 describes the Panel Extension Language, which adds functionality to the ISPF panel language.

The appendixes start with Appendix A, "Documenting an IPT failure for IBM level 2 support," on page 207, and continue through to Appendix M, "Persistent Table Library," on page 237. They cover a variety of topics, including describing the options to customize ISPF Productivity Tool for your particular environment, and using ISPF Productivity Tool while running other applications.

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 ISPF Productivity Tool tutorial, enter IPTHELP or IPT on any ISPF panel.

To display all ISPF Productivity Tool command shortcuts, enter IPT? on any ISPF panel.

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

To display the ASSIST window, which is available in both the Member Selection List (MSL) and Object List (OLIST), type ASSIST or A on the command line of the ISPF Productivity Tool Member List.

Text conventions in this guide

This guide uses the following conventions:

Bolded Phrase
> This shows the name of a field on a panel.

UPPERCASE
> This shows the text that you enter as a main command or line command, for example, CUT, PASTE. In a syntax diagram, UPPERCASE items are commands or keywords.

lowercase
> This shows variable that you must substitute with an appropriate value. The meaning of a variable displayed in a Syntax section is given in the Operands section.

How to read a syntax diagram

The format of the syntax diagram is as follows:

- Text in UPPER CASE (such as "BROWSE") must be entered exactly as shown.
- Text in mixed UPPER and lower case (such as "FILter") indicates a command or operand that can be abbreviated. The UPPER CASE text is required, and the lower case text is optional. (For example, "FILter" can be entered as "FIL", "FILT", "FILTE", and "FILTER", but not as "FI", since the "L" is required.)
- Text in *italics* (such as *DSNpatt*), possibly containing hyphens (such as *member_name*), represents information you enter. What you should enter is explained under the syntax diagram.
- A common element of a syntax diagram is a vertical stack of choices:

```
►►──┬─CHOICE1─┬──────────────────────────────────────────────────────►◄
    ├─CHOICE2─┤
    └─CHOICE3─┘
```
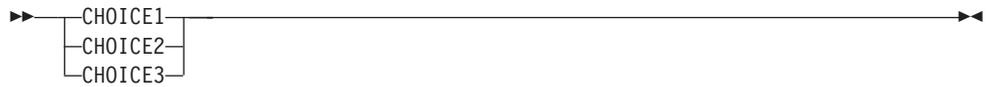
In this case you must enter one of these choices; CHOICE1, CHOICE2 or CHOICE3.

- A variation of this choice stack is when several elements are listed vertically below a horizontal line, like this:

```
►►────────────────────────────────────────────────────────────────────►◄
    ├─choice1─┤
    ├─choice2─┤
    └─choice3─┘
```

In this case, you can chose one element, but the choice is optional—you don't have to chose any element.

- A further variation is when several elements are listed vertically, below a horizontal line, and one element is above the horizontal line, such as:

```
        ┌─CHOICE1─┐
►►──────┼─────────┼────────────────────────────────────────────────────►◄
        ├─CHOICE2─┤
        └─CHOICE3─┘
```

In this case you can chose one element, but if you chose none, then the default option, which is the option above the line (CHOICE1), is the value used. You can supply the default value if you wish.

- The final variation on the choice stack is when there is a return loop:

```
       ┌─────,─────┐
►►─────▼─┬─CHOICE1─┬┴──────────────────────────────────────────────────►◄
         ├─CHOICE2─┤
         └─CHOICE3─┘
```

In this case you can chose more than one element. So, for example, you could chose CHOICE1 and CHOICE2, or CHOICE3 and CHOICE1 (the order isn't important), or just CHOICE2. The item in the return loop is the delimiter used to separate out the choices. If there is a limit to the number of choices you can make, this is noted in the diagram or with the associated description of the operands.

How to read a syntax diagram

Chapter 2. An overview of the ISPF Productivity Tool

This chapter presents a general description of ISPF Productivity Tool. It discusses the features, functions, and facilities that ISPF Productivity Tool provides to enhance ISPF.

What is ISPF Productivity Tool

ISPF Productivity Tool is an enhancement to TSO/ISPF that improves its productivity and performance. ISPF Productivity Tool integrates seamlessly into the most frequently used ISPF functions, including BROWSE, EDIT, VIEW, and DSLIST. ISPF Productivity Tool extends the functions provided by ISPF for standard data sets to other objects, including VSAM files, Librarian/Panvalet libraries, z/OS UNIX System Services files, PC files, DB2® tables, as well as other object classes. Along with this support, ISPF Productivity Tool provides a powerful object browser called OLIST that has the look, feel, and functionality of DSLIST.

Features and benefits

ISPF Productivity Tool combines separately provided ISPF utility functions and new ISPF Productivity Tool features into the Member List and the OLIST/DSLIST. The resulting member, data set, and object lists become powerful platforms where you can perform many tasks without navigating to other utilities.

ISPF Productivity Tool extends the ISPF Action Bar with options that provide access to new functionality so you do not have to learn new commands or syntax.

ISPF Productivity Tool provides extensive search capabilities that are fast and intuitive. You can easily search for volumes, data sets, members, and text within members. ISPF Productivity Tool also furnishes automatic drill-down system navigation to pinpoint volumes, data sets, and members.

In addition to the ISPF point-and-shoot capabilities, ISPF Productivity Tool has facilities that prompt actions upon cursor selection:
* Hotbars (user-defined fields that execute commands)
* Field-sensitive areas in MSLs and OLISTs
* Automatic recognition of a data set name on any ISPF panel as a parameter to BROWSE, EDIT, VIEW, or parameters within any TSO command

ISPF Productivity Tool provides integrated and enhanced SCLM support within the standard member and data set lists. SCLM is a source library management component of ISPF that provides change control, multiple source versions, auditing, a built-in make facility, and automatic check-in/sign-out using standard libraries (PDS, PDSE).

All ISPF Productivity Tool functions are totally integrated. ISPF Productivity Tool can perform almost any activity within ISPF, or internally invoke the function that can perform the task. All ISPF Productivity Tool functionality is available without a need to modify any ISPF Primary Option Menu.

If you decide to modify the ISPF Primary Option Menu (see "Sample modified main menu panel" in the *IPT Installation Guide*), it is changed only slightly, as

shown in this example:

```
 -IPT-                    IPT/ISPF Primary Option Menu      IBM IPT VERSION 6.1
 Option ===>

 0  Settings      Terminal and user parameters       User ID . : INTT125
 1  Browse        Display source data or listings     Time. . . : 09:09
 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 : IPTLOGN
 6  Command       Enter TSO or Workstation commands   TSO prefix: INTT125
 7  Dialog Test   Perform dialog testing              System ID : SP13
 9  IBM Products  IBM program development products    MVS acct. : IS100
 10 SCLM          SW Configuration Library Manager    Release . : ISPF 6.1
 11 Workplace     ISPF Object/Action Workplace
 0  Olist         IPT Object/Data set list


     Enter X to Terminate using log/list defaults
     BROWSE EDIT VIEW OLIST TSO IPT IPT? are available from any panel
```

Figure 1. The Primary Option menu

The main menu does not look much different. If you are already familiar with
ISPF, you can become productive immediately.

When you start using the enhanced features of ISPF Productivity Tool to perform
standard BROWSE, EDIT, VIEW functions, as well as most of the ISPF capabilities,
you will find almost every ISPF capability has been enhanced and new capabilities
added.

What's new in version 6.1

Here are the changes to IPT that are pertinent to using IPT. They are indicated in
the text through a change bar "|" in the left margin. Other changes are listed in
the *IPT Installation Guide*.

OLIST enhancements
- New command MAPPDS ("MAPpds (PDS only)" on page 170) displays a map
  of all existing and deleted members of a PDS library. Deleted members may be
  browsed, viewed, and restored into the directory.
- New command COPYALL ("COPYALl" on page 144) expeditiously invokes
  IEBCOPY to copy all members of a partitioned library concatenation into
  another library.
- New command MOVEALL ("MOVEALl" on page 173) expeditiously invokes
  IEBCOPY to copy all members of a partitioned library concatenation into
  another library, and then deletes all successfully copied members from the
  original library.
- New command SHOWMIG ("SHOWMigr" on page 181) may be used to
  automatically hide or reveal migrated data sets from any OLIST display of
  catalogued data sets.
- The user setting of SHOWMIG and SHOWCMD is now saved in his PROFILE.
- MEMFIND command ("MEMFind" on page 171) supports unrestricted member
  name patterns (not just by common prefix). FINDMEM and FM are valid aliases
  of MEMFIND.
- FINDTEXT command ("FINDTEXT (FT)" on page 153) now supports
  hexadecimal and case-sensitive SBCS as well as DBCS search strings. It also
  supports a restricted width via a from-to column setting.

- FINDTEXT handling of ampersand (&) characters in search strings has been streamlined to conform to ISPF EDIT conventions.
- OLIST titles and comment lines can include DBCS character strings.
- When @H is specified as target of Copy/Move the prompt panel (IQICOPY2 or IQICOP2S) supports FIND/RFIND command to locate target data set.
- New CLIST IQIDEL allows for OLIST "Group Delete" to be executed without a confirmation prompt for each data set.
- OLIST RESET command now supports "Type" and "CLAss" argument.
- The reminder about the "A" (Assist) appears only on first OLIST per session.

MSL enhancements
- New command MAP displays a map of all existing and deleted members of a PDS library. Deleted members may be browsed, viewed, and restored into the directory.
- New command COPYALL ("COPYALl" on page 90) expeditiously invokes IEBCOPY to copy all members of a partitioned library concatenation into another library.
- New command MOVEALL ("MOVEALl" on page 112) expeditiously invokes IEBCOPY to copy all members of a partitioned library concatenation into another library, and then deletes all successfully copied members from the original library.
- New command ALIAS ("ALIas" on page 85) to add an alias name to an existing member.
- BROWSE/EDIT/VIEW entry panels now accept and support extended size (15 characters) member name patterns.
- BROWSE/EDIT/VIEW entry panels now accept and support a GDG format name, <Dsn>(<Gen#>), in the **Other data set** field.
- FINDTEXT ("FINDTEXT" on page 100) and GLOBAL FIND command now support hexadecimal and case-sensitive SBCS as well as DBCS search strings. Both support a restricted width via a from-to column setting.
- FINDTEXT and GLOBAL handling of ampersand (&) characters in search strings has been streamlined to conform to ISPF EDIT conventions.
- FIND command also supports, in addition to member name, a search text string (quoted) parameter, like FINDTEXT.
- Any GLOBAL CHANGE or EDIT prompts for a confirmation before proceeding to process all members.
- MSL always invokes IEBCOPY for load-module members in order to provide complete Binder format integrity across different partitioned libraries. When copying a group of members from an unconcatenated library, MSL invokes IEBCOPY with COPYGRP control statement in order to copy all relevant aliases.
- MSL line commands can be stacked while scrolling through multiple pages of the member list. Multiple (scattered) line commands such as: Delete, Z (stats), Copy or Move are grouped together and executed as: "Group Delete", "Group Stats", "Group Copy", or "Group Move".
- ZUNIX file names that end with "+" make MSL display a prompt panel for entering a fully qualified ZUNIX file name (1023 characters).
- EDIT COMP no longer invokes COMPRESS.
- MSL display of load libraries properly shows Large-Program-Objects sizes.
- The reminder about the "A" (Assist) appears only on first MSL per session.

DSLIST enhancements
- The XV display has been enhanced to support EAV architecture volumes. It also supports sorting by any column.
- The DSLIST entry panel now accepts and supports a GDG format name, <Dsn>(<Gen#>), in the **Dsname Level** field.

What's new in version 6.1

Command shortcuts

- New command shortcut IPTNEW displays the "What's New" information for all current IPT versions.
- New command shortcut OLDA (or OLDASD) displays a list of volumes by pattern, similar to the "XV" option of DSLIST main menu.
- New command shortcut PLIST is an alias of OLIST command.

IPT SET updates

- Option to include member names in data set history list.
- Option to suppress "FIND <string>" prompt after FINDTEXT or GLOBAL FIND.
- Option to disable or enable Double-Byte-Character-Set (DBCS) support.
- Option to enable or disable DBCS case-sensitive search strings.
- Specification of maximum capacity of TSO-Shell Permanent and History command lists.
- Specification of threshold count for detailed VOLUME list display by new command shortcut OLDASD.

What's new in version 5.10

OLIST enhancements

- New object classes recognized: BOOK (BookManager®), SHELF (BookManager), ZONE (SMP/E).
- IBM BookManager invoked when selecting BOOK and SHELF objects.
- VSAM object handler invoked when selecting a VSAM PATH or ALTINDEX file.
- FINDTEXT command now fully supports the GLOBAL AUTO and EXCLUDE settings. All displayed data sets may be searched in one shot (like MSL GLOBAL).
- New command EMPTY, empties (with a confirmation) partitioned and sequential data sets.
- RIGHT (F11) and LEFT (F10) invoke DSLIST line command when the cursor is pointing at an OLIST row.
- FREE command requires a confirmation. This allows the user to invoke it it on a range of data sets with full control.
- IBM FileManager/DB2 is supported as a DB2 object handler.
- Object names starting with "/", ".", "~" are recognized as z/OS UNIX objects with a class name of ZUNIX. Fully support them under z/OS v1.9 via ISPF z/OS UNIX API. For lower z/OS levels provide a downward compatibility via the OLIST "OE" (OpenEdition) interface.

MSL enhancements

- New command EMPTY, empties (with a confirmation) some or all of the concatenated libraries.
- The name of EDIT initial macro is preserved as specified in the EDIT main menu screen. Automatically invoke this macro in all EDIT/VIEW sessions until changed by user to another name or blank.
- Supports (under z/OS v1.9) z/OS UNIX file names with absolute path names of up to 1023 characters in length.
- Supports properly displaying member lists of libraries with huge number (6 digits) of members. The enhanced LOCATE command can be used to position the member list display at a 6-digit row number.

Point-and-shoot enhancements

- Support z/OS UNIX object names as targets for a point-and-shoot.
- Support z/OS system symbols starting with "&".
- Support BookManager object names.

Command shortcuts
- New command IPTCMDS allows to dynamically disable/enable selected IPT command shortcuts, without affecting any other IPT functionality. TLIB member IQIDCMDS provides an easy way to define the command names that are affected by this feature.
- New command shortcuts: OLBO, OLBK, OLSH, and OLZ, support the new object classes of: BOOK, SHELF, and ZONE.
- OLVS command shortcut also recognizes PATH and ALTINDEX data sets as VSAM objects.
- ISET command shortcut supports a parameter for setting the defaults of a specific function.

Data set history list
- The History-List now includes names of accessed VSAM and UNIX objects.

IQIWIZRD updates
- Number of Dataset-History-List entries can be customized to a maximum of 999.
- IBM BookManager interface customization.
- IBM FileManager/DB2 interface customization.

IPT/ISPF Logon Procedure
- Alias names SPF and SPIFFY have been added to IPT main module IQIMAIN.
- IQICMDOF DD name: triggers an "IPTCMD OFF" at IPT startup.
- IQIOFF DD name: triggers an "IPTOFF" at IPT startup.
- IQIPANEL DD name: should be used instead of IPIPANEL.

Installation JCL
- Complete set of JCL skeleton jobs for managing a dedicated SMP/E global zone as a "Single Point of Maintenance".

z/OS 1.9 support/ISPF compatibility

IPT has been tested and certified to run on z/OS Version 1 Release 9 and the corresponding release of ISPF (internally numbered 5.9).

Rolled-up maintenance

All required, accumulated maintenance has been "sourced" and included in this release.

What's new in version 5.9

IBM ISPF Productivity Tool V5.9 contains the following improvements over the previous version:

- Revamped version of the former SPIFFY product from Isogon Corporation. The documentation and product interface has been updated to reflect the IBM name of ISPF Productivity Tool. It is recommended that you review the introductory sections of the *IPT Installation Guide* and *IPT User's Guide*.

What's new in version 5.9

- New naming conventions—a number of components have been renamed to conform to the IBM standard naming convention for z/OS® products.
- All load-modules and source members have names that start with "IQI".
- The customization wizard CLIST has been named IQIWIZRD.
- Required DD name IPITLIB has been replaced with IQITLIB. Note that if the DD name IPITLIB is present without DD name IQITLIB, its associated data set is re-allocated with a DD name IQITLIB.
- PRINT command output DD name is IQISOUT.
- Optional SCLM support DD name IPISCLM has been replaced with IQISCLM.
- Utility work data set DD names are: IQIUTIN, IQIUTOT, IQIUT03, IQIUT04.
- Diagnostics data set DD names, such as IPILOGPR and IPITRSNP, have been renamed as IQILOGPR and IQITRSNP.
- Command shortcuts—this new facility offers 47 command shortcuts, which provide easy access to most of the product functions via the main command line of any application panel. There is also a method to customize each command shortcut to a site-wide selected name or to completely disable it. The presence of command shortcuts for OLIST and MSL removes any need to customize the ISPF primary menu panels (such as ISP@PRIM).
- OLIST command enhancements:
  - Revamped ASSIST facility provides a quick online reference to all supported main and line commands.
  - CANCEL command now bypasses a SAVE to a modified permanent OLIST.
  - REFRESH command restores a modified temporary or permanent OLIST to its original contents.
  - RFIND (F5 key) supports both FIND and EXCLUDE commands in both directions.
  - Automatic filling of the VOLSER field can be either site-wide controlled (via IQIWIZRD CLIST) or changed by each user (via SET command).
- MSL command enhancements:
  - INFO command correctly displays PDSE directory information.
  - REFRESH command restores the displayed members from the current directory.
  - RESET command supports a TEXT or NOTE parameter to allow removal of all permanent notes (such as those generated by GLOBAL command).
  - SORT command supports a TEXT or NOTE parameter to allow sorting by permanent notes (such as those generated by GLOBAL command).
  - BROWSE/EDIT and VIEW main menu displays the data set history list in either an OLIST format or as a time-stamped modifiable list of data set names. Handling of @H "Other data set" field can be either site-wide controlled (via IQIWIZRD CLIST) or changed by each user (via SET command).
- @H (for data set history list) can now be specified in the "Other data set" field of the ISPF "Data Set Utility" menu (option 3.2) as well as of the ISPF "Move/Copy Utility" (option 3.3).
- z/OS 1.7 Support/ISPF Compatibility - Full support for Large-Format sequential data sets.
- Rolled-Up Maintenance - All required, accumulated maintenance is included in this version.

Chapter 3. Using ISPF Productivity Tool

This chapter is intended to help you get started using ISPF Productivity Tool. It describes the features and functionality of ISPF Productivity Tool and explains how to implement its fields, tool bars, and options.

Object orientation

By extending the data-set objects used by ISPF to other object classes, ISPF Productivity Tool lets you specify the object to be processed and the action that is performed (such as EDIT or BROWSE). The facility appropriate to the object class for the action you have requested is invoked automatically. With this object-oriented metaphor, you need not be concerned with object classes and the corresponding utility for each. ISPF Productivity Tool relates objects to applications similarly to the way a PC performs OLE (Object Linking and Embedding).

OLE is the process by which a specified object (for example, a VSAM file) is internally registered to a method (for example, FileManager) that performs a task the user requests. Usually, it is sufficient to "click" on the object to take the appropriate action. It is up to the system to resolve the class of object, the desired action, and what program or product should perform the requested function. Consider the following example:

1. You are using OLIST to display a list of files. The OLIST default command is B (for browse). The OLE registration performed during ISPF Productivity Tool installation indicates that your site has IBM's FileManager VSAM browser/editor.
2. Use your mouse to click (point-and-shoot) on the line showing the name of a VSAM file.
3. Enter one of the commands: EDIT, VIEW, BROWSE, or program a PF key to represent the command. ISPF Productivity Tool automatically recognizes that the data set is a VSAM file and invokes the FileManager browser.

Under ISPF Productivity Tool, the same actions for a VSAM file in OLIST can be performed in DSLIST. DSLIST does not support all objects, for example, DB2 or PC file names, whereas OLIST supports all objects.

ISPF Productivity Tool attempts to classify objects automatically. For example, it would recognize that a data set is a VSAM file rather than a PDSE library. Some object types cannot be automatically recognized, so ISPF Productivity Tool uses a special prefix character to designate the object class. In the case of DB2, table names are prefixed by a hyphen. The special prefix character is not considered part of the object name.

The following objects are supported by every ISPF Productivity Tool function:

Table 1. Objects supported by ISPF Productivity Tool

Object class	Object identification	Supported product	Example
Sequential, PDS data sets	Standard data set syntax	None needed, built-in support using standard ISPF facilities.	ACCOUNTS.PAYABLE.COBOL PAYROL.NORTEAST.TRANS

Object orientation

Table 1. Objects supported by ISPF Productivity Tool (continued)

Object class	Object identification	Supported product	Example
VSAM files	Standard data set syntax	FileMgr, FileAid, Data-Xpert, MacKinney VSAM utility, and other 3rd party products, a sample browser, and installation written interfaces.	ACCOUNTS.MASTER.DATA
Panvalet or Librarian files	Standard data set syntax	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
BOOK data sets	Standard data set syntax	IBM BookManager READ/MVS	PP.DB2V710.DSNAGH10.BOOK
SHELF data sets	Standard data set syntax	IBM BookManager READ/MVS	PP.PLI.V1R1M1.IBM3SH03.BKSHELF
ZONE data sets	Standard data set syntax	Requires IBM SMP/E	SUPPORT.TECH24.IBM.GLOBAL.CSI
DD names	@DD. Followed by a DDNAME	Depends on allocated DD name object class.	@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 wildcards (% or * included in the name)	None needed, built-in support.	SYS1.*LIB CICS.A%C.COBOL
z/OS UNIX System Services files	Name starting with any of the following characters: slash(/) or dot(.) or tilde(~)	Utilizing z/OS native Unix Services under z/OS v1.9 and above. Utilizing OpenEdition services under z/OS v1.8 and below.	/samples/comics.lst
OpenEdition files	Leading right parenthesis (not part of the name)	Utilizing z/OS native Unix Services under z/OS v1.9 and above. Utilizing OpenEdition services under z/OS v1.8 and below.	)root/TEST/ACCOUNTS-PAY/AP.C
PC file names	Name enclosed in double quotation marks	Requires ISPF Workstation connection.	C:\WINDOWS\SYSTEM\SPFE5.TXT
User defined	Indicated by greater-than sign	User-defined process.	>MY-OBJECT_is/HERE

Using these objects is similar to specifying a standard data set. For example, to BROWSE the Member List of the library allocated to the second concatenation of the STEPLIB DD, you would enter the following command (on any ISPF panel):

```
BROWSE @DD.STEPLIB.#2
```

Note: A common example of combined object support is to specify a volume pattern (or a data set name pattern) in option 2 (EDIT) to obtain a data set list matching the specified volume pattern. Then, select a data set from the data set list. If it is a VSAM file, for example, ISPF Productivity Tool places you in the VSAM editor. You have now used both the volume pattern object and a VSAM object, without having to navigate out of the EDIT panel to DSLIST or to your VSAM editor utility.

Extended point-and-shoot

ISPF Productivity Tool extends the point-and-shoot capabilities of ISPF to allow more cursor activated functions. Like ISPF's point-and-shoot, you can use the cursor to click on fields, press the Enter key, and have ISPF Productivity Tool take the appropriate action. If you use an emulation program, for example, IBM Personal Communications, you can use the mouse to both position the cursor on a field and send the Enter key. With a workstation and mouse, the ISPF Productivity Tool extended point-and-shoot capability makes ISPF behave more like a PC.

In addition to the ISPF point-and-shoot fields, ISPF Productivity Tool supports three new point-and-shoot facilities:

Hotbars
> User-definable point-and-shoot fields that appear on selected panels. These fields provide an easy way to enter frequently used commands without having to dedicate a PF key for that purpose. You can reveal or hide the Hotbar line.

Point-and-shoot parameters
> Any data set name (or member name) included on any ISPF panel is automatically available as a point-and-shoot field for the BROWSE, EDIT, VIEW, and TSO commands.
>
> In addition you may also point-and-shoot from any panel by invoking the following command shortcuts: OL, OLB, OLBK, OLBO, OLDD, OLE, OLG, OLI, OLM, OLPDSE, OLP, OLSH, OLT, OLV, OLVS, OLZ, EX1, EX2, EX3, EX4, EX5, EX6, EX7, EX8, EX9. This facility makes it easy to use displayed information as input parameters for common functions.

Action fields
> These fields are similar to the ISPF point-and-shoot fields, but are not marked by special highlighting. (If the action fields were highlighted, most of the panel would be covered by highlighting.) The action fields appear on MSLs and OLISTs.

The following sections describe each of these facilities.

Hotbars

The hotbar is an optional line you can define to contain commands for each panel. Hotbars can be activated on the Member list, Object list, and BROWSE, EDIT, VIEW Entry Panels. The hotbar includes the `Hotbar:` tag on the left, followed by up to eight commands.

How to activate and deactivate hotbars

From any command line (except when you are in OLIST or MSL), enter IPT SET, or the shortcut ISET. When you are in OLIST or MSL, enter SET. The Setting IBMIPT Defaults panel is displayed.

Select the **INTERFACE** option. The User Interface Options panel is displayed:

```
 -IPT- ---------------------User Interface Options-----------------------------
 COMMAND ===>

    +----------------------------------------------------------------+
    | Note: Changes specified on this screen may not affect all of the |
    |       panels that are currently displayed in nested applications. |
    +----------------------------------------------------------------+

 Verify or specify the following options: (Enter Y for Yes, N for No):

   Activate HOTBARS                       ===> Y

   Activate Action Bars                   ===> Y
     If Action Bars are active:
       Display Action Bars in Browse, Edit, View     ===> Y
       Display Action Bars in Member Selection List ===> Y
       Display Action Bars in the object list       ===> Y
       Display Action Bars in DSLIST                ===> N

  Press ENTER for options menu, END to exit, CANCEL for installation defaults.
```

Figure 2. Activating hotbars through the User Interface Options panel

To the right of **Activate HOTBARS**, type Y, and press Enter. Now, on each of your panels, the hotbar is available.

To deactivate hotbars, repeat this procedure, but set the **Activate HOTBARS** field to N.

How to define the commands on hotbars

Once the hotbar is activated, it appears under the COMMAND line.

If commands are not defined on the hotbar, the **Hotbar:** tag changes to **Hotbar?**.

```
 -IPT- OLIST (B) ----------- Objects List --------------------- Row 1 to 3 of 3
 Command    ===>                                        SCROLL ===> PAGE
 Hotbar?
 Open list  ===> MYLIST    (or BLANK for reference list)
```

The hotbar line still occupies a panel line. If you do not plan to use the hotbar, you can deactivate it and gain the extra panel line (see "How to activate and deactivate hotbars").

```
 -IPT- OLIST (B) ----------- Objects List --------------------- Row 1 to 3 of 3
 Command    ===>                                        SCROLL ===> PAGE
 Open list  ===> MYLIST    (or BLANK for reference list)
```

The setting for the hotbars is global. If you have a hotbar displayed in the OLIST, then you also have one displayed in the MSL.

To define the hotbar commands, click the **Hotbar:** or **Hotbar?** tag or place your cursor under the tag and press Enter. The tag changes to **HOTBAR=**. You can enter up to eight commands.

```
-IPT- OLIST (B) ----------- Objects List ------------- Define HOTBAR commands
Command    ===>                                         SCROLL ===> CSR
HOTBAR= VALIDATE FILLVOL_ UPDATE__ RFIND___ CANCEL__ SAVE____ _____ _____
Open list  ===> MYLIST   (or BLANK for reference list)
```

You can enter any valid command on the Hotbar. ISPF Productivity Tool lets you enter an invalid command on the hotbar, but when you invoke the invalid command from the hotbar, nothing happens. No error message are issued.

The underscores show the positions of the eight command fields. You can press the Tab key to move the cursor from one field to another.

To replace a command with another, overtype the original command.

Suggested hotbar settings

The following figures show the commonly used hotbar commands for the OLIST, the MSL, and the EDIT, VIEW and BROWSE Entry panels. You may want to define your own hotbars in the same manner.

OLIST hotbar commands:

```
-IPT- OLIST (B) ----------- Objects List -------------------- Row 1 to 3 of 3
Command    ===>                                         SCROLL ===> CSR
Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL     UPDATE   CUT     FLIP
Open list  ===> MYLIST   (or BLANK for reference list)
```

MSL hotbar commands:

```
-IPT--BROWSE L1---- SYS1.MACLIB ---------------------------ROW 00001 OF 01757
COMMAND  ===>                                           SCROLL ===> PAGE
HOTBAR: REFRESH  FLIP     GLOBAL    INFO      COMPRESS EXPDIR   TAILOR   TOTALS

   NAME    RENAME   LIB VV.MM CREATED     CHANGED     SIZE INIT   MOD USERID
```

BROWSE, EDIT and VIEW Entry panels:

```
-IPT--L1 - - - ------ VIEW - ENTRY PANEL -------------------------------------
COMMAND ===>
HOTBAR: @H      @L       SORT CHA TAILOR   COMPRESS EXPDIR   INFO     SET
```

Point-and-shoot parameters

ISPF Productivity Tool supports the following ISPF point-and-shoot fields:
- Action bars
- Menu options
- Other panel defined point-and-shoot fields

The following OLIST panel illustrates some of the extended point-and-shoot fields:

Point-and-shoot parameters

```
   File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit   1
----------------------------------------------------------------------------
-IPT- OLIST (B) ----------- LEVEL SYS*PLIB* ---------- "A" will display assist
Command    ===>                                              SCROLL ===> CSR
Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL      UPDATE  CUT    FLIP     2
                                                              *TEMPORARY LIST*

TSO PARMS   ===>
Command   Member   Numbr  Data Set Names / Objects                   Class   3
--------- -------- ----- ------------------------------------------- -------
                      1 'SYS1.ADFQPLIB'
                      2 'SYS1.ADGTPLIB'
                      3 'SYS1.AICEPLIB'      4
                      4 'SYS1.APLIB'
                      5 'SYS1.ASAMPLIB'
                      6 'SYS1.CIPLIB'
                      7 'SYS1.DFQPLIB'
                      8 'SYS1.DGTPLIB'
                      9 'SYS1.SAMPLIB'
                        ---------------- END OF LIST ----------------
```

Figure 3. OLIST extended point-and-shoot fields

1   Action bar
2   Hotbar
3   Column headings (typical action fields)
4   Data set/Object (typical point and shoot parameter). Applies to all items in the list.

Many ISPF panels contain data set names. ISPF Productivity Tool automatically treats these as input parameters to the BROWSE, EDIT, and VIEW commands. Additionally, the ISPF Productivity Tool TSO shell lets you use a slash as a symbolic placeholder for a Point-and-Shoot Parameter within the parameter buffer of a TSO command.

For example, when you BROWSE JCL using a spool viewer (SDSF, IOF, or a similar product), you may want to inspect a data set referred to in the JCL. You can type BROWSE on the command line, place the cursor on the data set name on the spool viewer panel, and press the Enter key. If you predefine a PF key as BROWSE, EDIT, or VIEW, you can place the cursor on the data set name and press the PF key directly.

The point-and-shoot parameters can be of any supported object class. For example, you can point at a VSAM data set and invoke the VSAM editor on top of the spool browser.

The ISPF Productivity Tool TSO shell substitutes a slash in the TSO command buffer with the name of a data set you pointed to. This is similar to how BROWSE, EDIT, and VIEW accept point-and-shoot parameters. For example, you can enter TSO LISTDS / LABEL on the command line to display the VTOC entry for a catalogued data set, place the cursor on a data set and press the Enter key. If you place the cursor on a data set named 'JONES.TEST.JCL', ISPF Productivity Tool issues the command LISTDS 'JONES.TEST.JCL' LABEL.

ISPF Productivity Tool determines the name of the data set that you point to in this fashion:

1. Unquoted data set names are always interpreted as if the name is prefixed by your current TSO prefix.

   For example, if the TSO prefix is your user-id is "INTT125", then if you enter BR TEST.DATA it is interpreted as "BR 'INTT125.TEST.DATA'".

2. If the unquoted name is up to eight characters in length without any dots (that is, levels) it is always interpreted as a library member name.

   The member name is expected to come from the current library if MSL is in control, or from the most recently accessed library as saved in the user's ISPF profile.

3. If the name is quoted it's always a data set name.

These rules apply when you do a point-and-shoot to EDIT/BROWSE/VIEW, which are MSL controlled.

If you point-and-shoot to an OLIST shortcut such as OL, OLM, OLG, or OLI, the name is always (quoted or unquoted) interpreted as a "data set level", which is any data set name that is identical to this name or matches the pattern of "level.* ". For example, the command OL INTT125.TEST displays a temporary OLIST with names like:

```
INTT125.TEST            <-- The identical name
INTT125.TEST.A          <-- Pattern matches
INTT125.TEST.XYZ
INTT125.TEST.ABC.XYZ
```

In the case of OLIST shortcuts (but not for MSL shortcuts) you may also point-and-shoot strings that contain wild-cards "*" and "%".

Occasionally, ISPF Productivity Tool is not able to match a data set to the pointed string, or you aren't pointing to a data set. In these cases BROWSE, EDIT, and VIEW display a prompt panel, and the TSO shell leaves the slash unsubstituted.

You may want to specify the TSO command with a leading question mark when using the TSO shell. This is an indication that you want to see the substituted command buffer before executing the command. You may change the command before issuing it, or press the END key to discard the command.

Adding point-and-shoot commands

The ISPF Productivity Tool TSO shell allows point-and-shoot substitution to occur within entered commands. For example, you may enter TSO LISTDS / LABEL on the command line, and place the cursor on a data set name that appears. If the cursor was positioned over 'SYS1.LINKLIB', ISPF Productivity Tool issues the command LISTDS 'SYS1.LINKLIB' LABEL.

Using this capability, you can define your own point-and-shoot command. For example, if you create a CLIST (or REXX exec) that accepts a data set as a parameter, you can define it in the ISPF command table (to be called by the ISPF Productivity Tool TSO shell). For example, if your command is COMPILE, the ISPF command table definition (as entered in option 3.9) is:

Verb	T	Action
COMPILE	5	SELECT SUSPEND PGM(IQITSO) PARM(-,%COMPILE /)

You could then enter COMPILE on the command line, move the cursor on top of a data set name, and press the Enter key. If you define PF23 as COMPILE, you only have to position the cursor on the data set name and press PF23.

Adding point-and-shoot commands

If you do not point to the data set name, ISPF Productivity Tool passes the slash instead. Your CLIST or REXX exec should inspect the passed parameter, and if it is a slash, issue an error message or prompt the user for input.

Note: Each user may specify such TSO commands or CLIST executions in his private ISPF Productivity Tool TSO shell permanent command table. Such commands may be used for point-and-shoot by specifying a main command TSO <n> (where <n> is the permanent command sequence number) or any of the command shortcuts EX1 to EX9.

Action fields

Action fields are similar to the ISPF point-and-shoot fields, although ISPF Productivity Tool does not highlight these fields to avoid panel clutter. For more information see "The point-and-shoot interface of OLIST" on page 23 and "The point-and-shoot interface of MSL" on page 25.

Function-oriented action bar

The action bar (shown below) is the area at the top of an ISPF panel that contains actions available on that panel. ISPF Productivity Tool enhances the ISPF action bar by including additional pull-down options. If you are a more experienced user, you can hide the action bar to conserve panel space.

For the major ISPF functions, action bars are organized to look like Windows®. The action bar reflects commands for the specific panel you are looking at. For example, the action bar on an OLIST panel looks like this:

Figure 4. The action bar on the OLIST

```
   File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
 ------------------------------------------------------------------------------
 -IPT- OLIST (B) ----------- Objects List --------------------- Row 1 to 3 of 3
```

If you select the File option, a pull-down menu is displayed:

```
   File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
                              --------------------------------------------
 __  1. Open ...             List -------------------- Row 1 to 3 of 3
 __  2. Save                                          SCROLL ===> CSR
     3. Save as ...          ILLVOL  UTIL     UPDATE   CUT     FLIP
     4. Export ...           or reference list)
     5. Cancel
     6. --------------       mes / Objects                    Class
     7. Print file ...       ----------------------------------- -------
     8. Print OLIST          25 INT580 TEST580 RLSE580 ASM      ISPF
     9. Release grouped printouts  90.ASM'                      PDS
    10. Purge grouped printouts    580.FILE'                    VSAM
    11. ----------------------     ---- END OF LIST ----------------
    12. Print options
    13. Exit
```

When you choose a pull-down item with an ellipsis (...), a pop-up window is displayed. For example, selecting **Export...** displays the Export OLIST pop-up window:

Figure 5. An example pop-up window

```
   File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
 -                         Export Object List (MYLIST)                       --
 -                                                            -IPT-    | 3
 C │  Command ===>
 H │
 O │  Current LIST:MYLIST
 T │  Export to dataset ===>
 C │
 -                                                                     --
           Replace  ===> N (N=No, Y=Yes - replace existing member)

           Press ENTER to proceed or the END key to cancel
```

The pop-up window prompts you to enter required information and to confirm any requested action.

The ISPF Productivity Tool Action Bar and the pop-up windows let you access advanced functions without having to learn command names or parameters.

The object list (OLIST)

OLIST is the ISPF Productivity Tool object list. It is similar to DSLIST (option 3.4), but with support for additional types of objects (not just plain data sets) as well as additional commands to act upon each object. In its simplest form, OLIST contains only data sets, and is used instead of DSLIST to gain access to new commands.

OLISTS have two main types, temporary OLISTs and permanent OLISTs.

Temporary OLISTs are invoked from the DSLIST Entry Panel (where you can select between DSLIST and OLIST), or when you specify a data set with wildcards when you invoke BROWSE, EDIT, or VIEW.

If you enter OLIST with no parameters, the last permanent OLIST that you invoked is displayed.

Similar to DSLIST, the list of data sets is built ad-hoc to match a generic data set specification (DSNAME with wildcards). This list is created from the catalog, a disk volume, or other sources.

Permanent OLISTs differ from temporary OLISTs in the following ways:
- They are given a name and an optional description.
- They are automatically saved across sessions.
- They can be recalled at any time from any panel.

You invoke this type of OLIST:
- From the DSLIST Entry Panel.
- From a special option on the main menu.
- By entering the OLIST command on the command line of any panel.

You can maintain as many OLISTs as you wish, switch among OLISTs instantly, and configure OLISTs to be shared among multiple users. You would typically use different OLISTs for different projects or products you maintain and support. As

The object list (OLIST)

you can place different object classes in OLISTs, you will find it useful to recall an OLIST you have not accessed in some time and see every object you need for a particular project.

Note: All of the above OLIST functionality can be invoked from any panel via the OLIST main command and its various special command shortcuts: O*, O/, OH, OL, OL*, OL/, OLDD, OLB, OLBK, OLC, OLE, OLPDSE, OLG, OLH, OLI, OLM, OLP, OLS, OLSH, OLT, OLV, OLVS, OLZ.

A typical OLIST panel is illustrated below:

Figure 6. An OLIST panel

```
   File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
------------------------------------------------------------------------------
-IPT- OLIST (B) ----------- OLIST Object Examples ---------- Row 1 to 17 of 17
Command    ===>                                          SCROLL ===> CSR
Hotbar: REFRESH  FLIP     CLRVOL   FILLVOL  VALIDATE CUT      OPRINT   SET
Open list  ===> SAMPLE   (or BLANK for reference list)
TSO PARMS  ===>
Command    Member   Numbr Data Set Names / Objects                   Class
--------- -------- ----- ---------------------------------------------- -------
                  1 'INTT025.IPT.JCL'
                  2 SPFE.CNTL
          *ZAP*    3 SPFE.CNTL
                  4 'SPFE.DEVI025.ASM'                              PDS
                  5 !--The following are special objects types---- ------
                  6 =SPFE DEVI025 INT580 TEST580 RLSE580 ASM       ISPF
                  7 <SPFE.DEVI925.ASM                              SCLM
                  8 'SPFE*V5R8*PLIB'                               LIST
                  9 /samples/comics.lst                            ZUNIX
                 10 )/samples/compile.c+                           OE
                 11 >ACCOUNT.DBFILE                                USER
                 12 -ACCOUNT.TABLE                                 DB2
                 13 "C:\TEMP1\MSG.TXT"                             PC
                 14 'IMS.RLDSP.I91A(-2)'                           SEQ
                 15 +LISTDS 'SYS1.MACLIB'                          CMD
                 16 :LISTS LINKLIST                                OLIST
                 17 :LISTV SYS*                                    OLIST
```

Both permanent and temporary OLISTs provide powerful features:

- You can populate the OLIST from the catalog, disk volume, allocated data sets, migrated data sets, GDG data sets, system lists, and multiple volumes.
- You can type in object names.
- Every object class visible in OLISTs is supported by ISPF Productivity Tool. In native ISPF DSLIST, some object classes are not shown (for example, PC file names), and of the shown objects classes, some are not supported (for example, VSAM files).
- The multiple object class support ISPF Productivity Tool provides lets you keep the names of objects in the OLIST and perform actions on these objects. The multiple object class support makes it convenient to organize work around projects and use OLIST as the launch pad for your work.
- OLISTs can be annotated with comments for reference purposes.
- OLISTs can be edited in full-screen. Every change you make on the panel is preserved, and you can even invoke the ISPF editor to edit the OLIST.
- Information contained in OLISTs can be exported to other data sets. OLISTs support the enhanced CUT and PASTE capabilities to allow passing information across OLISTs and into an edited file.

- OLISTs provide powerful search capabilities. You can search for data sets across multiple disks, for members across multiple libraries, and for text within data sets.
- An OLIST can include the same data set name more than once, each with a different member name, member name pattern, or volume. Typically, these are used to provide different views or ways of accessing the same object.
- OLISTs support system managed storage (SMS). SMS may dynamically move data sets across volumes since permanent OLISTs are preserved across sessions. OLISTs provide convenient ways to clear and refill the volume associated with a data set. A special command synchronizes information in the OLIST against the catalog.
- OLISTs can contain entries with generic data set names (names with wildcards). You can issue the DSLIST command separately on each entry. As permanent OLISTs are preserved across sessions, these entries provide a convenient method to invoke DSLIST on commonly used levels. You can also drill-down to these generic names, getting a real-time OLIST view.
- OLISTs support fully qualified z/OS UNIX file names of up to 1023 characters. The file name is displayed in a shortened form, appended by a "+". However, if you select this file, the full name may be specified in the z/OS UNIX Object Name Verification panel.
- OLISTs provide an enhanced user interface which features:
  - An Action Bar that is organized to provide easy access to powerful commands.
  - The OLIST entries are numbered to allow selection of objects by numbers or by point-and-shoot.
  - OLIST lines that can be excluded without showing separator lines.
  - Many useful Action Fields (point-and shoot extensions).

Managing OLISTs

To manage your OLISTs at the main command line, enter OLIST * or its shortcut O*.

The Permanent Object Lists panel is displayed:

Figure 7. The Permanent Object Lists panel

```
 -IPT-                   Permanent Object Lists              Row 1 to 8 of 8
 Command    ===>                                          Scroll ===> CSR

 Your default OLIST is MYLIST
 Object lists saved in 'INTT125.PLIST.LIBRARY'

 Main commands:S=Select OLIST, L=Locate OLIST, QUIT, SORT, VALIDATE the list
 Line commands:D=Delete, DYN=Dynamic OLIST, IMP=Import, N=Next default, R=Rename
 Create a new OLIST by typing over an existing name.
 CMD NAME                DESCRIPTION              ENTRIES CREATED    UPDATED
 --- --------    --------------------------------  ------- -------- --------------
 ___   BOOKS                                          26 07/05/08 07/07/23 10:45
 ___   CICS                                            3 07/12/17 07/12/17 11:21
 ___   HFS                                            15 02/04/10 07/01/31 14:29
 ___   IPT                                            58 03/01/11 07/12/30 14:26
 ___   MYLIST     My Special List                     22 06/12/07 07/12/07 15:28
 ___   SA                                             34 01/04/09 07/07/24 10:42
 ___   SAMPLE     OLIST Object Examples               17 02/09/24 08/01/01 14:13
 ___   TESTLIST                                        5 07/03/08 07/03/08 12:52
       -------------- END OF LIST ---------------
```

This panel is where you can manage your OLISTs. The Main Line and Line command options available to you are displayed in the panel.

The description value is the value displayed as the heading (title) when you display an individual OLIST. You can include DBCS character strings in this description.

The VALIDATE command lets you automatically organize the list by removing any OLISTS from the reference list that have not been saved. When you enter VALIDATE (with no parameter), the next panel displayed is the list of updated OLISTS, showing only the OLISTS that have been saved:

```
-IPT-                    Permanent Object Lists              Row 1 to 7 of 7
Command    ===>                                              Scroll ===> CSR

Your default OLIST is MYLIST
Object lists saved in 'INTT125.PLIST.LIBRARY'

Main commands:S=Select OLIST, L=Locate OLIST, QUIT, SORT, VALIDATE the list
Line commands:D=Delete, DYN=Dynamic OLIST, IMP=Import, N=Next default, R=Rename
Create a new OLIST by typing over an existing name.
CMD NAME                 DESCRIPTION             ENTRIES CREATED    UPDATED
--- --------    -------------------------------- ------- -------- --------------
___    BOOKS                                          26 07/05/08 07/07/23 10:45
___    CICS                                            3 07/12/17 07/12/17 11:21
___    HFS                                            15 02/04/10 07/01/31 14:29
___    IPT                                            58 03/01/11 07/12/30 14:26
___    MYLIST      My Special List                    22 06/12/07 07/12/07 15:28
___    NEWLIST                                        34 01/04/09 07/07/24 10:42
___    SAMPLE      OLIST Object Examples              17 02/09/24 08/01/01 14:13
       -------------- END OF LIST ---------------


        IQIP1037 Reference list changes: 1 lists added, 2 removed
```

Additional objects supported by OLIST

OLISTs support all the object classes supported by ISPF Productivity Tool. In addition to the objects listed in Table 1 on page 11, OLIST supports the following:

Object class	Object identification	Example
Comments	Leading exclamation mark	! This is a comment
Dynamic OLIST (Invokes a nested 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 TSO commands	Leading plus sign	+LISTDS 'USER12.TEST.DATA' LABEL +RECEIVE +ISPEXEC SELECT PGM(MYPROG) PARM(A) +%MYTEST DSN(/)
Prompt TSO commands	Leading question mark	?LISTDS 'USER12.TEST.DATA' LABEL ?RECEIVE ?ISPEXEC SELECT PGM(MYPROG) PARM(A) ?%MYTEST DSN(/)

The point-and-shoot interface of OLIST

OLISTs support the extended point-and-shoot interface: action bars, hotbar, and action fields. The following panel illustrates a typical OLIST, with cursor-sensitive input fields bolded. The list of fields under the screen describes what happens when each field is clicked.

```
  File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
-------------------------------------------------------------------------------
-IPT- OLIST (B) ----------- My Special List ---------- "A" will display assist   A  B
Command   ===>                                           SCROLL ===> CSR         C
Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL     UPDATE   CUT     FLIP        D  E
Open list  ===> MYLIST   (or BLANK for reference list)
TSO PARMS  ===>
Command   Member   Numbr Data Set Names / Objects                     Class     F  G
--------- -------- ----- ---------------------------------------------- -------
                      1 !----------------- Personal libraries ------- ------
                      2 'INTT125.CLIST'
                      3 'INTT125.CNTL.JCL'
                      4 !----------------- CICS support ------------- ------
                      5 'CICS*V310*'                                   LIST
                      6 'CICS*V330*'                                   LIST         H
                      7 'CICS*V410*'                                   LIST
                      8 !----------------- SPIFFY support ----------- ------
                      9 =SPFE DEVI825 INT580 TEST580 RLSE580 ASM       ISPF
                     10 'SPFE*CSI'                                     LIST
                     11 <IQI.DEVI125.ASM                               SCLM
                        --------------- END OF LIST ----------------
```

Figure 8. Cursor-sensitive areas on the OLIST

OLIST (B) **A**
> Changes the current default cyclically through B for Browse, E for Edit, and V for View.

----------- My Special List ---------- **B**
> Displays a pop-up window where you can change the OLIST description. The description is saved across sessions.

Command **C**
> Displays the OLIST Command Assistance panel, which shows you the list of available commands. From this list you can display the details for an individual command.

Hotbar: **D**
> Edits the hotbar. In edit mode, you can enter any main command as a hotbar command.

OPRINT REFRESH CLRVOL FILLVOL UTIL UPDATE CUT FLIP **E**
> These are the current hotbar commands. Clicking a command performs it.

Data Set Names / Objects **F**
> Sorts all data set names or objects in ascending order.

Class **G**
> Toggles the column contents to show either the Volume or the Class.

'CICS*V330*' **H**
> Selects the data set or object, using the default action (BROWSE, EDIT, or VIEW) selected. Applicable to each list item.

View main and line commands (Assist)

You can display the available OLIST main and line commands by clicking the
"Command" Action Field or by entering the ASSIST command (Assist or A). The
following is an OLIST panel with the commands displayed:

```
-IPT-                    OLIST Command Assistance
Cmd ====>

   For more details, point cursor at selected command and press ENTER
   Enter END or CANCEL to exit
   While reviewing an ASSIST example you may enter an OLIST command,
     press ENTER, and be prompted with command over the OLIST display.


---------------------- MAIN Commands ------------------------------
ASSIST    #f-#l    CANCEL    CLEARVOL CMDPARMS CUT       DEFAULT  END
EXCLUDE   EXPORT   FILLVOL   FILTER   FIND     FINDTEXT FLIP     LEVEL
LISTALOC  LISTBASE LISTBOOK  LISTCAT  LISTGDG  LISTHIST LISTMIGR LISTMULT
LISTPAGE  LISTPDSE LISTSHLF  LISTSMP  LISTSYS  LISTTAPE LISTVSAM LISTVTOC
LOCATE    MEMFIND  OPEN      OPRINT   PASTE    POPULATE QUIT     REFRESH
RELEASE   RESET    RFIND     RIGHT    SAVE     SET      SHOWCMD  SHOWMIG
SHOWTYPE  SHOWVOL  SORT      TITLE    UPDATE   UTIL     VALIDATE


---------------------- LINE Commands ------------------------------
/         /D /DD   /I        /R       /X /XX   =        ?<Cmd>   %<Exec>
ALLOCATE  BF       BROWSE    CATALOG  COMPRESS COPY     COPYALL  DELETE
DSLIST    EDIT     EF        EMPTY    EXPDIR   FREE     HDELETE  HLIST
INFO      LISTBASE LISTBOOK  LISTCAT  LISTGDG  LISTMIGR LISTSHLF LISTSMP
LISTTAPE  LISTVTOC MAPPDS    MOVE     MOVEALL  OLIST    PRINT    RENAME
SELECT    SUBMIT   UNCATALO  VF       VIEW     XFER     <other>
```

Figure 9. OLIST Command Assistance panel

The enhanced Member Selection List (MSL)

When you work with standard (PDS and PDSE) libraries, ISPF Productivity Tool
provides a Member Selection List (MSL) that supports nearly every function on
one or more selected members. You no longer need to navigate from panel to panel
of ISPF to accomplish a variety of tasks on a single library. MSL is automatically
invoked by BROWSE, EDIT, VIEW, DSLIST, and OLIST. MSL is an enhanced
version of ISPF's Member List and supports the commands supported by different
ISPF Member List utilities.

MSL provides several useful features:

- Tailor the display. Several commands let you tailor the Member List. When you
  tailor the MSL, it includes only the members you want in the order you want
  them. For example, you can:
  - FILTER on one or several ISPF statistic fields (including load module
    statistics) using wildcards.
  - EXCLUDE members by member name.
  - FLIP between the excluded and included member display.
  - Use GLOBAL FIND to exclude members that do not contain the searched
    text.
  - Tag members, and use the tagging for filtering.
  - SORT on one or several ISPF statistic fields (including load module attributes)
    in either ascending or descending order, using patterns.
- Combine multiple utilities into a single common interface Member List. Whether
  the Member List is started by BROWSE, EDIT, or VIEW, all of the MSL
  commands are available (BROWSE, COPY, DELETE, EDIT, MOVE, RENAME,
  VIEW, STATS-RESET, SUBMIT, and TSO commands, among others).

- Text searching capabilities. You can locate members by context and perform global find operations. The results can be used to locate members, to filter the Member List for only members containing specific text, and to display found text along the member names.

- GLOBAL EDIT. MSL also provides built-in GLOBAL EDIT which supports multiple commands using standard edit syntax. You can even create complex macros. Changes can be performed automatically, or you can request a prompt panel before changes are saved. Using the concatenation hierarchy, you can SAVE changes in a separate library, leaving the original members intact.

- Provides immediate access to other libraries via library switching from within the Member List. You can change to another library by changing the first, middle, or last qualifier (level) of the library. You can switch to another volume, or pick a library from the list of the recently referenced data sets.

- Preview windows display member contents within a window on the Member List. You can preview specific members or automatically preview located members or members containing searches for text.

- Provide integrated SCLM support (automatic check-out, lock management, promotion, and other SCLM functions).

- Reduce the number of I/O operations. Many built-in functions substitute utilities that would require invocation of separate utilities.

- Issue multiple line commands and commands on multiple members using extended patterns. For example, you can move all members ending in ACCT to library 2 by issuing the main command `M *ACCT 2`.

View main and line commands (Assist)

You can display the available MSL main and line commands by entering the ASSIST command (`Assist` or `A`). The following is an MSL panel with the commands displayed:

```
 -IPT--BROWSE L1---- NEILBL.TEST.PDS -----------------------ROW 00001 OF 00134
  COMMAND  ===>                                             SCROLL ===> PAGE
 HOTBAR: REFRESH  FLIP     GLOBAL   INFO     COMPRESS EXPDIR   TAILOR   TOTALS


    NAME    RENAME   LIB VV.MM CREATED      CHANGED      SIZE  INIT   MOD USERID
    IQIABOUT          +--------------------------------------------Assist --+
    IQIALI1           |           ---- -IPT- MSL MAIN COMMANDS ----
    IQIALI2           | Assist   ALIas    COMPress CONFirm  COPYALl DEFault
    IQIAS000          | DSName   EMPty    eXclude  EXIT     EXPDIR  FILter
    IQIAS001          | Find     FindText FLIP     Global   INFO    LIB
    IQIAS002          | LMAP     Locate   MAPpds   MOVEALl  PROject QUIT
    IQIAS003          | REFresh  RELease  RESet    RFind    SAVE    SCLm
    IQIAS004          | SCLMPARM SET      SORT     SSI      STATS   SUBmit
    IQIAS005          | TAG      TAILOR   TOTALS   TYPE     UNFilter USAGE
    IQIAS006          | VLF      WHERE    XFER
    IQIAS007          |          ---- -IPT- MSL LINE COMMANDS ----
    IQIAS008          | A (alias)  B (browse)  C (copy)    D (Delete) E (edit)
    IQIAS009          | H (where)  I (ISPEXEC) J (submit)  K (SCLM)   L (lmap)
    IQIAS020          | M (move)   P (print)   R (rename)  S (select) T (TSO)
    IQIAS021          | V (view)   W (preview) X (exclude) Z(stats)
    IQIAS022          | = (repeat) % (CLIST/REXX call)
    IQIAS023          |  Use "A <cmd_name>" to display details window.         |
```

Figure 10. MSL Command Assistance panel

The point-and-shoot interface of MSL

The following figure shows a typical MSL panel. The list after the screen describes what happens when the corresponding cursor-sensitive field is clicked:

The point-and-shoot interface of MSL

```
   File  Display  Library  SCLM  Settings  Menu  Utilities  Test  Help  Exit
   -------------------------------------------------------------------------------
  -IPT--EDIT L1------ SPFE.IBM.JCL --------------------------ROW 00001 OF 00008  A  B
   COMMAND  ===>                                               SCROLL ===> PAGE
  HOTBAR: REFRESH  FLIP     GLOBAL    INFO     COMPRESS EXPDIR  TAILOR   TOTALS
  *FILTER*EXCLUDE*SORT* 20 HIDDEN                                            C  D
     NAME     RENAME   LIB VV.MM CREATED    CHANGED       SIZE  INIT   MOD USERID  E
     IQIJLIST          1 01.02 06/08/21 06/08/21 17:07     53    64     0 INTT025
     IQIREJEC          1 01.11 05/10/17 06/12/19 16:21     70    70     0 INTT025
     IQIJACC           1 01.00 05/09/21 05/09/21 11:08     60    60     0 USER3
     IQIJALLO          1 01.02 05/08/16 05/09/21 08:50    208   208     0 USER3
     IQIJAPP           1 01.97 05/08/16 06/12/22 13:48    937    64     0 INTT025
     IQIJDDDF          1 01.02 05/08/16 05/09/21 08:51    246   245     0 USER3
     IQIJRECV          1 01.93 05/08/16 06/12/22 13:47    970    70     0 INTT025
     IQIRESTR          1 01.41 05/08/16 05/11/14 23:04     64    64     0 USER2
     --END--
```

Figure 11. Cursor-sensitive areas on the MSL

EDIT L1 A

Changes the current default cyclically through BROWSE, EDIT, and VIEW. The "L1" shows the nesting level.

------ SPFE.IBM.JCL -------------------------- B

Displays a nested OLIST History display, where you can review or process recently accessed data sets. When you exit this temporary OLIST (PF3), you return to the MSL.

*FILTER*EXCLUDE*SORT* C

Tailoring messages. Shows the conditions that have been applied to the MSL member list. By clicking a condition, you remove it. For example, if you click *FILTER*, you remove the filter applied to the MSL.

20 HIDDEN D

The number of members not currently in the displayed list. (This field is for information only. No action happens if you click it.)

NAME RENAME LIB VV.MM CREATED CHANGED SIZE INIT MOD USERID
E   Clicking a column heading sorts the list by the values in that column, and adds "*SORT*" to the tailoring messages. The current sort column heading is highlighted. To sort in the default order (NAME), click the NAME field, or click the *SORT* tailoring message.

Drill-down navigation

ISPF Productivity Tool lets you access resources without having to know the exact name of those resources. For example, in the BROWSE, EDIT, and VIEW prompt panels, instead of entering the data set name, you can enter a generic name (a name with wildcards). ISPF Productivity Tool automatically opens a temporary OLIST where you can select the data set to process.

Similarly, on the same panel that you can specify a VOLSER, you can specify wildcards. ISPF Productivity Tool displays a Volume Selection List and let you select the volume to use.

You can specify a DSN pattern in OLIST that displays the Volume Selection List. A DSN pattern specified with a volume pattern entry (a data set that has a wildcard in it), opens a temporary OLIST with all data sets matching the DSN pattern which resides on the volumes that match the volume pattern.

You can specify volume patterns in the DSLIST (option 3.4) Entry Panel. As DSLIST provides volume specific functions (like VTOC display), being able to chose a volume from a list is a great convenience.

The ability to specify wildcards on both the data set and the volume fields provides the means to search for a data set. If you are uncertain of the exact data set name or where it resides, you can enter an asterisk followed by a part of the name and another asterisk. In the volume field, you can enter an asterisk. ISPF Productivity Tool searches for all data sets matching the pattern on all the disks accessible to you depending on existing security settings.

Enhanced Data Set List (DSLIST)

ISPF Productivity Tool enhances the DSLIST (option 3.4) to provide access to the standard DSLIST display as well as the OLISTs and other enhancements.

New options on the DSLIST entry panel

The DSLIST entry panel is shown here:

```
   Menu  Reflist  Refmode  Special-lists  Utilities  Settings  Test  Help  Exit
 -IPT- ------------------------ Data Set List Utility ------------------------
 Command ===>
    DS - Display dataset list              P  - Print data set list
 blank - Temporary Object List             PV - Print VTOC information
    PL - Permanent Object List             V  - Display VTOC information
   GDG - Display Generation Datasets       XV - Extended VTOC & space summary
   SET - Set DSLIST defaults               SP - Special data set lists


 Enter an option or select it by placing cursor on the option code
 Specify parameters below:
    Object List   ===> _____            (* for selection list, = for MYLIST)
    Dsname Level  ===> _____  More? ===> N
    Volume Serial ===> _____            (Leave BLANK for catalog scan,
                                          volser or pattern for VTOC scan)
 Data set list options:
    Initial View  ===> 1 :  1. Volume  2. Space   3. Attrib   4. Total
    Enter "/" to select option:
    / Confirm Data Set Delete      / Additional Dataset Qualifiers
    / Display Catalog Name         / Display Total Tracks
 When the data set list is displayed, enter the "/" line command for a list of
 the available line commands. TSO commands, CLISTs, or REXX execs are supported.
```

Figure 12. DSLIST entry panel

There are several enhancements:

- An XV (Extended VTOC & space summary) command displays detailed information about a volume, along with a space usage graphical bar. You can type over the volume serial to switch to another volume, and immediately see the graphical bar and the detailed information change.
- The GDG (Display Generation Data sets) command opens a temporary OLIST listing all the existing generations of a GDG base, showing both the relative generation number and the physical data set name. You can use all the OLIST commands on these data sets, including pattern matching. See Appendix C, "Patterns," on page 215 for instructions on how to apply pattern matching.
- The More? prompt following the Dsname Level input field opens a pop-up window allowing you to specify multiple DSNAME levels and VOLSERs. ISPF Productivity Tool responds by opening a temporary OLIST containing the data sets that match the multiple criteria you specify. It is typically used to create a list of different catalog levels.

- The Action Bar contains a new option: Special-lists. When selected, ISPF Productivity Tool presents options that let you open OLISTs containing data sets from special sources, like the allocated data sets, the migrated data sets, and other sources.
- Extended VTOC Display & Space Summary

The XV command displays extended VTOC information. If you specify all volumes by entering * for volume serial, a Space Summary Volume Selection list is displayed:

You can use pattern matching wild cards to narrow down the initial list.

```
-IPT- ----------------- VOLUME SELECTION LIST -------------- Row 1 to 18 of 19
COMMAND ===>                                                SCROLL ===> CSR
Main commands: DOWN, END, L=Locate, S=Select, UP
Line commands: S=Select volume to process
IQIU622 Enter volume to be used with the data set list
CMD VOLUME TYPE   ATTRIBUTES       OPEN FILES      DYNAMIC UCB
___ SUPPTA 3390   PRIVATE  SHARED       0
___ SUPPTB 3390   PRIVATE  SHARED       0
___ SUPPTC 3390   PRIVATE  SHARED       0
___ SUPPTD 3390   PRIVATE  SHARED       0
___ SUPPTE 3390   PRIVATE  SHARED       1
___ SUPPTF 3390   PRIVATE  SHARED       0
___ SUPPT1 3390   PRIVATE  SHARED       0
___ SUPPT2 3390   PRIVATE  SHARED       0
___ SUPPT3 3390   PRIVATE  SHARED       0
___ SUPPT4 3390   PRIVATE  SHARED       0
___ SUPPT5 3390   PRIVATE  SHARED       0
___ SUPPT6 3390   PRIVATE  SHARED       0
___ SUPPT7 3390   PRIVATE  SHARED       0
___ SUPPT8 3390   PRIVATE  SHARED       0
___ SUPP
___ SUPT  | IQIU622 Enter volume to be used with the data set list |
___ SUPT  
___ SUPT03 3390   PRIVATE  SHARED       0
```

Figure 13. Volume Selection List

Space Summary Volume Selection List

If you use the XV command and use a pattern to specify a volume (VOLSER with wildcards), ISPF Productivity Tool displays a Space Summary Volume Selection List:

```
-IPT- --------------- SPACE SUMMARY VOLUME SELECTION LIST -- Row 1 to 15 of 19
COMMAND ===>                                             SCROLL ===> CSR

Main commands: DOWN, END, L=Locate, S=Select, UP, SORT V|T|%|F|L|S|D|A
Line commands: TP=OLIST, DS=DSLIST, S=VTOC information, V=VTOC summary, =
 LEVEL  ===>                                             (For TP, DS commands)

                   %... ...FREE SPACE... .LARGEST EXTENT. *=EAV
CMD VOLUME TYPE     FREE    CYLS    TRKS     CYLS    TRKS SMS DYN ATTRIBUTES
    SUPPTA 3390      36    1204   18086      388    5820  Y      PRIV SHAR
    SUPPTB 3390      61    2041   30672      927   13905  Y      PRIV SHAR
    SUPPTC 3390      31    1043   15715      644    9666  Y      PRIV SHAR
    SUPPTD 3390      48    1603   24095      523    7859  Y      PRIV SHAR
    SUPPTE 3390      65    2157   32462      619    9285  Y      PRIV SHAR
    SUPPTF 3390      44    1481   22281     1105   16588  Y      PRIV SHAR
    SUPPT1 3390      39    1314   19751      742   11130  Y      PRIV SHAR
    SUPPT2 3390      31    1023   15411      606    9090  Y      PRIV SHAR
    SUPPT3 3390      46    1537   23109      494    7424  Y      PRIV SHAR
    SUPPT4 3390      48    1593   23944     1232   18484  Y      PRIV SHAR
    SUPPT5 3390      39    1299   19532      497    7455  Y      PRIV SHAR
    SUPPT6 3390      67    2242   33654     1855   27834  Y      PRIV SHAR
    SUPPT7 3390      86    2876   43215     1579   23685  Y      PRIV SHAR
    SUPPT8 3390      40    1324   19877      535    8025  Y      PRIV SHAR
    SUPPT9 3390      38    1271   19107      802   12030  Y      PRIV SHAR
```

Figure 14. Space Summary Volume Selection List

You can select specific volumes for extended VTOC information (using the S line command), open a DSLIST (the DS line command) or open a temporary OLIST (the TP line command) of data sets matching the data set level appearing on top of the panel for the selected volume.

The Space Summary Volume Selection List is a convenient platform to open data set lists (DSLIST or OLIST) for similar levels on different volumes.

If you specify a particular volume by entering a volume name at Volume Serial (VOLSER) or by Point-and-Shoot from the Space Summary Volume Selection list, the Extended VTOC Information for Volume Admin panel is displayed:

```
-IPT- EXTENDED VTOC INFORMATION FOR VOLUME SUPPTB -----------------------------
COMMAND ===>

VOLUME  ===> SUPPTB (Change for another volume)

   +---- VOLUME DATA ----+----- VTOC DATA -----+----- FREE SPACE DATA ----+
   | TRACKS:      50070 | TRACKS:         90 |                TRACKS    CYLS |
   | %USED:          48 | %USED:           0 | SIZE:       26025    1733 |
   | TRKS/CYLS:      15 | FREE DSCBS:    4478 | LARGEST:    25290    1686 |
   | UNIT TYPE:    3390 |                     |                           |
   | CYLINDERS:    3338 | VTOC EXTENTS:     1 | EXTENTS:       12         |
   | TRACK LEN:   58786 | DSCBS/TRK:       50 |                           |
   | UCB ADDR.:    8538 | INDEX VTOC:  ACTIVE |                           |
   | SHARED:        YES | VIRs:           308 |                           |
   | ATTRIBUTES: PRIVATE |                    |                           |
   | OPEN FILES:      0 |                     |                           |
   | DEFRAG IX:      16 |                     |                           |
   | SMS:    INIT STATUS |                    |                           |
   +--------------------+--------------------+-------------------------+
    SPACE: ....v....10...v....20...v....30...v....40...v....50...v....60%
    USAGE: --------------------------------------------> 48%

Press ENTER to refresh, END key to exit.
```

Figure 15. Extended VTOC Information for Volume Admin panel

You can type over the volume name to select a different volume.

The GDG display

ISPF Productivity Tool treats a Generation Data Group (GDG) the same as any
other data set (for example, VSAM or LLIB) so you can use any ISPF Productivity
Tool capability, including all OLIST and MSL capabilities and pattern matching. See
Appendix C, "Patterns," on page 215 for instructions on how to apply pattern
matching.

The special lists

When you select the **Special-lists** option on the Action Bar ISPF Productivity Tool
provides a pull-down menu with the following options:

```
   Menu  Reflist  Refmode  Special-lists  Utilities  Settings  Test  Help  Exit
  -  ┌──────────── Populate into OLIST ─────────────┐   ------------------------
  C  │ Option ===>                        -IPT-      │
  b  │ Select one of the following options:         │   t data set list
     │      1 - Allocations...                      │   t VTOC information
     │      2 - Catalog...                           │   lay VTOC information
     │      3 - VTOC ...                             │   nded VTOC & space summary
     │      4 - Multiple Levels...                   │
  E  │      5 - History                              │    option code
  S  │      6 - Migrated files...                    │
     │      7 - SYSTEM files...                      │   tion list, = for IPT)
     │      8 - GDG (Generation Data-Groups)...      │             More? ===> N
     │      9 - GDS (Generation Data-Sets)...        │    for catalog scan,
     │     10 - TAPE files...                        │   attern for VTOC scan)
  D  │     11 - VSAM clusters...                     │
     │     12 - PAGE files...                        │   ttrib   4. Total
     │     13 - Paste (from clipboard)               │
     │     14 - BOOKMANAGER books...                 │   t Qualifiers
     │     15 - BOOKMANAGER bookshelves...           │   cks
  W  │     16 - Paste (from clipboard)               │   ne command for a list of
     │                                               │   elete
     │ Press Enter to process or END to cancel       │    Qualifiers
     └───────────────────────────────────────────────┘   me
```

Figure 16. Special Lists pull-down menu

The available choices provide access to OLISTs populated from different sources.
These lists are often used to diagnose problems and to find accessed resources. For
example, on the OLIST created from data sets allocated to the ISPPLIB DDNAME
(the ISPF panel library), you can issue the MEMFIND command to find where
ISPF locates a panel within the concatenated list. Similarly, you can create an
OLIST of migrated data sets of a specific volume pattern, cut the list, start an edit
session, paste the data set names into the edit area, and create JCL to recall all of
them at once. If you disable the DSLIST Action Bar, ISPF Productivity Tool places
the special list options on the panel as additional commands.

Customizable user interface

You can customize the ISPF Productivity Tool user interface to fit your needs. For
example, you can hide the Action Bar to gain two more lines to display
information. You can also hide the Hotbar line to gain another line. On ISPF
Productivity Tool panels, you can choose leader dots or arrows as the standard
prefix for input fields. You can select the leading character in the Member Selection
List line command area, along with other interface options.

To use the SET command from any command line (except when you are in OLIST
or MSL), enter IPT SET, shortcut ISET. In OLIST or MSL, enter SET. The SETTING
IPT DEFAULTS panel is displayed.

Options you set via the SET commands are remembered across sessions. When you invoke the SET command the following panel is displayed:

```
-IPT- --------------------Setting IBMIPT Defaults-----------------------------
COMMAND ===>
Select options by number, name, with cursor selection, or with line commands:
Web link: http://www.ibm.com/software/awdtools/ispfproductivitytool
 IBMIPT is running under ISPF version 6.0

 _  A - ALL       - Select all the below displayed options
 _  M - MSL       - Member Selection List options
 _  O - OLIST     - Object list options
 _  G - GLOBAL    - Global edit and Findtext options
 _  P - PRINT     - Print options
 _  D - DSLIST    - DSLIST options
 _  T - TSO       - TSO shell options
 _  E - EDIT      - Edit, Browse and View options
 _  I - INTERFACE - Specify user interface options
 _  S - SCLM      - SCLM options
 _  N - DIAGNOSE  - Diagnose ISPF errors
 _  L - LIBRARY   - Persistent table library options
 _  B - BOOKMGR   - BookManager interface options
 _
   Make your selection and press the ENTER key or press the END key to exit
```

Figure 17. Setting IBMIPT Defaults panel

You can select any of the options, or the ALL option to inspect all options. As an example, the following panel is displayed when you select the INTERFACE options:

Figure 18. User Interface Options

```
 -IPT- ---------------------User Interface Options-----------------------------
 COMMAND ===>

    +------------------------------------------------------------------+
    | Note: Changes specified on this screen may not affect all of the |
    |       panels that are currently displayed in nested applications.|
    +------------------------------------------------------------------+

 Verify or specify the following options: (Enter Y for Yes, N for No):

   Activate HOTBARS                      ===> Y

   Activate Action Bars                  ===> Y
     If Action Bars are active:
       Display Action Bars in Browse, Edit, View    ===> Y
       Display Action Bars in Member Selection List ===> Y
       Display Action Bars in the object list       ===> Y
       Display Action Bars in DSLIST                ===> Y

   Press ENTER for options menu, END to exit, CANCEL for installation defaults.
```

Refer to Appendix B, "Controlling ISPF Productivity Tool processing (the SET command)," on page 209 for more details about the ISPF Productivity Tool Set options.

The enhanced handling of BROWSE, EDIT, and VIEW commands

You can invoke the BROWSE, EDIT, and VIEW commands (or their shortcuts BR, ED and VI) at any time, from any panel. If you are already in MSL BROWSE, EDIT, and VIEW, these commands initiate a nested level indicated in the left-hand corner of the top line of the panel. When you finish the current level, you are returned to the previous level, exactly where you were, so that you never lose your place in your work.

You can define PF keys as BROWSE, EDIT, or VIEW because they are general commands that are invoked by pressing the key. If the cursor is on the command line, the appropriate Entry Panel is displayed.

The BROWSE, EDIT, and VIEW commands accept the name of the data set or object to process, bypassing the Entry Panel.

Using the Point-and-Shoot Interface, you can place the cursor on the name of an object anywhere on any panel, and invoke BROWSE, EDIT, or VIEW on the object simply by pressing the PF key you have defined. This lets you "zoom in" on an object and "zoom out" again at will. For example, if you're browsing a member containing JCL that references a data set by name, you can edit that data set by moving the cursor to that name and pressing a PF key defined as EDIT.

BROWSE, EDIT, and VIEW accept different ISPF Productivity Tool objects. For example, by entering EDIT 'TEST.*.COBOL', you display an OLIST for data sets that match the specified pattern (with EDIT being the default action for the OLIST). Similarly, you can enter BROWSE 'TAXES.TEST.MASTER' (which we assume here to be a VSAM file) and have your VSAM file editor process the selected file automatically.

The BROWSE, EDIT, and VIEW enhanced Entry Panels are similar in design. An enhanced VIEW Entry Panel is shown below:

```
   Menu  Reflist  Refmode  Utilities  SCLM  Settings  Test  Help  Exit
  -----------------------------------------------------------------------------
  -IPT--L1                VIEW - ENTRY PANEL
  COMMAND ===>
  HOTBAR: @H       @L        TAILOR    SORT CHA


  ISPF Project  ==> INTT125       Alternate SCLM project   ==>
       Group    ==>           ==>           ==>           ==>
       Type     ==>
       Member   ==>           (Blank or pattern for selection list)
  Other data set, VSAM file, or z/OS UNIX file:
  @H for History-List or @L for 'SPFE.RLSE5100.ASM'
  Name/Pattern  ==> 'SPFE.RLSE5100.ASM'                              +
  Volume serial ==>           (Optional VOLSER or pattern for selection list)
  Password      ==>           (If password protected)
  Default func. ==> V         (B=Browse, V=View, E=Edit, BF, EF, VF, or ?)
  Do TAILOR     ==> N         (Y=Yes, N=no, D=define commands)
  EDIT/VIEW parameters:              SCLM LOCK ==> YES (Yes, No)
  Initial Macro ==>                  Confirm Cancel/Move/Replace     ==> N (Y,N)
  Profile Name  ==>                  Action Bar in Edit/View         ==> N (Y,N)
  Format  Name  ==>                  Highlight coloring in Edit/View ==> Y (Y,N)
  Record Length ==>                  Exclusive access of viewed file ==> Y (Y,N)
  Preserve VB record length ==> N  Mixed Mode (NLS DBCS char. set) ==> N (Y,N)
```

Figure 19. Enhanced VIEW Entry Panel

The enhanced handling of BROWSE, EDIT, and VIEW commands

And here is an enhanced Browse panel:

```
  Menu  Reflist  Refmode  Utilities  SCLM  Settings  Test  Help  Exit
-------------------------------------------------------------------------------
-IPT--L1               BROWSE - ENTRY PANEL
COMMAND ===>
HOTBAR: @H        @L        TAILOR    SORT CHA


ISPF Project  ==> INTT125     Alternate SCLM project   ==>
     Group    ==>             ==>            ==>            ==>
     Type     ==>
     Member   ==>          (Blank or pattern for selection list)
Other data set, VSAM file, or z/OS UNIX file:
@H for History-List or @L for 'SPFE.RLSE5100.ASM'
Name/Pattern  ==> 'SYS*PARM*'                                          +
Volume serial ==> CSYS*    (Optional VOLSER or pattern for selection list)
Password      ==>          (If password protected)
Default func. ==> B        (B=Browse, V=View, E=Edit, BF, EF, VF, or ?)
Do TAILOR     ==> N        (Y=Yes, N=no, D=define commands)
EDIT/VIEW parameters:          SCLM LOCK ==> YES (Yes, No)
Initial Macro ==>              Confirm Cancel/Move/Replace    ==> N (Y,N)
Profile Name  ==>              Action Bar in Edit/View        ==> N (Y,N)
Format  Name  ==>              Highlight coloring in Edit/View ==> Y (Y,N)
Record Length ==>              Exclusive access of viewed file ==> Y (Y,N)
Preserve VB record length ==> N  Mixed Mode (NLS DBCS char. set) ==> N (Y,N)
```

Figure 20. Enhanced BROWSE Entry Panel

There are several enhancements on this panel:

- Specify data sets and other objects in the fields under the **Other data set, ...** line. You can use @L for the last referenced data set, or @H for a list of referenced data sets.
- Specify wildcards in the **Volume serial** field. ISPF Productivity Tool displays a Volume Selection List where you can select the volume to access.

```
  File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
-------------------------------------------------------------------------------
-IPT- OLIST (B) ----------- SELECTED DATASETS ON CSYS* ------- Row 1 to 8 of 8
Command    ===>                                          SCROLL ===> CSR
Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL   UTIL      UPDATE   CUT    FLIP
                                                            *TEMPORARY LIST*
TSO PARMS  ===>
Command   Member   Numbr Data Set Names / Objects                    Volume
--------- -------- ----- --------------------------------------------- -------
                 1 'SYS1.PARMLIB'                                      CSYSA1
                 2 'SYS1.TCPPARMS'                                     CSYSA1
                 3 'SYS1.PARMLIB.RESTORE'                              CSYSG1
                 4 'SYS1.PARMLIB'                                      CSYSG1
                 5 'SYS1.TCPPARMS'                                     CSYSG1
                 6 'SYS1.PARMLIB.RESTORE'                              CSYSL1
                 7 'SYS1.PARMLIB'                                      CSYSL1
                 8 'SYS1.TCPPARMS'                                     CSYSL1
                 --------------- END OF LIST ----------------
```

Figure 21. The Volume Selection list

- Specify wildcards in the data set field, requesting an OLIST.
- Change the default action (among BROWSE, EDIT, and VIEW) to override the default implied when you invoked this panel, or you can explicitly invoke a data browser/editor (for example, VSAM browser/editor) on non-VSAM files using the BF, EF, or VF options.

- Hide or reveal the Action Bar lines in BROWSE, EDIT, or VIEW without affecting other panels. You can control other user-interface aspects including support of language-sensitive coloring in EDIT, display of cancel confirmation panels, and other options.
- Specify MSL tailoring (such as filters and sorting) to be performed before the Member List is displayed.
- Enter any MSL commands on the command line which executes automatically when the Member List is displayed. For example, by entering L ACT1 you can position member ACT1 on the top of the Member List display.
- You can enter a GDG format name ("<Dsn>(<Gen#>)") in the **Other data set** field, for example `'IMS.RLDSP.I91A(-2)'`.

Shared and exclusive VIEW

The ISPF VIEW function provides edit-like capabilities without the ability to SAVE the member. As you view a file, other users can also access the file, and modify it. The viewed version may not reflect the updated file. In ISPF Productivity Tool you now have two options: Shared VIEW and exclusive VIEW.

Shared View is ISPF's basic View function. It allows several users to work with the same file at the same time. Shared View does not ENQ on the file being viewed. Though this View disables the SAVE command, a user can still save via the REPLACE command by using the same name of the member being viewed as a parameter to the REPLACE command. The viewed member may not reflect the real member since other users may edit and change it while it is being viewed.

Shared VIEW does not pull down members edited from the ISPF concatenation list (PROJECT, GROUP, TYPE) in the same way EDIT does. If a member exists in the second library in the concatenated member list (indicated by 2 under the LIB column), it is viewed under LIB 2 while in EDIT it is ENQed and saved under the first library in the concatenation (LIB 1).

Exclusive VIEW does not allow other users to either EDIT or use exclusive VIEW on the viewed file (shared VIEW and BROWSE are still permitted). Exclusive VIEW also has a controlled save capability. When you use controlled save, a prompt panel is displayed, prompting you to override the default mode of discarding changes. Exclusive VIEW provides functionality similar to shared VIEW, but with enhanced integrity.

Your installation may configure ISPF Productivity Tool to support both VIEW modes, or enforce one of the two VIEW modes.

BROWSE, EDIT, and VIEW enhancements

ISPF Productivity Tool enhances EDIT and VIEW with several functions. For example, ISPF Productivity Tool automatically recognizes out-of-space conditions when trying to SAVE a member. ISPF Productivity Tool displays a confirmation panel, and upon approval proceeds to expand the library directory or compress the library as appropriate. Additionally, ISPF Productivity Tool detects redundant SAVE requests and bypass them.

ISPF Productivity Tool also enhances several EDIT and VIEW commands.

Note: If you want to invoke the alternate application for BROWSE, EDIT, or VIEW that was specified during setup, use BF, EF, or VF (instead of B, E, or V).

Enhanced CUT and PASTE

When customizing ISPF Productivity Tool, you can specify whether you want ISPF Productivity Tool CUT/PASTE or ISPF CUT/PASTE. The ISPF Productivity Tool CUT and PASTE commands provide these additional benefits:

- Supports up to 200 CUT/PASTE clipboards. Clipboards can be named or numbered. These clipboards can be edited, browsed, copied, saved, restored, and renamed.
- Ability to CUT excluded and non-excluded lines. You can CUT context-sensitive lines by combining the EXCLUDE and FIND commands with the CUT command.
- Both CUT and PASTE commands support the STAtus keyword to display the list of all existing clipboards. You may use this display to select a new or existing clipboard to CUT into or from which to PASTE.
- You can paste lines from different sources:
  - Previously cut lines.
  - Lines from another member.
  - Captured output of TSO commands.
  - Member names of a specified directory.
  - Contents of a previously cut OLIST.
- Before pasting, you can display the lines to be pasted, and select the lines you want to process. For example, when pasting the contents of another member, you can first display the lines of that member and select which lines you want to paste. This is more convenient than the regular COPY command where you have to remember line numbers.

You can paste lines from the different sources of CUT directly to the printer.

STATUS command

The STATUS command, available in EDIT and VIEW, provides information about the member directory entry and whether the member was saved. The information is displayed as message lines in the edit workspace.

If the member is numbered and has ISPF statistics, STATUS can display the lines changed at a particular modification level. ISPF Productivity Tool also provides SCLM statistics and accounting information for SCLM- controlled members.

Enhanced FIND and CHANGE support

RFIND and RCHANGE are remembered across different libraries and across BROWSE, EDIT, and VIEW. For integrity, the first time RCHANGE is performed in a member, ISPF Productivity Tool places the command on the command line to allow rejection, modification, or execution of the change command.

ISPF Productivity Tool propagates the text search command issued within the MSL into the BROWSE, EDIT, and VIEW. For example, after the following command within MSL:

```
FINDTEXT 'DATE'
```

The RFIND command in BROWSE positions the cursor on the first "DATE" string.

Data set history facility (@H)

When an input field requires a data set name, you can call up a panel displaying a selection list of the last 100 data sets you referenced. To do this, enter the symbol @H in place of the data set name. @H is similar to the ISPF REFLIST function, but provides these advantages:

- Simpler access. Enter @H instead of the data set and select the data set to use from the history list. There is no need for Action Bar or command input.
- The list is automatically stored in reversed-access order so that recently referenced data sets are on top. The date and access time are shown.
- You can type over a data set to change your selection, or add or change member names.
- The list preserves member names specified along with data set names.
- You can open an OLIST containing the history list by entering the command:

  OLIST @H

  or shortcuts OH and OLH.

  Thereafter, you can issue all the OLIST commands on the data sets listed.
- Directly invoke BROWSE, EDIT, or VIEW with the @H parameter, requesting display of the reference list rather than the standard Entry Panel.
- On any panel, directly specify the last data set referenced (that is, the first item on the Data Set History List) using the symbol @L (for "last"). You can use this symbol in any input field requiring a data set name, or in a command, like this:

  EDIT @L

You enter the @H symbol like this:

```
 -IPT-                         Data Set Utility
 Option ===>

     A Allocate new data set                C Catalog data set
     R Rename entire data set                U Uncatalog data set
     D Delete entire data set                S Short data set information
 blank Data set information                  V VSAM Utilities

 ISPF Library:
    Project  . . INTT125         Enter "/" to select option
    Group  . . . _____        /  Confirm Data Set Delete
    Type . . . . _____

 Other Partitioned, Sequential, VSAM Data Set or @H (history list):
    Data Set Name . . .  @H _____
    Volume Serial . . .  _____   (If not catalogued, required for option "C")

 Data Set Password  . . _____   (If password protected)
```

Figure 22. Entering @H on a Data Set Name field

By default, the items are listed in descending access order. If a pattern or a member name was specified, that information is included in the item.

```
 -IPT- ----------------------- DATA SET HISTORY ------------ Row 1 to 23 of 55
COMMAND ===>                                                  SCROLL ===> CSR

  To select a data set place the cursor on selected line and press ENTER or
  use the S line command. You can overtype a line to alter your selection.
  Use Find <string> (case sensitive) and RFind to search for an object name.
  Press the END key to exit without selection.

      DATA SET NAME                                            ACCESSED
  -  ---------------------------------------------------- --------------
      'IMS.V9RQ.OLP14'                                      08:59 07/02/05
      'IMS.V8R1.OLS04'                                      08:59 07/02/05
      'IMS.V8R1.OLP04'                                      08:59 07/02/05
      'IMS.V9R1.OLS04'                                      08:59 07/02/05
      'IMS.V9R1.OLP04'                                      08:59 07/02/05
      'IMS.V8RX.OLS04'                                      08:59 07/02/05
      'IMS.V8RS.OLS04'                                      08:59 07/02/05
      'IMS.V8RC.OLS04'                                      08:59 07/02/05
      'IMS.V8RC.OLP04'                                      08:59 07/02/05
      'IMS.V8RQ.OLS14'                                      08:59 07/02/05
      'IMS.V8RQ.OLP14'                                      08:59 07/02/05
      'IMS.V8RP.OLS14'                                      08:59 07/02/05
      'IMS.V8RP.OLP14'                                      08:59 07/02/05
      'IMS.VARG.OLS04'                                      08:59 07/02/05
      'IMS.VARG.OLP04'                                      08:59 07/02/05
      'IMS.V410.GENLIBA'                                    08:59 07/02/05
      'SYS1.AIATMAC'                                        08:59 07/02/05
      'SYS1.AHASMAC'                                        08:59 07/02/05
      'SYS1.AERBMAC1'                                       08:59 07/02/05
      'SYS1.ADFMAC1'                                        08:59 07/02/05
      'SYS1.ACUNMAC'                                        08:59 07/02/05
      'SYS1.ABDTMAC'                                        08:59 07/02/05
      'SYS1.AADFMAC1'                                       08:59 07/02/05
```

Figure 23. The Data Set History panel

To select an item, type S next to it and press Enter, or simply put your cursor on
the item and press Enter. Processing continues exactly as if you had typed the
information in the input field.

You can also modify the name of the data set while selecting it, changing the entire
data set name, or possibly adding or changing the member name.

You can use the Find and RFind commands to search for an object name.

If you know the name of the last accessed data set, you can use @L instead of @H
to select the last referenced data set, bypassing the history selection list.

Access data sets by DD name

In a way similar to how you select a data set from the history list by using the @H
symbol, you can specify a data set by an allocated DD name. For example, on the
ISPF library utility (option 3.1), you can specify the data set as the current ISPPLIB
like this:

Access data sets by DD name

```
   Menu  RefList  Utilities  Help
─────────────────────────────────────────────────────────────────
                          Library Utility
Option ===>

blank Display member list    I Data set information      B Browse member
   C Compress data set        S Short data set information D Delete member
   X Print index listing      E Edit member              R Rename member
   L Print entire data set    V View member              P Print member

                              Enter "/" to select option
ISPF Library:                 /  Confirm Member Delete
   Project . . . INTT125         Enhanced Member List
   Group . . . .      . . .        . . .        . . .
   Type  . . . .
   Member  . . .          (If B, D, E, P, R, V, or blank selected)
   New name  . .          (If R selected)

Other Partitioned or Sequential Data Set:
   Data Set Name . . . @DD.ISPPLIB_____
```

Specify a particular entry in the concatenation, like this:

```
Other Partitioned or Sequential Data Set:
   Data Set Name . . . @DD.ISPPLIB.#2_____
```

With the ISPF Productivity Tool general commands BROWSE, EDIT, and VIEW, you can specify a member, like this:

```
    BROWSE @DD.JCLLIB(JCL01)
```

or a pattern, like this:

```
    VIEW @DD.ACCTIN.#3(PAY*)
```

Enhanced TSO command support

ISPF Productivity Tool provides enhanced support of TSO commands (including a TSO Command Shell), the ability to repeat a previously executed command, and the ability to use point-and-shoot with TSO commands. Your installation can activate the ISPF Productivity Tool TSO shell instead of or along with the ISPF command shell. For simplicity, the discussion in this section assumes that the ISPF Productivity Tool TSO shell replaces the ISPF command shell.

Accessing the ISPF Productivity Tool TSO shell

To access the TSO shell, use option 6 (COMMAND) from the ISPF main menu or enter "TSO" on the command line. The displayed panel has two areas:

- The command area where you enter your commands.
- The history command list area which lists up to 999 commands issued, or the permanent command list area which allows up to 999 entered commands. You can use the permanent area for any command that is frequently issued.

The history and permanent lists are numbered. Instead of entering a command, you can enter its number on the command area. All history command lists and permanent command lists can be edited, browsed, saved, and restored from a persistent table library.

Recalling a command

To recall a command, enter a question mark followed by its number, or place the cursor on a line and click "ENTER" to bring up that command to the main Command. You can also edit that command from the main Command before you execute it. Once the command is edited, the new command is listed in the Command History List.

Note: Main command "TSO =" or shortcut "EX=" can be entered from any panel to display the ISPF Productivity Tool TSO Shell command history list with the most recently executed TSO command recalled to the main command line.

Capabilities of the ISPF Productivity Tool TSO shell

The ISPF Productivity Tool TSO shell offers these advantages:
- Support for ISPEXEC dialog manager commands. ISPF Productivity Tool executes these commands, and display dialog error messages if any are produced.
- Control over the location of the output line of TSO commands.
- The ability to substitute a data set pointed to by the cursor into the command buffer. (See "Point-and-shoot parameters" on page 15.)

The TSO Command Shell panel looks like this:

Figure 24. The TSO Command Shell panel

```
 -IPT-                       TSO COMMAND SHELL              Row 1 to 13 of 999
 PF6/F6=Standard SPF/TSO, PF10/F10=Set Linenum
 Command ===>


 Enter: TSO command, CLIST, REXX EXEC, or ISPEXEC statement.     Scroll => CSR
        /IS standard ISPF/TSO, /H history
        /EH edit history, /EP edit permanent, /SAV save, /RES restore
        <c><entry number> where <c> is ? or / or omitted.

 ------------------------ PERMANENT COMMAND LIST -----------------------------
   1 │ RECEIVE                                                          ->
   2 │ ISPVCALL                                                         ->
   3 │ SUB CNTL.JCL(COMPRESS)                                           ->
   4 │ XMIT OS390/INTT125 DA('SPFE.IBM.HIQI580.PTFLIB') OUTDA(SPFE.PTFLIB)  ->
   5 │ PROFILE WTPMSG                                                   ->
   6 │ SEND 'Hello World' USER(INTT125) LOGON                           ->
   7 │ LISTCAT ENTRY('SYS1.LINKLIB') /* LIST CATALOG */                 ->
   8 │ ishell /*UNIX services*/                                         ->
   9 │                                                                  ->
  10 │                                                                  ->
  11 │                                                                  ->
  12 │                                                                  ->
  13 │                                                                  ->
```

If you choose to show History Command List by entering /H on the command line, TSO Command Shell panel is displayed as follows:

```
-IPT-                        TSO COMMAND SHELL                    Row 1 to 3 of 3
PF6/F6=Standard SPF/TSO, PF10/F10=Set Linenum
Command ===>


Enter: TSO command, CLIST, REXX EXEC, or ISPEXEC statement.      Scroll => CSR
       /IS standard ISPF/TSO, /P permanent
       /EH edit history, /EP edit permanent, /SAV save, /RES restore
       <c><entry number> where <c> is ? or / or omitted.

------------------------ HISTORY COMMAND LIST -----------------------------
  1 │ LISTCAT ENTRY('SYS1.LINKLIB')                                      ->
  2 │ ISHELL                                                             ->
  3 │                                                                    ->
------------------------- END OF COMMAND LIST ---------------------------
```

The TSO Command Shell allows you to reissue any of the commands on the list from any panel by number.

ISPF Productivity Tool also provides special point-and-shoot support for TSO commands and CLISTs. When entering such a command, you can designate the data set name with a slash ("/") and point to the data set name with your cursor. For example, on any ISPF panel with the cursor on the name ACCOUNTS.A.REPORT, the command TSO ALLOC FILE(A) DA(/) OLD is equivalent to TSO ALLOC FILE(A) DA('ACCOUNTS.A.REPORT') OLD

If you are not pointing to a data set name, ISPF Productivity Tool passes the slash to the command.

The ISPF Productivity Tool print engine

ISPF Productivity Tool provides many ways to print members, data sets, text within the edit workspace, or the OLIST itself. This section describes how to print items with ISPF Productivity Tool, how to control the output destination, how to group different print requests together, and how to get the results faster.

Whatever you print through an ISPF Productivity Tool function can be directed to the ISPF list data set (as ISPF normally does), or to the ISPF Productivity Tool print engine. The ISPF Productivity Tool print engine is significantly faster than ISPF's printing function, and it bypasses the ISPF list data set (writing directly to the spool).

Print items from ISPF Productivity Tool

From OLIST and MSL, print data sets and members using the P line command. To print several members at a time, you can tailor the Member List (use the FILTER, EXCLUDE, and FLIP commands) and invoke the P line command, followed by a pattern defining the members to print (an asterisk would print every members in the tailored list).

The CUT PRINT command in EDIT and VIEW lets you print selected lines from the edit workspace even without saving these lines. You can use the PASTE command to capture and print other information (for example, the captured output of TSO commands, Member List directories, and selected lines from another member).

The list of data sets in an OLIST and the list of members in MSL can also be printed. The File pull-down option on the MSL and OLIST Action Bars contains the appropriate PRINT options.

Using the print engine

The ISPF Productivity Tool print engine prints directly into the system spool without an intermediate data set. ISPF Productivity Tool provides several parameters that control how the printout is spooled: class, destination, form, FCB, and others. You can specify how many copies to create, and whether to keep it in the hold queue (for future release, rerouting, or cancellation).

The ISPF Productivity Tool print engine lets you chose between accumulating all print requests as a single printout, or print each request separately.

To control the print options, use the SET command (in MSL or OLIST). When you select the print option, the following panel is displayed:

```
 -IPT- ------------------------Print options----------------------------------
COMMAND ===>

  Suppress page formatting    ===> N (N=No, Y=Yes - file is already formatted)
  Print changed lines in bold ===> N (N=No, Y=Yes)
  Highlight program elements  ===> Y (N=No, Y=Yes - emphasize recognized items)
  Process mode                ===> G (I=print immediately)
                                     (G=Group requests for later printing)
                                     (L=print direct to the ISPF LIST data set)
  For process modes I and G:

    DESTINATION ID      ===>                  (Node-id<.User-id>)
    CLASS               ===> A        (or Sysout class)
    WRITER name         ===>          (Output WRITER)
    Number of copies    ===> 1        (How many?)
    Lines per page      ===> 60       (page size)
    Keep in HOLD queue  ===> N        (Y=Yes, N=No)
    FORM number         ===>
    FCB name            ===>

 NOTE: Under process modes I and G, your USERID will be on the separator page.

 Press ENTER or END to exit. Enter CANCEL for installation defaults.
```

Figure 25. Print options panel

Accumulating different print requests is called "grouping". Grouped output is automatically released for printing when your ISPF session terminates (or is cancelled), when you issue the RELEASE command (in MSL or OLIST), or when you set new print options that are incompatible with the existing print options (for example, change destinations). To purge grouped print requests before they are released, enter RELEASE PURGE

Grouped printing is a convenient method of producing printouts that contain members from different data sets, edited lines (see CUT PRINT), and data set lists (print the OLIST).

Special formatting of source data

ISPF Productivity Tool can provide special formatting that highlights specific elements within printed members. Automatic highlighting is provided for JCL and COBOL members.

For members with ISPF statistics, you can request that ISPF Productivity Tool highlight lines modified in the last modification level.

ISPF dialog development enhancements

ISPF Productivity Tool enhances the process of developing ISPF dialogs. With ISPF Productivity Tool, ISPF dialog developers can:

- Refresh specific panels before display without having to run in Dialog Test mode. Avoiding Dialog Test mode significantly improves the performance of ISPF.
- Display panels from within the member list.
- Invoke dialog services from within the member list. Feedback messages provide dialog error information on the screen.
- Invoke dialog services from the ISPF Productivity Tool TSO shell and invoke dialog services from any panel.
- Place dialog services calls within the OLIST.
- Enforce the display of panel identifiers throughout the ISPF session (on all split screens).

To refresh specific panels, select the TEST option on the MSL or OLIST Action Bar, or enter IPT DTEST on any ISPF panel. A pop-up window provides you with the ability to specify the panel name to refresh, or a prefix of panels to refresh throughout the current ISPF session. ISPF Productivity Tool continuously refreshes the specified panels only on the current session. Once the ISPF session is terminated, change the panel refreshing option and standard panel processing resumes.

```
   Dialog-Test  Redisplay  System-Info  Exit
 -IPT---------------------- PANEL TESTING OPTIONS ----------------------------
 COMMAND ===>

 Specify options below and press the ENTER key to accept, END key to cancel:
 Diagnose panel processing errors ===> N (Y=Yes, N=No)
 Diagnose SELECT service   errors ===> N (Y=Yes, N=No)
 Display panel identifier         ===> N (Y=Yes, N=No)

 Panel refreshing options:
 Unless you run in Dialog Test, ISPF will remember previously displayed
 panels, ignoring panel changes made after the panels are displayed.
 To avoid running in Dialog Test (an inefficient mode), you can request
 that specific panel or panels be refreshed:
   Refresh name or prefix         ===>            (BLANK, panel name, or prefix*)
   Refresh next displayed panel   ===> N          (N=No, Y=Yes)

 IPT panels (prefix "IQI") must also be released from the cache.
   Release all IPT panels         ===> N          (N=No, Y=Yes)
```

Figure 26. Panel Testing Options panel

When editing a panel, it is convenient to place it in "refresh" mode as explained above. During editing, you can save the panel and use the TSO shell to display it. For example, if you are editing the member "ACCTMAIN", and the member is accessible through ISPPLIB, you can issue the command "TSO ISPEXEC DISPLAY PANEL(ACCTMAIN)" to display the panel. You can even put the command in the permanent list (for example, entry number 10), and thereafter type TSO 10.

SCLM integration

ISPF Productivity Tool provides integrated and enhanced SCLM support. SCLM, a free component of ISPF, is IBM's strategic library manager and software change management product. SCLM uses standard libraries (PDS, PDSE) and provides automatic check-out, a built-in make facility, maintenance of multiple versions, auditing, and control. ISPF Productivity Tool and SCLM provides the easiest and best method to implement a change management system using standard libraries and standard ISPF facilities.

Without ISPF Productivity Tool, SCLM forces you into a separate option on the main menu (the SCLM option). This deprives programmers of many useful ISPF utilities and functions.

ISPF Productivity Tool provides integrated SCLM support to the standard DSLIST, MSL, and OLIST. The benefits of SCLM are added to all the existing ISPF and ISPF Productivity Tool functions.

ISPF Productivity Tool also provides additional SCLM benefits:
- Automatic association between SCLM libraries and parameters required to use these libraries (for example, alternate project ID, parser language, authorization codes, change codes).
- Automatic lock management when members are selected for editing.
- Special identifier within the Member List for parsed and unparsed members.
- Special commands to lock, parse, unlock, promote, and build members directly from the Member List.
- Better error handling. Messages are placed near the member name, hierarchy validation allows temporary overrides, and the ability to leave members in suspended state (uncompleted unparsed members)

Calling ISPF Productivity Tool functions from applications

ISPF Productivity Tool provides several interfaces that make it easy to take advantage of its facilities in installation-developed applications.

Calling OLIST from an application

You can invoke OLIST from an application or CLIST. You can invoke the OLIST selection list, a new or existing permanent OLIST, or a temporary OLIST, with the default process (Edit, Browse, or View) of your choice. For example, to invoke a temporary OLIST of all data sets matching the level USER2.TEST, you can issue a command like this:

```
ISPEXEC SELECT PGM(IQIPLST) PARM('USE2.TEST.*') NEWAPPL(ISR) PASSLIB
```

The parameters passed to the IQIPLST program are the same parameters you can pass to the OLIST general command. For example, to obtain a temporary OLIST with the libraries allocated to STEPLIB you can enter the command:

```
OLIST @DD STEPLIB
```

Similarly you can invoke the same OLIST from a REXX exec with the statement:

```
ISPEXEC SELECT PGM(IQIPLST) PARM('@DD STEPLIB')
NEWAPPL(ISR) PASSLIB
```

The following are acceptable OLIST parameters:

Calling OLIST from an application

Parameter	Explanation
=	Invoke the default (last) referenced permanent OLIST
*	Display the OLIST reference list
DSNpatt,VOLpatt	Opens a temporary list showing catalogued data sets matching the specified DSN pattern (with wildcards). If a volume pattern is specified, only data sets catalogued to the specified volumes are listed. Examples: ``` OLIST TAXES.YEAREND.* OLIST SYS1.*,SYSR01 OLIST SYS1.*,* ```
Name	Invoke a previously saved OLIST. OLIST names follow the naming conventions of member names.
@DD,ddname @LISTA,ddname	Opens a temporary OLIST displaying allocated data sets. If a ddname is specified, only libraries allocated to the specified DD statement are listed.
@H	Opens a temporary OLIST showing the history list (the list of last 100 data sets referenced by the user).
@LISTB,DSNpatt	Opens a temporary list of generation data sets of generation group names matching the GDG base pattern. Examples: ``` OLIST @LISTB,GB* OLIST @LISTGRP,GB* ```
@LISTC,DSNpatt	Opens a temporary list of catalogued entries (objects). Example: ``` OLIST @LISTC,SYS* ```
@LISTF,DSNpatt	Opens a temporary OLIST displaying IBM BookManager Book-Shelf files by DSN pattern. **Note:** The .BKSHELF implied suffix does not have to be included in the pattern. Examples: ``` OLIST @LISTF,PP OLIST @LISTF,PP*DB2 ```
@LISTG,DSNpatt @LISTGDG,DSNpatt	Opens a temporary list of Generation-Data-Sets by DSN pattern. Examples: ``` OLIST @LISTG,S* OLIST @LISTGDG,S* ```
@LISTK,DSNpatt	Opens a temporary OLIST displaying IBM BookManager Book files by DSN pattern. **Note:** The .BOOK implied suffix does not have to be included in the pattern. Examples: ``` OLIST @LISTK,PP OLIST @LISTK,PP*IMS ```

Parameter	Explanation

@LISTM,DSNpatt
@LISTARC,DSNpatt
	Opens a temporary OLIST with the list of migrated (or archived) data sets matching the specified volume pattern. Both commands are similar and are offered for installations with HSM, ASM2, or DMS systems.
	
	Examples:
	<pre>OLIST @LISTM,SYS1.A*LIB
	OLIST @LISTARC,SYS2.*</pre>

@LISTP,DSNpatt	Opens a temporary list of all Page-Space files by DSN pattern
	
	Examples:
	<pre>OLIST @LISTP,*
	OLIST @LISTPAG,*</pre>

@LISTS,keyword,value	Opens a temporary OLIST displaying system data sets depending on the parameters.
	
	Examples:
	<pre>OLIST @LISTS,ALL
	OLIST @LISTS,APF
	OLIST @LISTS,LINK
	OLIST @LISTS,LINK,ALL
	OLIST @LISTS,LINK,CURR
	OLIST @LISTS,LINK,IPL
	OLIST @LISTS,LINK,J=PROD*
	OLIST @LISTS,LINK,L=MRO*
	OLIST @LISTS,LINK,U=INT*
	OLIST @LISTS,LINK,S=JES*
	OLIST @LISTS,LPA
	OLIST @LISTS,PARMLIB</pre>

@LISTT,DSNpatt	Opens a temporary list of Tape Files by DSN pattern. Requires a volume pattern and the first character cannot be a wildcard.
	
	Examples:
	<pre>OLIST @LISTT,I*
	OLIST @LISTT,MYTAPE*</pre>

@LISTV,VOLpatt,DSNpatt	Opens a temporary list of files (including uncatalogued) by VOLSER pattern and DSN pattern. You must supply a volume serial or pattern. Example: <pre>OLIST @LISTV,USER*,I*SPF*</pre>

@LISTW,DSNpatt
@LISTVS,DSNpatt
	Opens a temporary OLIST of VSAM Clusters by DSN pattern.
	
	Example:
	<pre>OLIST @LISTW,VS*
	OLIST @LISTVS,MYVSAM*FILE%1</pre>

@LISTZ,DSNpatt	Opens a temporary OLIST displaying SMP/E Zone VSAM clusters by DSN pattern.
	Note: The .CSI implied suffix does not have to be included in the pattern.
	
	Example:
	<pre>OLIST @LISTZ,SYS
	OLIST @LISTZ,FMN*V6</pre>

Calling MSL from an application

You can invoke the ISPF Productivity Tool enhanced Member Selection List (or EDIT, BROWSE, or VIEW) from an application or CLIST. The ISPF Productivity Tool interface supports CUT and PASTE, provides the enhanced Member Selection List services, and provides transparent access to PANVALET libraries, LIBRARIAN libraries, DSLIST, VSAM editors or browsers, and DB2 editors or browsers. For example, to view member A1 in the library MY.DATA, you can issue the CLIST command

```
ISPEXEC SELECT PGM(IQIMSL) PARM(V,MY.DATA(A1)) NEWAPPL(ISR) PASSLIB
```

The IQIMSL parameters are similar to the parameters specified with the BROWSE, EDIT, and VIEW general commands. The parameters (which should be separated with commas) are:

The default action (V for view, B for browse, E for edit).

The second is the object name (data set name). If none is specified, ISPF Productivity Tool performs a cursor position check and uses the data set name pointed by the cursor (point-and-shoot). To prevent a point-and-shoot call, specify "<PROMPT>" instead of the object name (in this case ISPF Productivity Tool displays a browse/EDIT and VIEW prompt screen).

The third parameter is optional and is the volume (for data set objects). If the parameter is omitted, the catalog is used. If a volume pattern is specified, a volume selection is displayed before processing continues.

The last parameter is optional and is intended for invoking applications, and can be specified as Y or N. If "Y" is specified, ISPF Productivity Tool returns to the calling application with return code of 8 if errors occurred (for example, the data set was not found). Otherwise, ISPF Productivity Tool displays a prompt screen with an error message, providing the user with the opportunity to change some options and retry.

Calling DSLIST (ISPF Option 3.4) from an application

With ISPF Productivity Tool installed, you can invoke DSLIST for a particular data set level (as accepted by DSLIST). The format of the call is:

```
►►──SELECT──PGM(IQIUDL)─────────────────────────────────────────►

  ►──PARM(-,──────────────────────────────────────)───────────►◄
            └─DSNpatt─┘ └─,──VOLpatt──────┘
                              └─,──command─┘
```
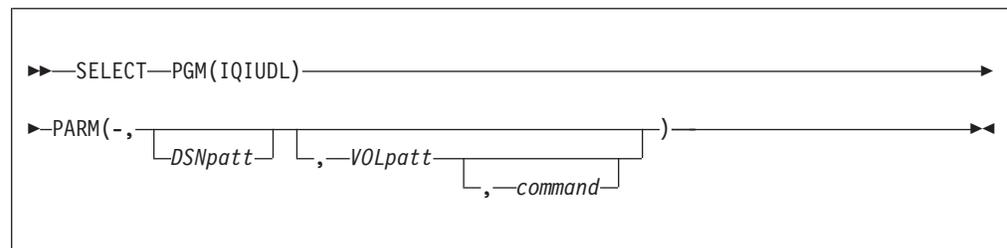
DSNpatt
      A data set name pattern.

VOLpatt
      A volume serial pattern.

command
      Specify the command for the output desired:

V	VTOC summary information.
P	Print the selected data set.
PV	Print VTOC summary information.
XV	Extended VTOC information.

For example, to display all data sets starting with 'SYS1' on all volumes, you can issue a command like this (from a program or CLIST):

```
ISPEXEC SELECT PGM(IQIUDL) PARM(-,'SYS1') NEWAPPL(ISR) PASSLIB
```

To restrict the DSLIST to the volume CICS01, you can issue the command like this:

```
ISPEXEC SELECT PGM(IQIUDL) PARM(-,*,CICS01) NEWAPPL(ISR) PASSLIB
```

To display all catalogued data sets starting with your TSO prefix (or user-id), which are matching a data set name pattern (without quotes) and reside on volumes matching a volume serial pattern, issue a command like this:

```
ISPEXEC SELECT PGM(IQIUDL) PARM(-,TEST*COBOL,DEV*) NEWAPPL(ISR) PASSLIB
```

To display all volumes matching a volume serial pattern for an IPT extended volume list you can issue the command:

```
ISPEXEC SELECT PGM(IQIUDL) PARM(-,,SYS*,XV) NEWAPPL(ISR) PASSLIB
```

Calling DSLIST (ISPF Option 3.4) from an application

Chapter 4. An introduction to commands

This chapter provides an introduction to commands and how they are used in ISPF Productivity Tool.

General commands

Enter general commands in the command field of any panel. General commands invoke a new function, while the previous function is waiting in the background. When the new function terminates, the previous one resumes control. Any combination of the general commands BROWSE, EDIT, and VIEW can be nested in this way up to nine levels deep (per split). All other general commands can be invoked an unlimited number of times. ISPF provides several general commands (such as HELP, KEYS, and LIST). ISPF Productivity Tool adds several more general commands (EDIT, BROWSE, VIEW, OLIST, TSO, IPT, and QUIT).

To avoid conflict with other commands with the same name, you may change each of those command verbs with the ISPF Productivity Tool customization wizard IQIWIZRD (see "The customization wizard IQIWIZRD" in the *IPT Installation Guide*).

Command shortcuts

These are an additional set of 52 commands that can be entered as main commands from any panel. The shortcut names are intended to be easily remembered (intuitively) and to provide a quick way to invoke most of ISPF Productivity Tool functions on the spot without a need to go through another split with more menus.

To avoid conflicts with other commands with the same name, each of the ISPF Productivity Tool command shortcut verbs can be either disabled or modified to a different name by modifying the ISPF Productivity Tool SIQITLIB member IQICMNDS.

Thus, most of OLIST related shortcuts start with "OL" and the rest of the name is usually a single character related to class of objects. For example, "OLM" invokes the "OLIST Migrated data sets" function, while "OLT" invokes the "OLIST Tape data sets" function. Main command "IPT?" can be entered from any panel to display all active command shortcuts.

A predefined set of command shortcuts (in member IQIDCMDS of SIQITLIB), may be disabled or enabled from any panel via command IPT CMDS (shortcut IPTCMD).

Edit, View, and Browse commands

You can enter these commands in BROWSE, EDIT, or VIEW in addition to those provided by ISPF. The new EDIT and VIEW commands are COMPRESS, EXPDIR, CUT, PASTE, QUIT, and STATUS. The SAVE command is listed and enhanced. The newly supported BROWSE commands are CANCEL and SUBMIT.

MSL commands

MSL commands are commands that can be entered only while a member selection list is on display. There are two types of MSL commands: MSL Main commands and MSL Line commands.

Unless otherwise indicated, all MSL commands can be entered as both main commands and line commands. When entered as a line command,

use its one-letter form. (For example, COPY must be entered as `C` when used as a line command.) However, only commands whose syntax show the optional operand pattern can be entered using a pattern, and only when entered as a main command.

OLIST commands
OLIST commands can be entered only while a permanent or temporary OLIST is on display.

There are three types of OLIST commands:

OLIST main commands
OLIST main commands can be entered only on the command line of an OLIST.

OLIST line commands
OLIST line commands can be entered in the command field of the OLIST. (OLIST line commands can be entered on the command line followed by an item number.) OLIST line commands act on the items named.

OLIST editing line commands
OLIST editing line commands can only be entered in the command field of the OLIST. OLIST editing line commands act on the lines of the OLIST, not the items named in the OLIST. Editing line commands begin with a slash ("/"), but are alphabetized without regard to the slash.

Commands available in the ISPF Productivity Tool EDIT session of an OLIST (invoked using the OLIST main command UPDATE) are not listed separately, since they are the standard EDIT commands as enhanced by ISPF Productivity Tool.

The commands are organized by categories of General, EDIT and VIEW, MSL, and OLIST in alphabetical order. Leading non-alphabetic characters (such as the "/" in "/D") are ignored. Commands consisting only of non-alphabetic characters (such "=") are listed before alphabetic commands.

Group commands

Group commands are OLIST and MSL line commands that you enter on the command line, with a supplied pattern. The effect of a group command is to apply the command against each item, as if you had applied the line command against each individual line. So a group command is a powerful shortcut.

The syntax of the MSL group commands is:

```
►►──MSL_line_command──member_name_pattern────────────────────►◄
```

You must supply the *member_name-pattern* (or a specific member name).

If you supply a pattern, the pattern only applies to displayed member names. You may wish to use the FILTER and X commands to get a target group of members, and then supply the pattern "*", to execute the line command on all displayed members.

The syntax of the OLIST group commands is:

```
>>──┬─from_line#──┬──────────────────┬──┬─OLIST_line_command─┬────────>◄
    │            └──┬──┬─to_line#─┬──┘  ├─CLIST──────────────┤
    │               │  └─*────────┘     └─TSO_command────────┘
    └─*─────────────────────────────────┘
```
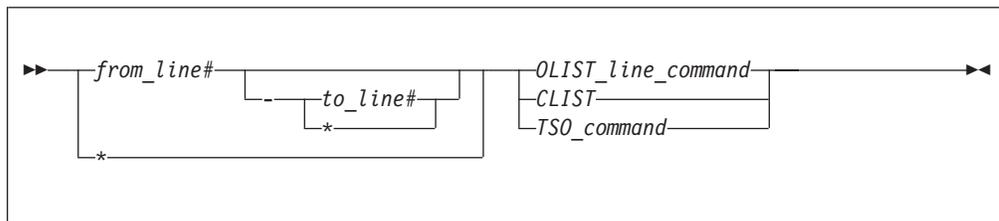
If you provide a * with a *from line number*, then it means until the last row. If you
provide a * by itself, then it means all.

Chapter 5. General commands

Main command	Line command	Remarks
BROWSE	N/A	The BROWSE command (page 53) invokes a new nested "BROWSE" session, or opens a new MSL with the default meaning of SELECT and S set to BROWSE.
EDIT	N/A	The EDIT command (page 55) invokes a new nested "EDIT" session, or opens a new MSL with the default meaning of SELECT and S set to EDIT.
IPT	N/A	The IPT command (page 56), controls your IPT environment.
OLIST	N/A	The OLIST command (page 60) invokes an Objects List, or a list of referenced Objects Lists.
QUIT	N/A	The QUIT command (page 63) terminates processing of pending members under MSL and pending objects under OLIST.
TSO	N/A	The TSO command (page 65) can be used to execute ISPEXEC statements and invoke the TSO Command Shell.
VIEW	N/A	The VIEW command (page 53) invokes a new nested "VIEW" session, or opens a new MSL with the default meaning of SELECT and S set to VIEW.

BROWSE

The BROWSE command invokes a new nested BROWSE session, or opens a new MSL with the default meaning of SELECT and S set to BROWSE. BROWSE is used to display sequential data sets and members of libraries (partitioned data sets). Data cannot be changed. Note that VIEW provides the same functionality, but with the power of EDIT.

Depending on how ISPF Productivity Tool is installed at your site, BROWSE may also process VSAM files, Librarian or Panvalet files, DB2 tables, and installation-defined objects.

Syntax

```
►►─┬─BROWSE─┬─┬─curr_lib_member_name──────────────────────┬─►◄
   └─BR─────┘ ├─curr_lib_pattern──────────────────────────┤
             ├─dsname─────────────────────────────────────┤
             │        └─(member_name)─┘                    │
             ├─DSNpatt────────────────────────────────────┤
             │        └─(MEMpatt)─┘    └─,volser─┘          │
             └─object_name────────────────────────────────┘
```

Operands

curr_lib_member_name
> The name of a member in the current library, or the last library processed (or, if the screen has been split, the last library processed in this split).

curr_lib_pattern
> A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the current library, or in the last library processed (or, if the screen has been split, the last library processed in this split).

dsname
> The name of the dataset you wish to browse.

member_name
> The name of a member in the library specified.

DSNpatt
> A data set name pattern using the wildcard characters "%" and "*" to match the name or names of one or more data sets in the library specified.

MEMpatt
> A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the library specified.

volser The volume serial you wish to browse.

object_name
> The name of an IPT supported object, such as a DB2 object (if supported) or UNIX file; see Table 1 on page 11.

Usage notes

If the data set specified is a library and you have not specified a particular member (that is, you have specified only the library name, or have specified a pattern), a member selection list is displayed.

An unqualified two-level data set name must be entered with a leading period to distinguish it from a member name. (If your TSO profile is set to NOPREFIX, a name entered with a leading period refers to a single-level data set name.)

Note: BROWSE can be abbreviated to BR (as a command shortcut), subject to change by the local ISPF Productivity Tool admin. The MSL line command B, which can be entered as a main command, invokes a BROWSE session on one or more members in the current library.

Examples

```
BROWSE
BROWSE PAYROLM
BROWSE PAY*
BROWSE 'PAYROLL.JONES.COBOL'
BROWSE 'PAYROLL.JONES.COBOL',PROD02
BROWSE 'PAYROLL.JONES.COBOL(PAYROLM)'
BROWSE 'PAYROLL.JONES.COBOL(PAY*)'
BROWSE DEV.COBOL(PAY*)
BROWSE .TESTLIST
```

EDIT

The EDIT command invokes a new nested EDIT session, or opens a new MSL with the default meaning of SELECT and S set to EDIT.

Depending on how ISPF Productivity Tool is installed at your site, EDIT may also process VSAM files, Librarian or Panvalet files, DB2 tables, and installation-defined objects.

Syntax

```
>>──┬─EDIT─┬──┬─curr_lib_member_name──────────────────────────────┬──><
    └─ED───┘  ├─curr_lib_pattern──────────────────────────────────┤
              ├─dsname──────────────────────────────────┤
              │         └─(member_name)─┘
              ├─DSNpatt─────────────────────────────────┤
              │         └─(MEMpatt)─┘  └─,volser─┘
              └─object_name─────────────────────────────┘
```

Operands

curr_lib_member_name
> The name of a member in the current library, or the last library processed (or, if the screen has been split, the last library processed in this split).

curr_lib_pattern
> A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the current library, or in the last library processed (or, if the screen has been split, the last library processed in this split).

dsname
> The name of the dataset you wish to edit.

member_name
> The name of a member in the library specified.

DSNpatt
> A data set name pattern using the wildcard characters "%" and "*" to match the name or names of one or more data sets in the library specified.

MEMpatt
> A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the library specified.

volser The volume serial holding the data sets you wish to edit.

object_name
> The name of an IPT supported object, such as a DB2 object (if supported) or UNIX file; see Table 1 on page 11.

Usage notes

If the data set specified is a library and you have not specified a particular member (that is, you have specified only the library name, or have specified a pattern), a member selection list is displayed. An unqualified two-level data set

name must be entered with a leading period to distinguish it from a member name. (If your TSO profile is set to NOPREFIX, a name entered with a leading period refers to a single-level data set name.)

Note: EDIT can be abbreviated to ED (as a command shortcut), subject to change by the local ISPF Productivity Tool admin. The MSL line command E, which can be entered as a main command, invokes an EDIT session on one or more members in the current library.

Note: EDIT can be abbreviated to ED (as a command shortcut), subject to change by the local ISPF Productivity Tool admin. The MSL line command E, which can be entered as a main command, invokes an EDIT session on one or more members in the current library.

Examples

```
EDIT
EDIT ACCTMAIN
EDIT ACCT*
EDIT 'PAYROLL.JONES.PANELS'
EDIT 'PAYROLL.JONES.PANELS',PROD02
EDIT 'PAYROLL.JONES.PANELS(INPUT1)'
EDIT 'PAYROLL.JONES.PANELS(INPUT*)'
EDIT JONES.PANELS(INPUT1)
EDIT DEV.COBOL(PAY*)
EDIT .TESTLIST
```

IPT

The IPT command provides online Help, and control over your IPT environment.

Syntax

```
>>──IPT──┬──HELP───┬──────────────────────────────>◄
         └─option─┘
```
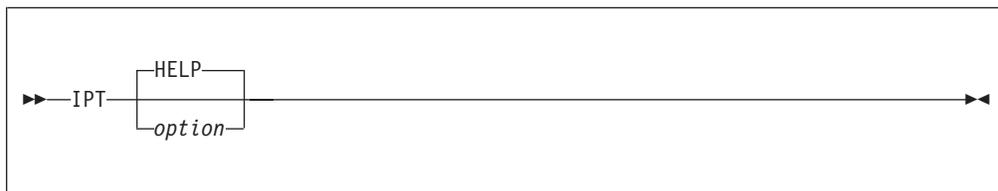
Operands

This section describes each option that you can supply with the IPT command.

HELP

Description: The HELP parameter displays the online help and tutorial.

Syntax:

```
>>──┬─HELP─┬──────────────────────────────────────>◄
    └──?───┘
```
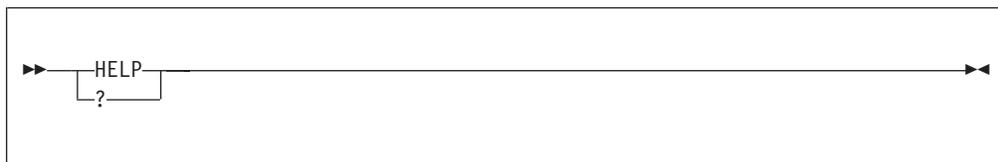
CMDS

Description: The CMDS parameter manages shortcut keys.

Syntax:

```
>>--CMDS--+--OFF--+--------------------------------------------><
          +--ON---+
```
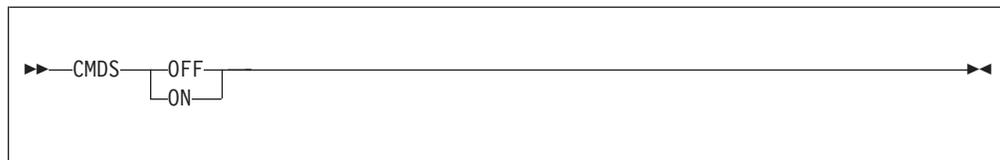
Operands:

OFF Nominated (member IQIDCMDS of SIQITLIB library) shortcuts are disabled.

ON All shortcuts are enabled.

If no parameter is supplied, IPT displays the list of command shortcuts. If a shortcut has been disabled, this is indicated in the Description column.

OFF

Description: The OFF parameter disables all IPT functionality by passing complete control to ISPF without any IPT intervention.

Syntax:

```
>>--OFF----------------------------------------------------------><
```
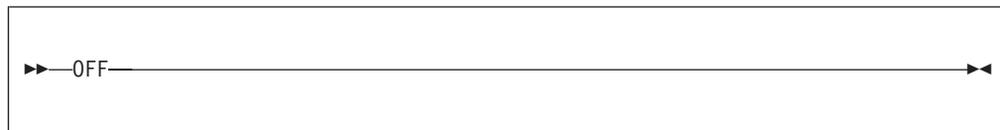
ON

Description: The ON parameter reactivates IPT by restoring all IPT intercept points into ISPF.

Syntax:

```
>>--ON-----------------------------------------------------------><
```
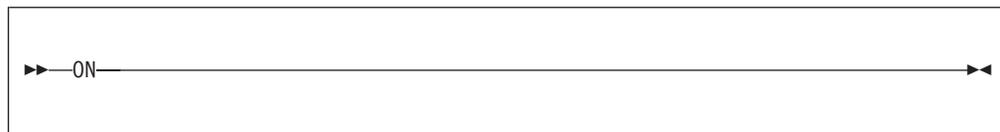
DTEST

Description: The DTEST parameter displays the Panel Testing Options panel. For more information about this panel, see "ISPF dialog development enhancements" on page 42.

Syntax:

DTEST

```
►►──DTEST──────────────────────────────────────────────────────────────────►◄
```

SET

Description: The SET parameter manages the setting of IPT default values.

Syntax:

```
►►──SET──┬─ALL───────┬────────────────────────────────────────────────►◄
         ├─MSL───────┤
         ├─OLIST─────┤
         ├─GLOBAL────┤
         ├─PRINT─────┤
         ├─DSLIST────┤
         ├─TSO───────┤
         ├─EDIT──────┤
         ├─INTERFACE─┤
         ├─DIAGNOSE──┤
         ├─LIBRARY───┤
         └─BOOKMGR───┘
```

Operands:

ALL   The panels for all of the other options are displayed in order.

MSL   The Member Selection List options panel is displayed.

OLIST
          The Object list options panel is displayed.

GLOBAL
          Global edit and Findtext options panel is displayed.

PRINT
          The Print options panel is displayed.

DSLIST
          The DSLIST options panel is displayed.

TSO   The TSO shell options panel is displayed.

EDIT   The Edit, Browse and View options panel is displayed.

INTERFACE
          The panel where you specify user interface options is displayed.

DIAGNOSE
          The panel where you specify options for control of ISPF error diagnosis is
          displayed.

LIBRARY
          The panel where you set persistent table library options is displayed.

BOOKMGR
          The panel where you set BookManager interface options is displayed.

If no parameter is entered, the Defaults panel is displayed, and from this you can select the panels that you want to display.

VER

Description: The VER parameter displays the Module List panel. This list provides information about each IPT module, including the level and the date.

Syntax:

```
►►──VER──────────────────────────────────────────────────────────►◄
```

MAINT

Description: The MAINT parameter creates a maintenance report, which is placed in a data set member. You can then read or print this report.

Syntax:

```
►►──MAINT────────────────────────────────────────────────────────►◄
```
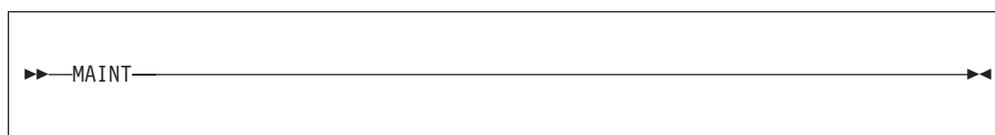
DIAG

Description: The DIAG parameter controls the setting of different diagnostic flags.

Syntax:

```
►►──DIAG───────────────────────────────────────────────────►◄
         ─ALLON───────
         ─ALLOFF──────
                ─ON─
         ─TRACE─┤  ├──
                ─OFF─
              ─ON─
         ─DBG─┤  ├────
              ─OFF─
              ─ON─
         ─LOG─┤  ├────
              ─OFF─
               ─ON─
         ─SNAP─┤  ├───
               ─OFF─
```
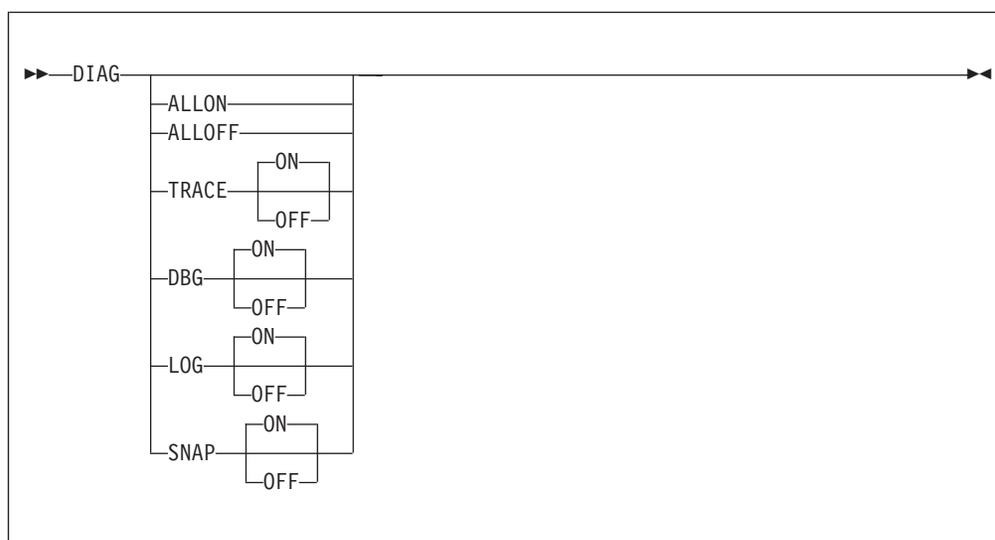
Operands:

ALLON

All of the diagnostic options are set on.

ALLOFF

All of the diagnostic options are set off.

TRACE

The trace option is set on or off. When the trace option is on, the incore trace commences.

Note: When you set TRACE ON, IPT automatically sets LOG ON. You dump the trace using the SNAP option.

DBG The debug option is set on or off. When the debug option is on it sets optional additional diagnostics.

LOG The log option is set on or off. LOG ON dynamically allocates DD(IQILOGPR) sysout data set for outputting IPT log messages.

SNAP The snap option is set on or off. SNAP ON dynamically allocates DD(IQITRSNP) sysout data set for outputting various core dumps.

When you enter SNAP OFF or LOG OFF, you may lose ongoing log messages and some intermediate snaps (depending on the scenario). However, the in-core (wraparound) trace table normally contains all pertinent entries. so when you enter ISNAP (shortcut for IPT SNAP), if DD(IQITRSNP) is not present, it is dynamically allocated and the whole trace-table dumped out to it.

For more information, see Appendix A, "Documenting an IPT failure for IBM level 2 support," on page 207.

SNAP

Description: The SNAP parameter creates a snapshot of IPT, which is used for diagnosing problems.

Syntax:

```
                ┌─TRACE─┐
►►──SNAP──┼───────┼──────────────────────────────────────►◄
                ├─ALL──┤
                └─COMM─┘
```
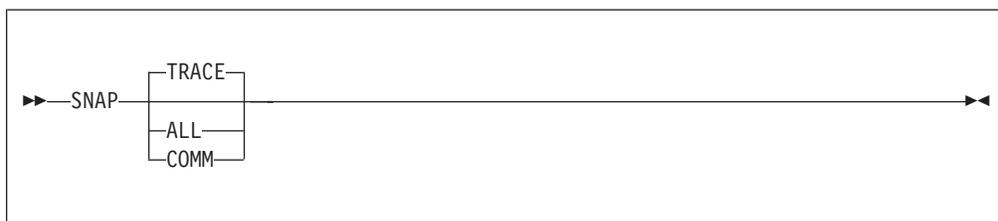
Operands:

TRACE

Dump out the in-core trace table and the IPT COMMAREA (the main control block area).

ALL Dump out the entire TSO session address-space (or region).

COMM

Dump out only the IPT COMMAREA (the main control block area).

OLIST

The OLIST command invokes an Objects List, or a list of referenced objects lists.

Syntax

|

```
►►──OLIST─────────────────────────────────────────────────────────────►◄
           ├─OLIST_name────────────────────┤
           ├─DSNpatt─────────────────┤
           │         └─,VOLpatt─┘
           ├─level─────────────────────────┤
           └─special_list,special_parameter─┘
```

Operands

OLIST_name
> The name of an OLIST to be displayed or created. The name of an OLIST can be from one to eight characters; it must conform to the syntax of a member name.

DSNpatt
> A data set name using the wildcard characters "%" and "*".

| *VOLpatt*
| > A valume name using the wildcard characters "%" and "*".

| *level* The level qualifiers for the data set names. For example, for a
| fully-qualified data set name of `ACCOUNTS.PAYABLE.COBOL`, the level could be
| `ACCOUNTS.PAYABLE` or `ACCOUNTS`.

| *special_list*
| > One of the @LISTxxx options. See examples in the table in the *Usage Notes*.

| *special_parameter*
| > The parameter relevant to the special list option.

Usage notes

Processing depends on the form of the command, as shown below. (In this table, *newlist* is an OLIST that does not already exist, *oldlist* is an OLIST that already exists. *VOLpatt* and *DSNpatt* are as defined above.)

Form of Command	Processing
OLIST	Invoke the default (last) referenced permanent OLIST.
OLIST *	Displays the list of permanent objects lists.
OLIST *oldlist*	The OLIST "oldlist" is displayed.
OLIST *newlist*	A new OLIST with the name "newlist" is created. "newlist" is checked to see if it matches a first-level qualifier. If so, the OLIST is filled with all catalog entries that have "newlist" as their first-level qualifier. If not, the OLIST is prefilled with the names of the ISPF libraries on the EDIT entry panel and DSLIST entry panel.
OLIST /	Opens a temporary OLIST and immediately executes the POPULATE command to prompt for sources of names to go into this list.
OLIST *DSNpatt*	A temporary OLIST is displayed listing all data sets in the catalog matching pattern "DSNpatt".

OLIST general command

Form of Command	Processing
OLIST *DSNpatt,VOLpatt*	Invoke a temporary list showing catalogued data sets matching the specified DSN pattern (with wildcards). If a volume pattern is specified, only data sets catalogued to the specified volumes are listed.
OLIST @DD,*ddname*	Invoke a temporary OLIST displaying allocated data sets. If a *ddname* is specified, only libraries allocated to the specified ddname are listed.
OLIST @H	Display a temporary OLIST showing the history list (the list of last 100 data sets referenced by the user).
OLIST @LISTB,*DSNpatt*	Opens a temporary OLIST showing catalogued data sets matching the specified data set name pattern that are Generation Data Groups.
OLIST @LISTE,*DSNpatt*	Opens a temporary OLIST showing catalogued data sets matching the specified data set name pattern that are PDSE libraries.
OLIST @LISTF,*DSNpatt*	Opens a temporary OLIST showing catalogued IBM BookManager Book-Shelf files matching the specified *DSNpatt*. (.BKSHELF may be omitted from *DSNpatt*.)
OLIST @LISTGDG,*DSNpatt*	Opens a temporary list of generation data sets whose GDG base name is matching the specified pattern. The OLIST shows both the exact data set name as it appears in the VTOC and the relative generation number from the catalog.
OLIST @LISTI,*DSNpatt,VOLpatt*	A combination of OLIST *DSNpatt,VOLpatt*, followed by "* INFO". Invoke a temporary list showing catalogued data sets matching the specified data set name pattern. If a volume pattern is specified, only data sets catalogued to the specified volumes are listed. Then issues an OLIST INFO command on each data set to display the attributes of the data set. Issue a QUIT at any point to stop further attribute displays.
OLIST @LISTK,*DSNpatt*	Opens a temporary OLIST showing catalogued IBM BookManager Book files matching the specified *DSNpatt*. (.BOOK may be omitted from *DSNpatt*.)
OLIST @LISTM,*DSNpatt* OLIST @LISTARC,*DSNpatt*	Opens a temporary OLIST with the list of migrated (or archived) data sets matching the specified data set name pattern. Both commands are similar and are offered for installations with HSM, ASM2, or DMS systems.
OLIST @LISTP,*DSNpatt*	Opens a temporary OLIST showing catalogued data sets matching the specified volume pattern that are system page-space data sets.
OLIST @LISTS,*listtype*	Opens a temporary OLIST displaying system data sets. The *listtype* parameter may be used to restrict the display to one of the four list types available: LPALIB, LINKLIST, APFLIST, and PARMLIB. If *listtype* is omitted, a menu of choices is displayed.
OLIST @LISTT,*DSNpatt*	Opens a temporary OLIST showing catalogued data sets matching the specified data set name pattern that are Tape data sets.
OLIST @LISTV,*VOLpatt,DSNpatt*	Opens a temporary OLIST based on the VTOC entries matching the specified volume pattern and the specified DSN pattern. Wildcards are allowed in both patterns, practically offering a data-set search capability

Form of Command	Processing
OLIST @LISTVS,*DSNpatt*	Opens a temporary OLIST showing catalogued data sets matching the specified data set name pattern that are VSAM clusters.
OLIST @LISTZ,*DSNpatt*	Opens a temporary OLIST showing SMP/E Zone clusters matching the specified *DSNpatt*. (.CSI may be omitted from *DSNpatt*.)

Your default OLIST is the last permanent OLIST displayed. The first time you invoke OLIST, or if you have deleted the OLIST last used as the default, your default is an OLIST with the name set to your USERID. Processing is the same as if you specified the name explicitly. Your USERID is checked to see if it matches a first-level qualifier. If so, the OLIST is filled with all catalog entries that have your USERID as their first-level qualifier. If not, the OLIST is prefilled with the names of the ISPF libraries on your BROWSE, EDIT, and VIEW, and DSLIST Entry Panels.

You can also explicitly set the OLIST that is displayed when OLIST is next invoked without any specifications. To do so, enter the line command NXT on the OLIST selection list panel.

To display a temporary OLIST of all data sets in the catalog matching a first-level qualifier, rather than to display an existing OLIST of the same name or to create a new (permanent) OLIST of that name, enter it with a period, like this:

```
OLIST ACCOUNTS.
```

rather than

```
OLIST ACCOUNTS
```

Examples

```
OLIST
OLIST *
OLIST LEDGER1
OLIST ACCOUNTS.%PAY*.COB*
OLIST TAXES*YEAREND*
OLIST SYS1.*,SYSR01
OLIST SYS1.*,*
OLIST @LISTV,SYS*,SYS1*MACLIB
OLIST @LISTM,SYS1.A*LIB
OLIST @LISTARC,SYS2.*
OLIST @LISTGDG,ACCOUNTS.TRANSACT
OLIST @LISTS,LPALIB
OLIST @LISTS,APFLIST
OLIST @LISTS,LINKLIST
OLIST @LISTS,PARMLIB
OLIST @LISTS,ALL
```

QUIT

The QUIT command is used to terminate processing of pending members under MSL and pending objects under OLIST.

Pending members are members that have not yet been processed by GLOBAL, by an MSL line command entered as a main command with a pattern, or by MSL when multiple line commands have been entered. Pending objects are OLIST entries that have not yet been processed by an OLIST line command entered as a main command with a range of OLIST entries.

Syntax

```
              ┌─ALL──STOP─────────┐
►►──QUIT──────┼─MSL───────────────┼──────────────────────►◄
              │        └─STOP─┘    │
              ├─OLIST─────────────┤
              │          └─STOP─┘  │
              └─STOP──────────────┘
```
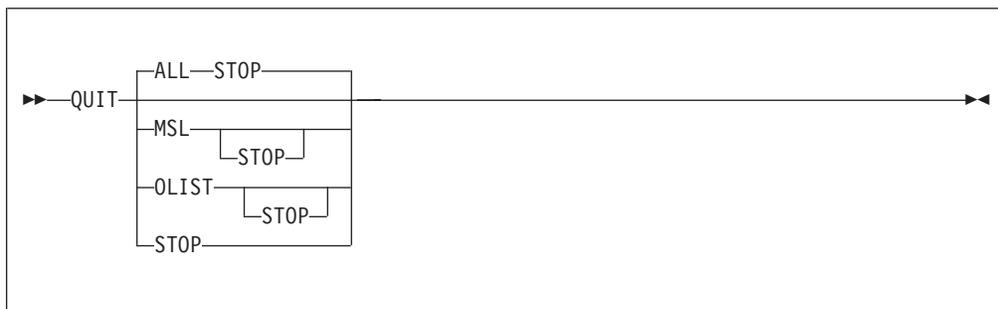
Operands

ALL   Request to abort all nested MSL and OLIST processing

MSL   Request to abort all nested MSL processing

OLIST
          Request to abort all nested OLIST processing

STOP Request to stop any aborting of nested MSL and OLIST processing.

Note: QUIT entered during GLOBAL command activity stops at the current member.

Usage notes

QUIT is a main command only. It cannot be used as a line command.

Examples

```
QUIT
QUIT OLIST
QUIT STOP
```

IPTHelp

If Help is invoked while in an OLIST or MSL, the Help is ISPF Productivity Tool specific. However, when invoked outside of OLIST or MSL, the standard ISPF help is invoked. To display ISPF Productivity Tool Help, you must enter `IPTHelp`, `IPT Help`, or `IPT`.

Syntax

```
      ┌─IPTHelp───┐
►►────┼─IPT Help──┼──────────────────────────────────────►◄
      └─IPT───────┘
```
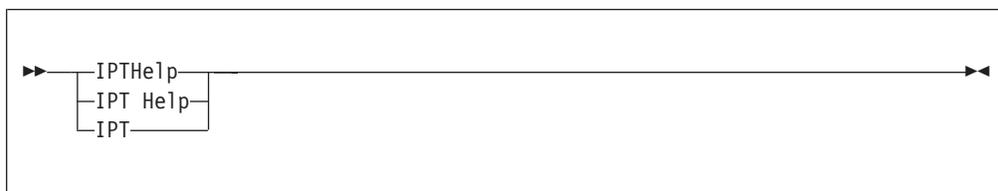
Operands

IPTHelp has no operands.

Examples

```
IPTHelp
IPT
```

TSO

As well as processing TSO commands, CLISTS, and REXX EXECs as under native ISPF, the TSO general command can be used to execute ISPEXEC statements and to invoke the TSO Command Shell.

Syntax

```
►►──TSO─────────────────────────────────────────────────────────────►◄
         └─?─┘  ┌─list_item───────┐
              ─┤─tso_command──────├─
               └─ispexec_statement─┘
         └─=─────────────────┘
```
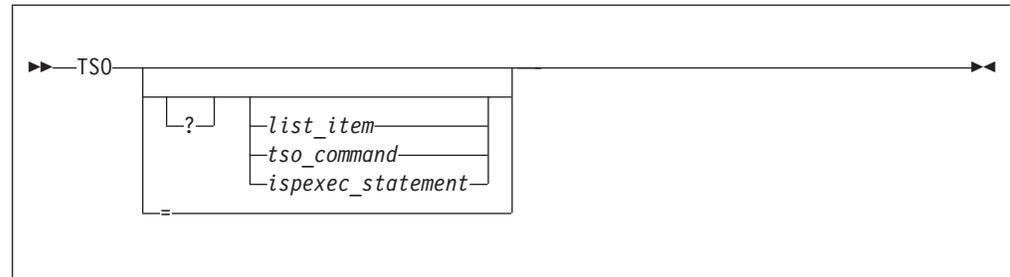
Operands

?   Display the TSO Command Shell panel and the default command list (History or Permanent, as set by IPT SET). If there is a following *list_item* (with no intervening space), then the command line displays the command from that line, ready for review and editing before execution. If there is a following *tso_command* or *ispexec_statement*, then it is displayed on the command line, ready for review, modification, and execution. If there is no *list_item*, then the command line is blank.

=   Display the TSO Command Shell panel, with the History command list, and the most recently executed TSO command in the command line (so that it can be reviewed and modified before you execute it). Since the line displayed is always the most recently executed TSO command, you do not enter a parameter after "=". In effect, "TSO =" is the same as "TSO ?1".

list_item
This is an integer, referring to a line in the TSO Command Shell list. When you enter this integer, you re-execute (or display) this command.

tso_command
A TSO command, CLIST, or REXX EXEC to execute (or display).

ispexec_statement
An ISPEXEC statement to execute (or display).

Usage notes

When TSO is entered without any operands, the TSO Command Shell panel is displayed, showing either a command history list or a permanent command list, depending on the user default option setting for TSO shell.

When TSO is entered with an operand but not the question mark, then the specified command is executed immediately.

When TSO is entered with just a question mark (and no command operand), the TSO Command Shell panel is displayed. If a question mark is entered with another operand, the specified command is displayed on the command line of the TSO Command Shell panel. The other operand must follow the question mark without any intervening spaces. An integer indicates a command on the permanent list of the TSO Command Shell panel. A slash ("/") within the command string indicates the data set name the cursor is on.

Examples

```
TSO
TSO =
TSO ?
TSO ?3
TSO ?DOWNLOAD 'PAYROLL.JONES.CNTL(ACCT1)'
TSO ALLOC FILE(A) DA('ACCT.TEST') OLD
TSO ALLOC FILE(A) DA(/) OLD
TSO DOWNLOAD 'PAYROLL.JONES.CNTL(ACCT1)'
TSO ISPEXEC SELECT PANEL(MY@PRIM)
```

VIEW

The VIEW command invokes a new nested VIEW session, or opens a new MSL with the default meaning of SELECT and S set to VIEW. The VIEW command is used to display sequential data sets and members of partitioned data sets. The displayed data can be changed, but not saved, unless specifically authorized on a confirmation panel. VIEW provides a BROWSE-like facility with the power of EDIT. VIEW cannot display load module format data sets, but automatically invokes BROWSE to do so.

Depending on how ISPF Productivity Tool is installed at your site, VIEW may also process VSAM files, Librarian or Panvalet files, DB2 tables, and installation-defined objects.

Syntax

```
►►──VIEW──┬─curr_lib_member_name──────────────────────┬──►◄
          ├─curr_lib_pattern──────────────────────────┤
          ├─dsname──┬──────────────────┬──────────────┤
          │         └─(member_name)─────┘              │
          ├─DSNpatt─┬────────────────┬─┬──────────┬────┤
          │         └─(MEMpatt)──────┘ └─,volser───┘    │
          └─object_name───────────────────────────────┘
```

Operands

curr_lib_member_name
: The name of a member in the current library, or the last library processed (or, if the screen has been split, the last library processed in this split).

curr_lib_pattern
: A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the current library, or in the last library processed (or, if the screen has been split, the last library processed in this split).

dsname
    The name of the dataset you wish to view.

member_name
    The name of a member in the library specified.

DSNpatt
    A data set name pattern using the wildcard characters "%" and "*" to match the name or names of one or more data sets in the library specified.

MEMpatt
    A member name pattern using the wildcard characters "%" and "*" to match the name or names of one or more members in the library specified.

volser   The volume serial holding the members you wish to view.

object_name
    The name of an IPT supported object, such as a DB2 object (if supported) or UNIX file; see Table 1 on page 11.

Usage notes

If the data set specified is a library and you have not specified a particular member (that is, you have specified only the library name, or have specified a pattern), a member selection list is displayed.

An unqualified two-level data set name must be entered with a leading period to distinguish it from a member name. (If your TSO profile is set to NOPREFIX, a name entered with a leading period refers to a single-level data set name.)

Note: VIEW can be abbreviated to VI (as a command shortcut), subject to change by the local ISPF Productivity Tool admin. The MSL line command V, which can be entered as a main command, invokes a VIEW session on one or more members in the current library.

Examples

```
VIEW
VIEW ACCTSTAT
VIEW ACCT*
VIEW 'PAYROLL.PROD.COBOL'
VIEW 'PAYROLL.PROD.COBOL',PROD02
VIEW 'PAYROLL.PROD.COBOL(ACCT1)'
VIEW 'PAYROLL.PROD.COBOL(ACCT*)'
VIEW DEV.COBOL(PAY*)
VIEW .TESTLIST
```

VIEW general command

Chapter 6. Command shortcuts

This table shows all of the command shortcuts available in ISPF Productivity Tool, and the associated command and operands.

Shortcut	Command	Operands	Remarks
BF	BFILE	'<DSNpatt>(<MEMpatt>)'	Invokes a new "BROWSE VSAM" session, or open a new MSL with the default meaning of SELECT and S set to BFILE.
BR	BROWSE	'<DSNpatt>(<MEMpatt>)'	Invokes a new "BROWSE" session, or open a new MSL with the default meaning of SELECT and S set to BROWSE.
ED	EDIT	'<DSNpatt>(<MEMpatt>)'	Invokes a new "EDIT" session, or open a new MSL with the default meaning of SELECT and S set to EDIT.
EF	EFILE	'<DSNpatt>(<MEMpatt>)'	Invokes a new "EDIT VSAM" session, or open a new MSL with the default meaning of SELECT and S set to EFILE.
EX?	EX??????	N/A	Display TSO Shell permanent command list.
EX=	EX=	N/A	Display TSO Shell most recently executed command.
EX1	EX1	N/A	Execute TSO Shell permanent command number 1.
EX2	EX2	N/A	Execute TSO Shell permanent command number 2.
EX3	EX3	N/A	Execute TSO Shell permanent command number 3.
EX4	EX4	N/A	Execute TSO Shell permanent command number 4.
EX5	EX5	N/A	Execute TSO Shell permanent command number 5.
EX6	EX6	N/A	Execute TSO Shell permanent command number 6.
EX7	EX7	N/A	Execute TSO Shell permanent command number 7.
EX8	EX8	N/A	Execute TSO Shell permanent command number 8.
EX9	EX9	N/A	Execute TSO Shell permanent command number 9.
IDIAG	IDIAG	<parm1>, <parm2>	Invoke ISPF Productivity Tool diagnostics.
IMAINT	IMAINT	N/A	Write out ISPF Productivity Tool maintenance report to DD(IQILOGPR).
IPT	IPTHELP	N/A	Display ISPF Productivity Tool online HELP.
IPT?	IPT?????	N/A	Display all active ISPF Productivity Tool command shortcuts.
IPTCMD	IPTCMDS	OFF|ON	Disable or enable shortcuts.
IPTOF	IPTOFF	N/A	Temporarily disable ISPF Productivity Tool functionality.
IPTON	IPTON	N/A	Enable ISPF Productivity Tool functionality previously disabled with the IPTOFF command.
IPTNEW	IPTNEWS	N/A	Displays "What's New" information for all current versions of IPT.
ISET	ISET	N/A	Display Setting ISPF Productivity Tool Defaults menu.
ISNAP	ISNAP	<parm1>	Write out a memory dump to DD(IQITRSNP).

Command shortcuts

Shortcut	Command	Operands	Remarks
IVER	IVERSION	N/A	Display ISPF Productivity Tool maintenance report.
O*	O*	N/A	Display a list of all permanent OLISTs.
O/	O/	N/A	Populate a new temporary OLIST.
OH	OHIST		Populate a new temporary OLIST with most recently accessed data set names.
OL	OL	<parm1>, <parm2>	Invoke OLIST function with any of supported parameters.
OL*	OL*	N/A	Display a list of all permanent OLISTs.
OL/	OL/	N/A	Populate a new temporary OLIST.
OLB	OLBASE	<DSNpatt>	Populate a new temporary OLIST with generation-data-group base names.
OLBK		<DSNpatt>	Listcat BookManager Books.
OLBO	OLBOOK	<DSNpatt>	Listcat BookManager Books.
OLC	OLCAT	<DSNpatt>	Populate a new temporary OLIST with catalogued data set names matching multiple patterns.
OLDA	OLDASD	<VOL_pat>	Lists online DASD volumes by pattern, similar to the "XV" option of the DSLIST main command.
OLDD	OLDDNAME	<DD_name>	Populate a new temporary OLIST with data set names allocated to a DD.
OLE	OLE	<DSNpatt>	Populate a new temporary OLIST with catalogued data set names of PDSE libraries matching a pattern.
OLG	OLGDG	<DSNpatt>	Populate a new temporary OLIST with generation-data-group data set names showing their relative generation numbers.
OLH	OLHIST		Populate a new temporary OLIST with most recently accessed data set names.
OLI	OLINFO	<DSNpatt>, <VOLpatt>	Populate a new temporary OLIST with catalogued data set names matching specified pattern and issue OLIST "INFO" command on every entry.
OLIS	OLIST	<parm1>, <parm2>	Invoke OLIST function with any of supported parameters.
OLM	OLMIG	<DSNpatt>	Populate a new temporary OLIST with catalogued data set names of migrated (archived) data sets matching a pattern.
OLP	OLPAGE	<DSNpatt>	Populate a new temporary OLIST with catalogued data set names of page-space data sets matching a pattern.
OLPDSE	OLPDSE	<DSNpatt>	Populate a new temporary OLIST with catalogued data set names of PDSE libraries matching a pattern.
OLS	OLSYS	<SYS_type>	Populate a new temporary OLIST with system data sets of a given type.
OLSH	OLSHELF	<DSNpatt>	Listcat BookManager Shelves.
OLT	OLTAPE	<DSNpatt>	Populate a new temporary OLIST with catalogued data set names residing on tapes that are matching a pattern.

Shortcut	Command	Operands	Remarks
OLV	OLVTOC	<VOLpatt>, <DSNpatt>	Populate a new temporary OLIST with data set names residing on volumes matching a pattern with names matching a pattern.
OLVS	OLVSAM	<DSNpatt>	Populate a new temporary OLIST with VSAM cluster names matching a pattern.
OLZ	OLZONE	<DSNpatt>	Listcat SMP/E Zones.
PLIST	PLIST	<parm1>,<parm2>	Invoke OLIST function with any of supported parameters.
VF	VFILE	'<DSNpatt>(<MEMpatt>)'	Invokes a new "VIEW VSAM" session, or open a new MSL with the default meaning of SELECT and S set to VFILE.
VI	VIEW	'<DSNpatt>(<MEMpatt>)'	Invokes a new "VIEW" session, or open a new MSL with the default meaning of SELECT and S set to VIEW.

Note: Shortcuts may be enabled or disabled universally. For more information see "ISPF Productivity Tool command shortcuts" in the *IPT Installation Guide*.

Command shortcuts

Chapter 7. EDIT/VIEW/BROWSE commands

Main Command	Line Command	Remarks
COMPRESS		COMPRESS (page 73) is used to compress the library currently in EDIT or VIEW. This is not to be confused with the MSL COMPRESS command, which is used to compress any library in the hierarchy.
CUT		CUT (page 73) lets you copy or move lines from the currently edited member to clipboard.
EXPDIR		EXPDIR (page 75) is used to expand the directory of the library being edited, thereby allowing more members.
PASTE		PASTE (page 76) can insert lines that were previously cut into a member, or to the printer or the ISPF LIST data set.
SAVE		SAVE (page 78) saves a member (or file), but only when it has been changed.
STATUS		STATUS (page 79) enters information about the current member as NOTE lines at the top of the current display.
SUBMIT		SUBMIT (page 80) submits the current member, data set, or specified member in the same library as a batch job.

COMPRESS

The COMPRESS subcommand is used to compress the library currently in EDIT or VIEW. It is to be distinguished from the MSL COMPRESS command, which is used to compress any library in the hierarchy.

Syntax

```
►►──COMPRess────────────────────────────────────►◄
```

Operands

COMPRESS has no operands.

Examples

```
COMPRESS
COMPR
```

CUT

The CUT subcommand lets you copy or move lines from the currently edited member to one of the clipboards for later pasting or for immediate printing.

Syntax

```
>>──CUT─────────────────────────────────────────────────────────────────────>
         ├─ALL────┤
         └─range──┤ ┌─X──┐
                    ├─NX─┤
                    └────┘

>────┬─REPlace──────────┬──┬─TO──00──────┬──┬──────┬──┬─BROwse─┬──┬─PRInt─┬──┬─SAVe─┬──><
     │         ┌─AFTer─┐ │  └─TO──board──┘  └─FINd─┘  └─EDIt───┘  └───────┘  └──────┘
     ├─APPend──┼───────┤─┤
     │         └─BEFore┘ │
     └─STATUS───────────┘
```
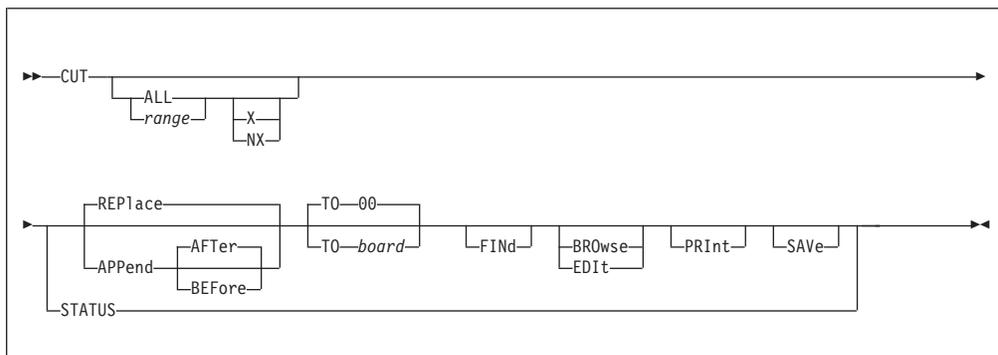
Operands

ALL   Indicates that the entire edited file is to be cut.

range   When entered, is a pair of operands, separated by at least one blank, specifying either the EDIT labels of the first and last lines to be cut or the first and last relative line numbers. If omitted, you can specify the range via the C, CC, M or MM line commands.

X   Indicates that only excluded (non-displayed) lines are to be cut.

NX   Indicates that only displayed (non-excluded) lines are to be cut.

> **Note:** If both X and NX are omitted, both excluded and non-excluded lines are cut.

REPlace
> The cut lines replace the contents of the clipboard. (This is the default.)

APPend
> The cut lines are added to the clipboard at the end or the beginning, as indicated:

AFTer   The cut lines are placed at the end of the clipboard, after any lines already present. This is the default location if APPEND is specified.

BEFore
> The cut lines are placed at the beginning of the clipboard, before any lines already present.

FINd   Displays a prompt panel on which to specify a string to be found. Only lines containing the specified string are cut.

BROwse
> Displays the contents of the clipboard mentioned in the CUT operation.

EDIt   Displays an EDIT panel for the contents of the clipboard mentioned in the CUT operation.

TO *board*
> Indicates that the cut lines are to be sent to a clipboard. *board* specifies the clipboard the cut lines are to be placed in. *board* can be a number (00 to 99) or a name (of up to eight characters). If *board* is not provided, lines are sent clipboard 00.

PRINt   When specified, the contents of the clipboard are also printed.

STAtus
> Displays a list of the current active clipboards. From this list select the target clipboard to receive the entries you are cutting.

SAVe The specified clipboard is made a permanent clipboard. Permanent clipboards are marked in the ACTIVE CLIPBOARD panel with a "*" leftmost against each clipboard name. The contents of permanent clipboards are retained over sessions.

Usage notes

If CUT is entered with any syntax error, the CUT Assistance panel is displayed.

If CUT is entered without any parameters, and you have specified a range with CC or MM, then it means "CUT TO 00". If you have not specified a range, CUT by itself is an error.

Examples

```
CUT
CUT X TO 1
CUT ALL
CUT 5 7 TO MYCLIP APPEND
CUT ALL FIND
CUT TO 9 NX APP BEFORE
CUT ALL FIND BRO
CUT TO 8 X APP AFT
CUT ALL PRINT
CUT .A .ZL
CUT ?                    -- This is an error; the CUT Assistance panel is displayed
```

EXPDIR

The EXPDIR command is used to expand the directory of the library being edited, thereby allowing it to contain more members. It is to be distinguished from the MSL EXPDIR command, which is used to expand any library in the hierarchy.

Syntax

```
                      ┌─1──────────────┐
►►──EXPDIR──BLKS──────┼────────────────┼──────────────────────►◄
                      └─number_of_blocks─┘
```
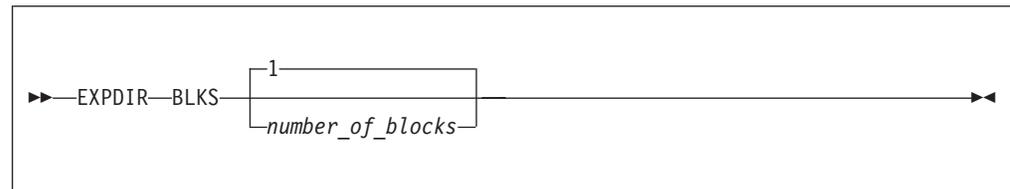
Operands

BLKS Specifies by how many blocks the directory is to be expanded.

number_of_blocks
> The number of blocks by which the directory is to be expanded. If no number is specified, the default is 1.

Usage notes

One block is enough for 5 members with ISPF statistics or 20 members without statistics.

Examples

```
EXPDIR
EXPDIR BLKS 3
```

PASTE

The PASTE command can insert lines that were previously cut into a member, or to the printer or the ISPF LIST data set. In addition, a directory list, the output of a TSO command or another member may also be pasted, the contents of a clipboard may be displayed, or the status and contents of all active clipboards may be displayed.

Syntax
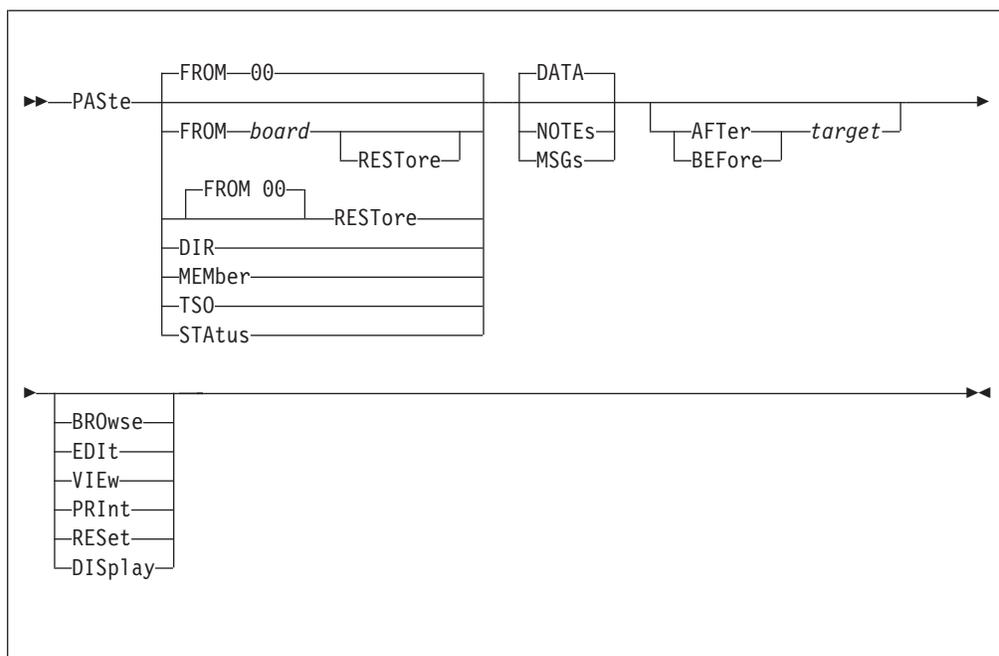
Operands

FROM *board*
> Specifies the clipboard *board*, numbered 00 through 99, or a name (up to eight characters) from which the cut lines are to be retrieved from. If the FROM operand is not supplied, "FROM 00" is the default. (This is the default location into which CUT lines are placed.)

MEMber *member*
> When specified, indicates that the pasted lines should be retrieved from another member in the current PDS.

name   The name of the member to be pasted.

DIR   When specified, displays a panel asking for the name of the library whose directory is to be pasted.

TSO   When specified, displays a TSO prompt panel, allowing you to enter the TSO command whose output should be pasted.

STAtus
>   When specified, displays a list of the currently active clipboards, from which you can select one to paste from, or to display. You can also cancel the PASTE command from this panel.

AFTer   When specified, indicates that the pasted lines should be placed after the indicated line.

BEFore
>   When specified, indicates that the pasted lines should be placed before the indicated line.

target   The line at which the pasted lines should be placed. It may be specified as an EDIT statement label, a relative line number, or one of the following synonyms for ISPF EDIT labels:

EDIT Label	Synonym
.ZF	TOP
.ZL	BOTtom
.ZCSR	CURsor

>   If you do not specify a target in the PASTE command, then you must specify the location at which the pasted lines are to be placed using the ISPF EDIT B (before) or A (after) line commands. If you do neither, this is an error, and the PASTE Assistance panel is displayed.

>   **Note:** Unless you are pasting temporary lines (MSGS or NOTES), there is no default location for PASTE. A location (AFTER, BEFORE, a target specified using the A or B EDIT line commands, or PRINT) is required.

DATA   Indicates that the lines be pasted as normal text lines. This is the default.

NOTEs
>   Indicates that the lines be pasted as temporary =NOTE= lines.

MSGs   Indicates that the lines be pasted as temporary ==MSG>> lines.

BROwse
>   The clipboard you are pasting from is shown in a browse panel. When you press End, the clipboard is inserted at the target position.

EDIt   The clipboard you are pasting from is shown in an edit panel. You can now edit the contents of the clipboard. When you press End, the clipboard is inserted at the target position. Furthermore, the changes that you made editing the clipboard you are pasting from remain in this clipboard. These changes are only made permanent if you save the clipboard.

VIEw   The clipboard you are pasting from is shown in a view panel. You can now select lines from the clipboard, using C or CC line commands. When you press Enter, the lines you have selected from the clipboard are inserted at the target position. If you make no selection, all the lines are inserted.

PRInt   When entered, indicates that the specified data be printed to the printer, or to the ISPF LIST data set, as specified on the SET panel.

DISplay
>   Please use the VIEw option, which does the same thing. DISplay is available in this version of ISPF Productivity Tool for backward compatibility.

RESet Indicates that the current NOTE and MSG lines are to be deleted from the display before the paste operation is performed.

RESTore

Restore from disk a persistent clipboard before pasting it. If you have changed a persistent clipboard as part of your current session, and not yet explicitly saved it, you can use RESTore to change the clipboard back to the value it had at the start of the session. If you have not nominated a clipboard, the default clipboard (00) is restored. So PASTE REST means first restore clipboard 00 from disk, and then paste it.

Examples

```
PASTE
PAS TSO PRINT
PASTE FROM 2 AFTER 5
PASTE VIEW
PAS DIR AFTER 5
PASTE FROM 1 AFTER TOP
PASTE DIR BEFORE BOTTOM
PASTE BEF CUR
PASTE FROM 2 MSG AFT BOT
PAS MEMBER ACCTMAIN AFTER .ZL
PASTE DIR VIE AFTER CURSOR
PASTE FROM 1 NOTES RESET BEFORE .ZF
```

SAVE

The SAVE command has been modified to save a member (or file) only when it has been changed. You may, however, want to force a SAVE (for example, to place the member in a lower level library). A keyword has been added to allow you to force a SAVE to be done even if the member or file has not been changed.

Syntax

```
►►──SAVE──┬───────┬─┬───────┬─┬───────┬────────────►◄
          └─FORce─┘ └─PARse─┘ └─BUIld─┘
```
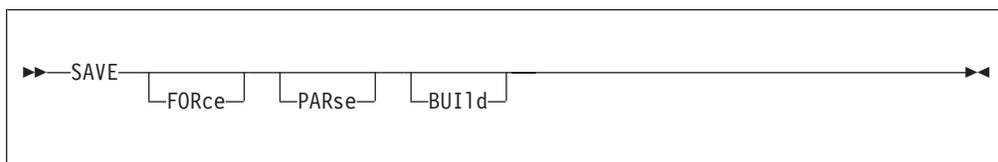
Operands

FORce

Indicates that the member (or file) is to be saved, even if it hasn't been changed since the last time it was saved.

PARse For SCLM controlled editing, parse a member for statistical and dependency information.

BUIld For SCLM controlled editing, build a member. Implies FORce and PARse.

Usage notes

If you issue the SAVE command under VIEW, a confirmation panel is displayed. You can confirm or cancel the requested save operation.

If there is not enough room in the library or the directory to save the member, ISPF Productivity Tool offers to compress the library or expand the directory (as appropriate) before attempting to perform the save operation.

Examples

```
SAVE
SAVE FORCE
SAVE FOR
SAVE BUILD
save PROMOTE
```

STATUS

The STATUS command enters information about the current member as NOTE lines at the top of the current display. In addition, if requested, only lines changed in the current or a specified modification level are displayed (others are excluded).

The information displayed includes:

- The member name.
- The record format and size.
- Whether anything in the member was changed since the last time the member was saved, and if so, how many lines have changed.
- The current directory entry of the member.

Syntax

```
▶▶──STAtus──┬──────────────────────────┬──▶◀
            ├─Changes─┬────────────┬────┤
            │         └─Level──nn──┘    │
            └─SCLM─────────────────────┘
```
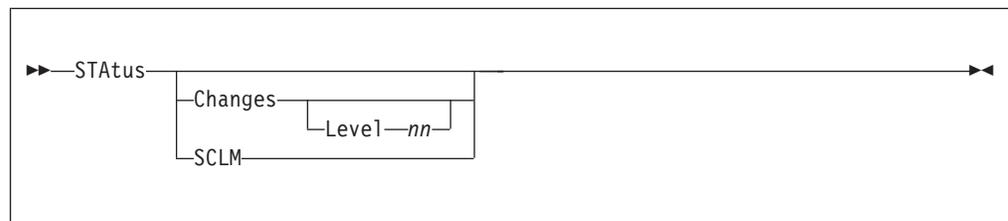
Operands

Changes
　　　If specified, indicates that only lines changed in the current modification level (the default) or the specified modification level are to be displayed. All other lines are to be excluded.

Level　If specified, indicates the modification level of which changed lines are to be displayed. The default is the current modification level.

nn　　　Indicates the modification level of which changed lines are to be displayed.

SCLM　For SCLM controlled edit, displays the SCLM accounting and referenced members.

Examples

```
STATUS
STATUS CHANGES
STATUS C LEVEL 2
STATUS CHA LEV 2
STA C L 2
```

SUBMIT

The SUBMIT command submits the current member or data set or a specified
member in the same library as a batch job.

Syntax

```
►►──SUBmit──┬──range───────┬──────────────────────────────────►◄
            └──member_name─┘
```
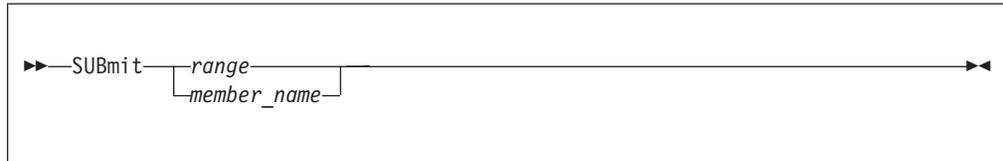
Operands

range   An EDIT label-range.

member_name
          The name of a member in the current library.

Usage notes

If no *member_name* is specified, the current member or data set is submitted.

Examples

```
SUBMIT
SUB
SUB .A .ZL
SUBMIT ACCTMAIN
SUB ACCTMAIN
```

Chapter 8. MSL commands

MSL commands are commands that you enter when a Member Select list is displayed.

Main command	Line command	Remarks
	=	The = command (page 84) repeats the preceding line command
	%	The % command (page 85) executes the CLIST/REXX EXEC specified on the RENAME column
ALIas	A	The ALIas command (page 85) creates an alias to a member.
ASSIST	N/A	The ASSIST command (page 86) controls the display of MSL assist windows on the member selection list panel.
B	B	The B command (page 87) invokes the BROWSE process on the specified one or more members. The B command can be used as a line command or a main command.
COMPress	N/A	The COMPress command (page 88) is used to compress one or more of the libraries in the current concatenation hierarchy. It is to be distinguished from the EDIT and VIEW subcommand COMPress, which is used to compress the library currently in EDIT or VIEW (page: 73).
CONFIRM	N/A	The CONFIRM command (page 89) activates or deactivates the member-delete confirmation screen.
Copy	C	The Copy command (page 89) copies the specified one or more members to the same or a different library. Copy can be used as a main command. C can be used as a line command or a main command.
COPYALl	N/A	The Copyall command (page 90) copies all members of a PDS or PDSE to another library.
DEFault	N/A	The DEFault command (page 91) is used to change the default process invoked by the SELECT (page 120) and S commands during the current MSL session.

Delete	D	The Delete command (page 92) deletes one or more members specified from the library containing them.
		`'Delete'`
		
		can be used as a main command.
		`D`
		
		can be used as a line command or a main command.

DSName	N/A	The DSName command (page 93) is used to change the member selection list to another library, to refresh the current display, or to invoke the current process (BROWSE, EDIT, or VIEW) on a specified data set.
Edit	E	The E command (page 95) invokes the EDIT process on the member named.

MSL commands

Main command	Line command	Remarks
EMPty	N/A	The EMPty command (page 96) is used to empty one or more of the libraries in the current concatenation hierarchy.
EXCLude	X	The EXCLude command (page 96) is used to eliminate members from the member selection list display (or to unexclude all excluded members). The line command equivalent of 'EXCLude' is X.
EXIT	N/A	The EXIT command (page 97) is used to return directly to the panel from which MSL was invoked.
EXPDIR	N/A	The EXPDIR command (page 97) is used to expand the directory of one of the libraries in the current concatenation hierarchy, thereby allowing it to contain more members. It is to be distinguished from the EDIT and VIEW subcommand EXPDIR (page 75), which is used to compress the library currently in EDIT or VIEW.
FILter	N/A	The FILter command (page 98) is used to selectively tailor the display of members in the member selection list (or to remove all filtering).
Find	N/A	The Find command (page 99) locates a particular member in the member selection list. If the member is in the hidden list, it is displayed in the MSL.
FindText	N/A	The FINDTEXT (or FT) command (page 100) locates the next member in the displayed list that contains a specified text string.
FLIP	N/A	The FLIP command (page 102) toggles between visible and invisible (excluded and filtered-out) lines.
Global	N/A	The Global command (page 102) is used to initiate global editing of the members in the displayed member list.
H	H	The H command (page 103) indicates in which libraries of the concatenation one or more members occur. The synonym for H is WHERE.
INFO	N/A	The INFO command (page 104) is used to display information about the libraries in the current concatenation sequence of the MSL.
ISPEXEC	I	The ISPEXEC command (page 104) invokes ISPEXEC on the one or more members specified.
J	J	The J command (page 105) submits a member as a batch job. The synonym for J is SUBMIT.
K	K	The K command (page 106) is used for library management functions, under SCLM.
LIB	N/A	The LIB command (page 107) allows you to switch to other libraries by changing the middle level qualifier (GROUP) of the current displayed libraries. In a hierarchy, the LIB command adds or removes a library to the concatenation.
LMAP	N/A	The LMAP command (page 108) is used to display a load module mapping.
Locate	N/A	The Locate command (page 109) positions the cursor in the member selection list panel at the first member matching the specified character string.

Main command	Line command	Remarks
MAPpds (PDS only)	N/A	The MAPpds (PDS only) command (page 110) displays a list of PDS members, including deleted members, which can then be restored.
Move (PDS only)	M	The Move (PDS only) command (page 111) moves one or more members specified to a different data set.
MOVEALl		The MOVEALl command (page 112) moves all of the members in a data set to a different data set.
P	P	The P (Main command) command (page 113) prints one or more members specified to a printer or to the ISPF LIST data set, as specified on the SET panel. The P (Line command) command (page 114) copies the one or more members specified.
PROJECT	N/A	The PROJECT command (page 115) changes the library (or libraries) being processed to one (or ones) with the same name (or names) as currently displayed except that the high-level qualifier is as specified in the command.
REFRESH	N/A	The REFRESH command (page 114) refreshes the member selection list display from the current directory.
RELease	N/A	The RELease command (page 115) is used to close or delete the current print group. This is applicable only if the PRINT processing mode is set to GROUP.
Rename	R	The Rename command (page 116) renames a member in the current member selection list.
RESet	N/A	The RESet command (page 117) is used to reset some or all of the tailoring of the current member list. It can be used to unexclude all excluded members, remove all filters, clear the RENAME field, and restore the default sorting (ascending by member name).
S	S	The S line command (page 118) selects an item and invokes the default process for that item. (The default process depends on the type of object, how MSL was invoked, and the setting on the ISPF Productivity Tool Options panel for MSL.) S can be used as a line command or, following a member, as a main command.
SAVE		The SAVE command (page 118) writes the currently displayed member selection list to a user-specified data set, a printer, or the ISPF LIST data set.
SCLMCMD	K	The SCLMCMD command (page 119) performs the specified SCLM function on the members (active only if SCLM support is active for the user).
SCLMPARM		The SCLMPARM command (page 120) displays the SCLM parameters active for the current library (active only if SCLM support is active for the user).
SELECT	S	The SELECT command (page 120) processes members under the default process (BROWSE, EDIT, or VIEW), or another line command specified.
SORT		The SORT command (page 121) is used to put the member selection list into a specified order.
SSI		The SSI command (page 122) displays SSI information for the specified members.

Main command	Line command	Remarks
STATS	Z	The STATS command (page 122) creates, removes, or allows the user to change statistics of members.
SUBmit	J	The SUBmit command (page 123) submits a member as a batch job.
TAG		The TAG command (page 125) places a character string in the RENAME field of the member list of members that match the specified name or pattern.
TAILOR		The TAILOR command (page 126) executes the MSL command or commands defined as your tailoring macro. The TAILOR command can also be used to display and change the current definition.
TOTALS		The TOTALS command (page 127) displays statistics totals for the non-excluded, non-filtered members.
TSO	T	The T command (page 124) invokes the specified TSO command or CLIST on the one or more members specified.
TYPE		The TYPE command (page 127) changes the library (or libraries) being processed to one (or ones) with the same name (or names) as currently displayed
UNFilter		The UNFilter command (page 127) removes the most recently applid filter, or all filters.
USAGE		The USAGE command (page 128) lists library members currently in use under ISPF from the displayed list, including the user IDs of the TSO users accessing them.
View	V	The V command (page 128) invokes the view process on the one or more members specified.
W	W	The W command (page 129) displays a preview window in the member selection list for the member named.
WHERE	H	A synonym of the H command (page 103)
X		Use the X command (page 131) to eliminate members from the member selection list display (or to unexclude all excluded members).
Z		The Z command (page 131) creates, removes, or changes statistics of members.

All MSL line commands can be entered as group commands. See "Group commands" on page 50 for more information.

=

The = command invokes the immediately preceding line command on the member named.

Syntax

```
►►─=─member_name──────────────────────►◄
          └─operand─┘
```
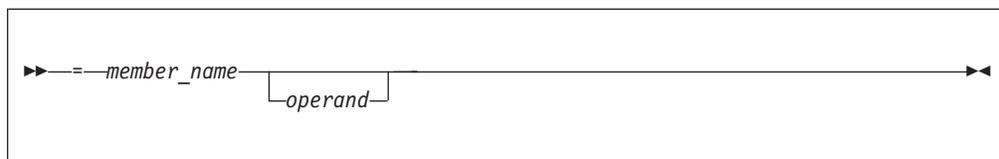
Operands

member_name
>   The name of the member in the current member selection list.

operand
>   The second operand, if any, appropriate to the previous command.

Usage notes

This command can be used only as a line command.

If the previous command accepts (or requires) a second operand, the corresponding operand can (or must) be entered in the RENAME column.

Feedback messages

The feedback message depends on what processing was invoked.

%

The % command executes the CLIST/REXX EXEC specified on the RENAME column, passing to the executed command the name of the library where the member resides along with the member name.

Usage notes

% can only be used as a line command.

Use this command for local MSL commands. The CLIST/REXX EXEC invoked has access to the same variables available through the T line command.

Examples

```
  NAME      RENAME   LIB VV.MM CREATED     CHANGED   ...
  ACCTMAIN            2 01.00 91/09/02 91/09/02 08:28...
  ACCTSTAT            2 02.00 91/09/02 91/09/02 18:49...
% CICSSTAT  UPLOAD    4 01.12 91/08/03 91/08/13 18:32...
  CICSTRAN            3 01.04 91/04/26 91/09/03 08:58...
  PAYROLM            2 01.20 91/08/23 91/09/02 18:07...
```

ALIas

The ALIas command adds an alias name to an existing member. An alias is an additional (different name) directory entry pointing to same first block of data as the member's primary (or parent) directory entry. A delete of an alias entry simply removes it from the directory. A member is considered "deleted" when all directory entries (primary and aliases) pointing to its data are removed from the directory.

Syntax

```
►►──ALIas──member_name──alias──────────────────────────────────►◄
```

Operands

member_name
> A member name or pattern.

alias   A new alias name. If multiple members are aliased (a pattern is used, instead of a member name), use = sign to specify identical characters.

Usage notes

ALIas is a main command. The line command equivalent of ALIas is A. Specify the alias name in the RENAME field of the primary entry.

PDSE program-objects are not supported.

Examples

```
ALI ABC XYZ      - Make XYZ an alias of ABC
ALI IQ* IP=====  - To member names starting
                   with IQ create aliases
                   starting with IP
```

ASSIST

The ASSIST command controls the display of MSL assist windows on the member selection list panel.

Syntax

```
►►──Assist───────────────────────────────────────────────────►◄
            └─command_name─┘
```
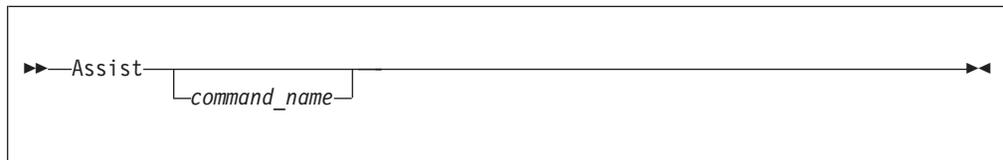
Operands

command_name
> The name of the command for which you want to see an assist window. If omitted, the whole list of available MSL commands is displayed.

```
 -IPT--BROWSE L1---- SYS1.MACLIB --------------------------ROW 00001 OF 01803
 COMMAND  ===>                                               SCROLL ===> CSR
HOTBAR: REFRESH  TAI ?    SET      INFO     EXPDIR    MAP       COMPRESS FLIP

    NAME    RENAME   LIB VV.MM CREATED    CHANGED     SIZE  INIT   MOD USERID
    ABEND            +------------------------------------------------Assist --+
 _  ACB            |       ---- -IPT- MSL MAIN COMMANDS ----           |
 _  ACBVS          |   Assist   ALIas   COMPress CONFirm  COPYALl  DEFault  |
 _  ACI            |   DSName   EMPty   eXclude  EXIT     EXPDIR   FILter   |
 _  ACYAPHDH       |   Find     FindText FLIP    Global   INFO     LIB      |
 _  ADREID0        |   LMAP     Locate  MAPpds   MOVEALl  PROject  QUIT     |
 _  ADRMCLVL       |   REFresh  RELease RESet    RFind    SAVE     SClm     |
 _  ADSR           |   SCLMPARM SET     SORT     SSI      STATS    SUBmit   |
 _  ADYDSTAT       |   TAG      TAILOR  TOTALS   TYPE     UNFilter USAGE    |
 _  ADYENF         |   VLF      WHERE   XFER                                |
 _  AHLFFAP        |       ---- -IPT- MSL LINE COMMANDS ----            |
 _  AHLMCWRC       |   A (alias)  B (browse)  C (copy)    D (Delete) E (edit) |
 _  AHLWKAL        |   H (where)  I (ISPEXEC) J (submit)  K (SCLM)   L (lmap) |
 _  AHLZGTO        |   M (move)   P (print)   R (rename)  S (select) T (TSO)  |
 _  AHLZGTS        |   V (view)   W (preview) X (exclude) Z(stats)           |
 _  ALESERV        |   = (repeat) % (CLIST/REXX call)                        |
 _  AMDSADMP       |   Use "A <cmd_name>" to display details window.         |
                   +--------------------------------------------------------+
```

Usage notes

ASSIST is a main command only. It cannot be used as a line command.

You may enter any main command or line command while the assist window is displayed.

Examples

```
ASSIST
A
ASSIST COPY
ASSIST C
A DEL
```

B

The B command invokes the BROWSE process on the specified one or more members. The B command can be used as a line command or a main command.

Syntax

```
►►─B─┬─member_name─┬──┬──────┬───────────────────────────────►◄
     └─DSNpatt─────┘  └─DATA─┘
```
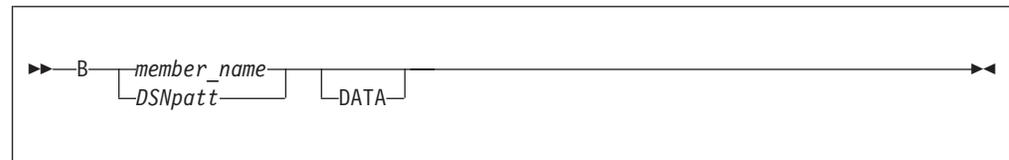
Operands

member_name
> The name of the member in the current member list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

DATA Invoke the installation-defined data editor (for example, a VSAM editor) to process this member.

Usage notes

"B" is not equivalent to BROWSE. BROWSE opens a nested level of BROWSE.

When you use B as a main command, you can specify a pattern. If you specify a pattern, each member matching the pattern is browsed.

Feedback messages

BROWSED	The member was browsed.
DELETED	The member was deleted before the BROWSE operation was initiated.
IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
NO AUTH	Since you began working, your access to the library has been revoked.

Examples

```
B ACCTMAIN
B *cCCT*
B AC%%MAIN
```

COMPress

The COMPress command is used to compress one or more of the libraries in the current concatenation hierarchy. It is to be distinguished from the EDIT and VIEW subcommand COMPress, which is used to compress the library currently in EDIT or VIEW.

Syntax
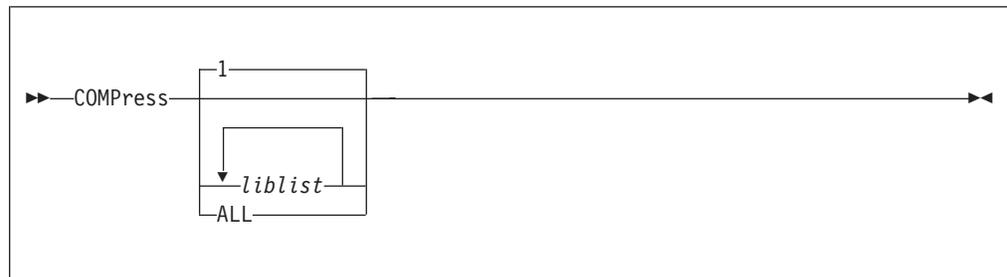
Operands

liblist   Comprises one or more library numbers (if more than one is allocated) separated by blanks. If omitted, the first library (library 1) is compressed.

ALL   All the concatenated libraries in the MSL.

Usage notes

COMPress is a main command only. It cannot be used as a line command.

Examples

```
COMPRESS
COMPRESS 3
COMPRESS 2 4
COMP ALL
```

CONFIRM

The CONFIRM command activates or deactivates the member-delete confirmation screen.

Syntax

```
                   ┌─ON─┐
►►─ CONFIRM ───────┼────┼── DATA ─────────────────────────────────────►◄
                   └OFF─┘
```
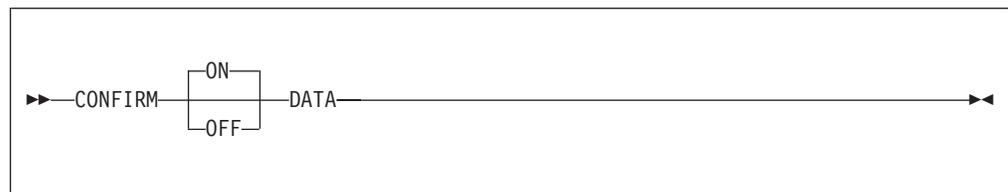
Where the response is CONFIRM ON or CONFIRM OFF.

Operands

ON   Activates the member-delete confirmation screen. The default is ON.

OFF   Deactivates the member-delete confirmation screen.

Examples

```
confirm ON
confirm OFF
```

COPY

The Copy command copies the specified one or more members to the same or a different library.

Syntax

```
►► ─ Copy ─┬── member_name ──┬─ out_member_name ─┬──────────────────────►◄
           │                 └─lib──────────────┘
           └─ DSNpatt ──────────
                       └─lib─┘
```
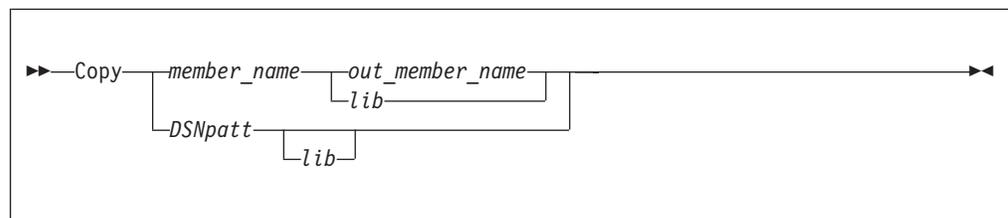
Operands

member_name
>The name of the member in the current member list to be copied.

DSNpatt
>A member name pattern using the wildcard characters "%" and "*".

out_member_name

The target member name. It is placed in the first library of the hierarchy, regardless of the current location of the source member.

lib The number of the library in the current concatenation list to which the source is to be copied.

Usage notes

Copy can be used as a main command. C can be used as a line command or a main command.

If C is entered as a line command, type the destination in the RENAME field of the member selection list.

With Copy or C as a main command, a pattern may be specified. In this case, each member matching the pattern is copied. If a pattern is specified, a target member name cannot be specified in the command. (A panel is displayed on which target member names can be individually specified.)

If no destination is specified, a Copy prompt panel is displayed. This panel allows specification of any data set as the destination.

Feedback messages

-COPIED	The member was copied.
-COPY ER	The member wasn't copied because an error occurred.
-DELETED	The member was deleted before the operation was initiated.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-NO AUTH	Since you began working, your access to the library has been revoked.
-NO REPL	The member wasn't copied because the REPLACE option was set to NO.
-NOT OLD	You specified that the target is to be replaced only if it is newer than the source, and the source is not older than the target.
-NO STAT	You specified that the target is to be replaced only if it is older or newer than the source, and either the source or the target was lacking statistics.

Examples

```
C *CCT*
C ACCT 2
C ACCT%11
C ACCT* 3
C PAYROL1
C PAYROL1 PAYROL
COPY PAYROL1 PAYROL
```

COPYALI

The COPYALl command copies all the members of a PDS or PDSE to a different library.

Syntax

```
►►──COPYAL1──────────────────────────────────────────────►◄
```

Operands

This command has no parameters.

Usage notes

When you invoke this command, you are shown the "COPY ALL" panel, at which you enter the target library (either by naming it directly, or by selecting from the @H history list).

You also specify whether you want to replace like-named library members. If you specify Y, then all like-named members in the target library are replaced by members from the source library. If you specify N, then like-named members are not copied from the source library, and in effect the "copy all" becomes "copy some".

All present members are copied, regardless of any prior filtering.

Feedback messages

|	
-COPIED	The member was copied.
-COPY ER	The member wasn't copied because an error occurred.
-DELETED	The member was deleted before the operation was initiated.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-NO AUTH	Since you began working, your access to the library has been revoked.
-NO REPL	The member wasn't copied because the REPLACE option was set to NO.
-NOT OLD	You specified that the target is to be replaced only if it is newer than the source, and the source is not older than the target.
-NO STAT	You specified that the target is to be replaced only if it is older or newer than the source, and either the source or the target was lacking statistics.

Examples

```
COPYAL
```

DEFault

The DEFault command is used to change the default process invoked by the SELECT and S commands during the current MSL session.

Syntax

```
►►──DEFault─────────────────────────────────────────────────────────►◄
           ├─E─┤
           ├─V─┤
           └─B─┘
```
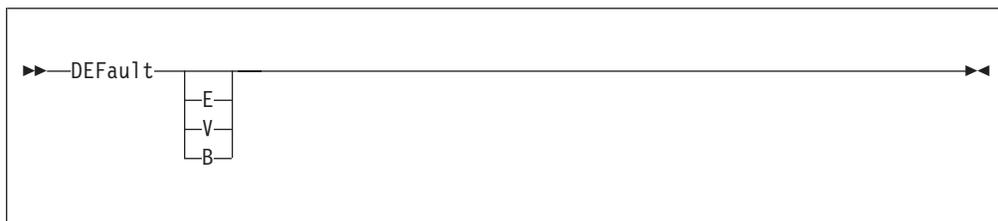
Operands

E   Invoke the E line command when the SELECT or S command is used in a member selection list.

V   Invoke the V line command when the SELECT or S command is used in a member selection list.

B   Invoke the B line command when the SELECT or S command is used in a member selection list.

Usage notes

DEFault is a main command only. It cannot be used as a line command.

If the operand is omitted, the current default is displayed.

Examples

```
DEFAULT E
DEF B
DEF
```

Delete

The DELETE command deletes one or more members specified from the library containing them.

Syntax

```
►►──Delete──┬─member_name─┬──┬─PROMPT────┬──────────────────────────►◄
            └─DSNpatt─────┘  ├─CONFIRM───┤
                             ├─NOPROMPT──┤
                             └─NOCONFIRM─┘
```
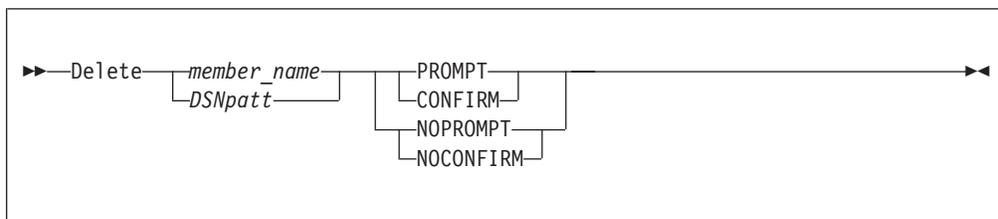
Operands

member_name
    The name of the member in the current member list to be deleted.

DSNpatt
    A member name pattern using the wildcard characters "%" and "*".

PROMPT

A keyword indicating that the delete prompt panel is to be displayed. "CONFIRM" is a synonym for "PROMPT".

NOPROMPT

A keyword indicating that the delete prompt panel is not to be displayed. "NOCONFIRM" is a synonym for "NOPROMPT".

Usage notes

DELETE can be used as a main command. D can be used as a line command or a main command.

When the command is used specifying a member, a delete confirmation panel is displayed. It shows the selection list entry of the member being deleted as well as the top of the member.

When DELETE, DEL, or D is used as a main command, a pattern may be specified. In this case, a confirmation panel for the entire group is displayed. By default, a confirmation panel for the deletion of each member of the group is also displayed. You can suppress the display of these individual confirmation panels.

Feedback messages

-DELETED	The member was deleted.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-NO AUTH	Since you began working, your access to the library has been revoked.
-REVEALD	Another member with the same name was found in a higher level library, and is now being displayed in the MSL instead of the deleted one.

Examples

```
DELETE ACCTMAIN
DEL STAT1
D PANEL1
D PANEL1 PROMPT
DEL *CCT*
DEL *CCT* NOPROMPT
DEL *CCT* NOCONFIRM
```

DSName

The DSName command is used to change the member selection list to another library, to refresh the current display, or to invoke the current process (BROWSE, EDIT, or VIEW) on a specified data set.

Syntax

```
►►── DSName ──┬── libnum ──────────────────────┬──┬────────┬──►◄
             └── dsname ──┬──────────────────┬─┘  └─ volser ─┘
             │           ├──(member_name)──┤
             │           └──(DSNpatt)───────┘
             └── = ──────────────────────────
```
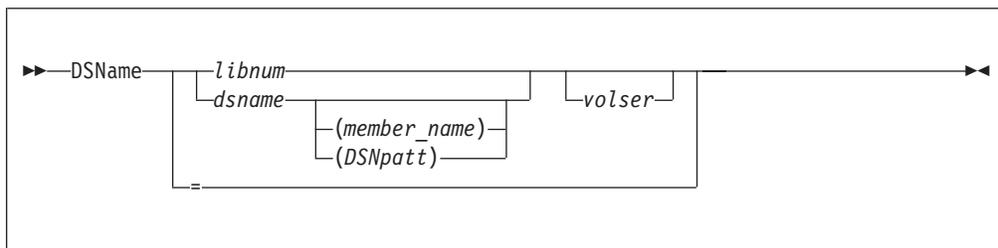
Operands

libnum   The number of the library in the current concatenation list for which a
member list is to be displayed

dsname

The name of a sequential data set or a library. If not enclosed in quotation
marks, the current TSO prefix is prefixed to the name.

member_name

The name of the member in the library specified.

DSNpatt

A member name pattern using the wildcard characters "%" and "*".

volser   The volume serial number of the library or data set to be processed.

=   The equals sign (=) forces ISPF Productivity Tool to refresh the member list
of the current library or libraries. If this operand is specified, volser cannot
be specified.

Usage notes

DSName is a main command only; it cannot be used as a line command.

If no operand is specified, the main entry panel of the current function (BROWSE,
EDIT, or VIEW) is displayed. You can specify several libraries in an ISPF hierarchy.

If a particular member of a library is specified, the current default process
(BROWSE, EDIT, or VIEW) is invoked on that member. If a library is specified
without any member or pattern, an MSL is invoked for that library. This has the
effect of changing the current library. If a library is specified with a pattern, an
MSL is invoked for that library, filtered to include only members whose name
match the pattern. This also has the effect of changing the current library. If a
sequential data set is specified, the current default process (BROWSE, EDIT, or
VIEW) is invoked on that data set.

Examples

```
DSNAME
DSN =
DSN 2
DSN 'PAYROLL.JONES.COBOL'
DSN MYLIB(A%C*)
DSN JONES.COBOL CICS01
DSN 'ROGER12.ISPLOG1.LIST'
DSN A.COBOL(ABC)
```

E

The E command invokes the EDIT process on the member named.
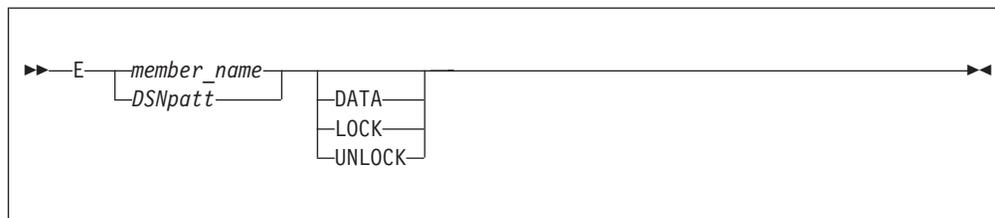
Syntax

```
>>--E----member_name-----------------------------------><
        |_DSNpatt____|  |_DATA___|
                        |_LOCK___|
                        |_UNLOCK_|
```

Operands

member_name
> The name of the member in the current member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

DATA Invoke the installation-defined data editor (for example, a VSAM editor) to process this member.

If not specified, the EDIT default (as specified on the entry panel or via the SET command) for locking is used.

Usage notes

E is not equivalent to EDIT. EDIT opens a nested level of EDIT.

E can be used as a line command or a main command. If E is entered as a line command, enter the locking parameter (if required) in the RENAME field.

When you use E as a main command, you can specify a pattern. If you specify a pattern, each member matching the pattern is browsed.

E ACCTMAIN	E ACCT*
E ACCTMAIN LOCK	E STAT1 NOLOCK

Feedback messages

-IN USE	The member wasn't edited because it was in use.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-NO AUTH	Since you began working, your access to the library has been revoked.
-NO SAVE	The member wasn't saved.
-SAVED	The member was saved. This feedback message is displayed if the member was saved at any time during the current edit session, whether or not SAVE or END was the last command issued.

EMPty

The EMPty command is used to empty one or more of the libraries in the current concatenation hierarchy.

Syntax
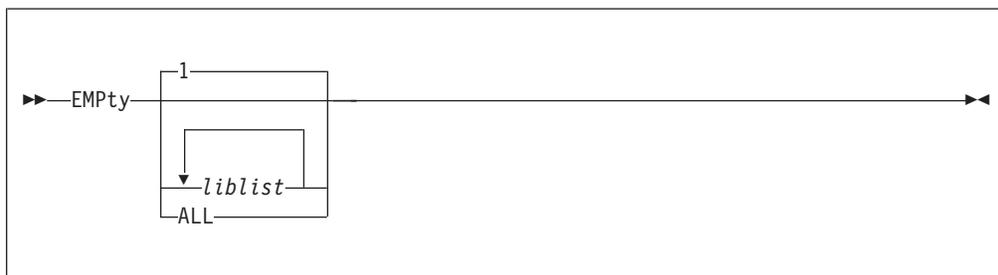
```
>>--EMPty----------1----------------------------------------------><
                |                  |
                |  +----------+    |
                |  v          |    |
                +----liblist--+----+
                |                  |
                +--ALL-------------+
```

Operands

liblist Comprises one or more library numbers (if more than one is allocated) separated by blanks. If omitted, the first library (library 1) is emptied and compressed.

ALL All the concatenated libraries in the MSL.

Usage notes

EMPty is a main command only. It cannot be used as a line command. Before IPT empties a library, as a precaution, it prompts the user for a final confirmation.

Examples

```
EMPTY
EMPTY 3
EMPTY 2 4
EMP ALL
```

EXCLude

The EXCLude command is used to eliminate members from the member selection list display (or to unexclude all excluded members).

Syntax

```
>>--EXCLude----member_name----------------------------------------><
              |             |
              +--DSNpatt----+
```
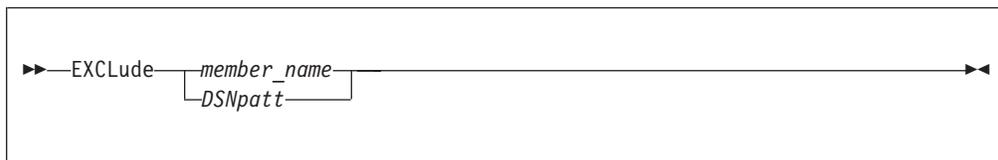
Operands

member_name
 The name of the member in the current member selection list.

DSNpatt
 A member name pattern using the wildcard characters "%" and "*".

Usage notes

If no operand is specified, all excluded members are unexcluded.

EXCLude is a main command. The line command equivalent of EXCLude is X.

Feedback messages

None. The specified members are removed from the displayed member selection list.

Examples

```
EXCLUDE ACCTMAIN
EXCLUDE *TAT*
EXCLUDE TEXT%%X
EXCLUDE *
EXCLUDE
```

EXIT

The EXIT command is used to return directly to the panel from which MSL was invoked.

Syntax

```
►►──EXIT──────────────────────────────────────────────────►◄
```

Operands

EXIT has no operands.

Usage notes

EXIT is a main command. It cannot be used as a line command.

Examples

```
eXIT
```

EXPDIR

The EXPDIR command is used to expand the directory of one of the libraries in the current concatenation hierarchy, thereby allowing it to contain more members. It is to be distinguished from the EDIT and VIEW subcommand EXPDIR, which is used to compress the library currently in EDIT or VIEW.

Syntax

```
►►──EXPDIR──┬──────────────────┬──┬────────────────────────────┬──►◄
            │         1        │  │  BLKS──┬──────1────────────┬│
            └──library_number──┘  └────────└──number_of_blocks─┘┘
```
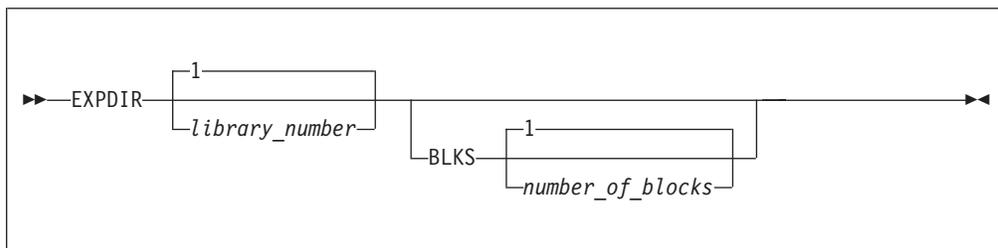
Operands

library_number
> The number of the library whose directory is to be expanded. If no number is entered, the default is 1.

BLKS   Specifies by how many blocks the directory is to be expanded.

number_of_blocks
> The number of blocks by which the directory is to be expanded. If no number is entered, the default is 1.

Usage notes

EXPDIR is a main command. it cannot be used as a line command.

One block is enough for 5 members with ISPF statistics or 20 members without statistics.

Examples

```
EXPDIR
EXPDIR 2
EXPDIR BLKS 3
EXPDIR 3 BLKS 4
```

FILter

The FILter command is used to selectively tailor the display of members in the member selection list (or to remove all filtering).

Syntax

```
        ┌──────────────────────────────────────────────┐
►►──FILter──┬──DSNpatt──┬────────────────────────────┬──┴──►◄
            │           └──field_name──field_pattern─┘
            └──field_name──field_pattern─────────────────
```
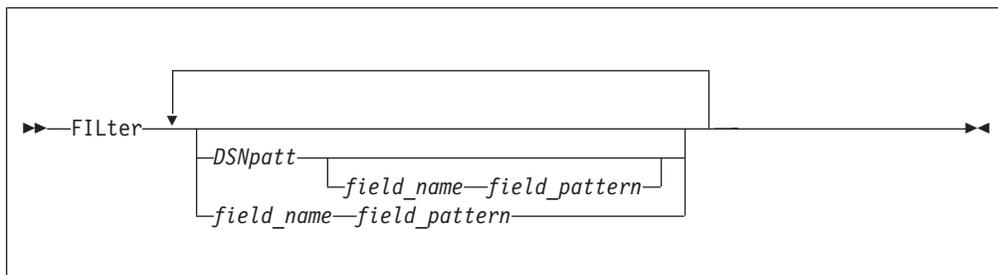
Operands

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

field_name
> The name of a member selection list column heading.

field_pattern
> A pattern for values of the corresponding field using the wildcard characters "%" and "*".

Usage notes

If no operand is specified, all filtering is removed.

FILter is a main command only; it cannot be used as a line command.

Up to six patterns (on six different fields), including member- name, may be specified in a single invocation; only the field name for the member name may be omitted, and only when it is the first pattern.

The FILter command operates on the current MSL, removing from the list all members that do not match the pattern or patterns specified (and placing them on the hidden list).

To see members that have been filtered, enter `FLIP` and to remove all filtering, enter `RESET ALL`.

You can also specify a relative date keyword: TODAY, WEEK, MONTH, YEAR, RECENT (defined to the last ten days), or the minus sign followed by the number of days (from today). The relative date function can only be specified as the last parameter when invoking the FILTER command. The relative date must be in the ISPF US data notation format in the member list (YY/MM/DD).

Examples

```
FILTER ACCT*
FILTER CHANGED 87/02* USERID R%%%R*
FILTER CHANGED WEEK
FILTER CHA -20
FIL CREATED 87* CHANGED 87/02*
FIL AC* LIB 2 RENT YES REFR YES AMODE ANY RMODE ANY
FILTER
FIL
```

Find

The Find command locates a particular member in the member selection list. If the member is in the hidden list, it is displayed in the MSL.

Syntax

```
►►──Find──┬──member_name───┬─────────────────────────────►◄
          ├─'search_string'─┤
          └─"search_string"─┘
```

Operands

member_name
> The exact name of the member that is to be located in the member.

search_string
> A search string. When a quoted search string is supplied, the Find command becomes equivalent to the FindText command.

Usage notes

Find is a main command only; it cannot be used as a line command.

The entire MSL is searched (including members that have been filtered out or excluded) for an exact match. If no match is found in either the displayed or hidden list, the directory of the library (or libraries) is reread, in case another user has recently added the member specified to the MSL. If there is still no match, a LOCATE command is issued for the *member_name* on the displayed list (to display the closest match).

If the automatic preview option is set, Find displays a preview window of the member located. To control this option, use the SET command.

To restrict the search to the displayed list, use the LOCATE command.

Examples

```
FIND STAT1     - Find member name STAT1 in any of the contatenated libraries
F ACCTMAIN     - Find member name ACCTMAIN in any of the contatenated libraries
F 'task'       - Find member containing string TASK
F "a'B"        - Find member containing string A'B
F X'abac'      - Find member containing two bytes
                   hexadecimal string of X'ABAC'
```

FINDTEXT

The FINDTEXT (or FT) command locates the next member in the displayed list that contains a specified text string. The search is constrained by the start and end columns (see Figure 34 on page 211).

Syntax

```
>>--+-FINDTEXT-+--+--------------------------------------+--><
    '-FT-------'   '-text_string-+-------+----------------'
                                 +-All---+
                                 +-First-+
                                 +-Last--+
                                 +-Next--+
                                 '-Prev--'
```

Operands

text_string
> The string to be found. If it contains blanks or special characters, enclose the text-string in quotation marks. The text string can be hexadecimal and case-sensitive SBCS characters, as well as DBCS search strings. A text string that includes single quotes (') should be enclosed with double quotes (").

> FINDTEXT handling of ampersand (&) characters in search strings conforms to ISPF EDIT conventions.

All All members are searched, and finds are flagged for each member.

First Finds the first member where a match is found.

Last Finds the last member where a match is found.

Next Starts the search from the member immediately below the one at the top of the panel.

Prev Finds the previous member where a match is found.

If no parameters are entered, you are presented with the Quick Find and Global Edit Commands panel, where you can adjust the global FIND parameters.

If no keyword is entered, the search starts from the member at the top of the display.

Usage notes

FINDTEXT is a main command only; it cannot be used as a line command.

The listing is positioned so that the member containing the text string is the first member on the panel. (This is pertinent to the operation of the NEXT and PREV keywords.) The feedback message -TXT FND is placed in the rename column and part of the found line is displayed in the member's statistics area. Processing of the FINDTEXT command is controlled by the PROMPT AFTER option of the GLOBAL processing options (set via the SET command). After the specified number of members have been unsuccessfully processed, FINDTEXT stops processing.

Use the RFIND command (or PF key) to continue the search. The RFIND command and the PF key set to RFIND (usually PF 5) can be used to reissue the FINDTEXT command (with the identical text string) to locate the next member containing that string. Using RFIND, if the first member on the display does not contain the feedback message -TXT FND, the search begins from the first member on the display. If the first member does contain the feedback message -TXT FND,

the search begins with the second member. Use the PF key set to RFIND with a new text string on the command line to continue the search with the string.

Examples

```
FINDTEXT ACCOUNTS
FT ACCOUNTS
FT 'MAJOR ACCOUNTS'
FT ' JOB ' LAST
FT MSGCLASS=(1,1)
FT "MOVE 'TAX' TO HEADING"  ALL
```

Feedback messages

-TXT FND	The member contains the specified text string.

FLIP

The FLIP command toggles between visible and invisible (excluded and filtered-out) lines.

Syntax

```
►►─FLIP──────────────────────────────────────────►◄
```
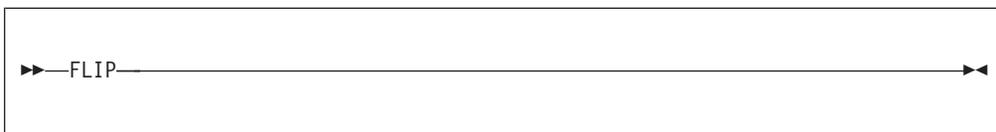
Operands

FLIP has no operands.

Examples

```
FLIP
```

Global

The Global command is used to initiate global editing of the members in the displayed member list.

Syntax

```
►►─Global─┬──────────────┬─────────────────────►◄
          └─edit_command─┘
```
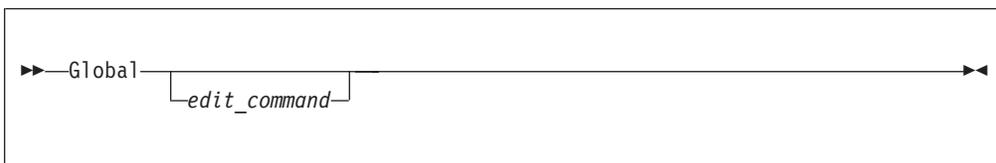
Operands

edit_command
> The EDIT command to be executed for each member in the displayed MSL. If omitted, the GLOBAL prompt panel is displayed.

```
-IPT- ----------------- QUICK FIND AND GLOBAL EDIT COMMANDS -----------------
COMMAND ===>                                                   SCROLL ===> CSR

STOP AFTER   ===> 9999 (Number of members to process successfully)
PROMPT AFTER ===> 100  (Number of members to process before prompt is issued)
START COLUMN ===> 1     (Quick FIND starting column in target data record)
  END COLUMN ===> 99999 (Quick FIND end column in target data record)
AUTOMATIC    ===> Y (Process without editing successful members?)
LINK         ===> Y (Process each command only if previous command succeeds?)
PRINT        ===> N (Generate listing of each member changed and saved?)
EXCLUDE      ===> N (Exclude failing members from selection list?)
Specify below the ISPF EDIT commands or macros to be executed (one per line).
Press END to process the global commands, or enter CANCEL to cancel.
------------------------------------------------------------------------------
****** ***************************** Top of Data *****************************
000001 F ABC
****** *************************** Bottom of Data ****************************
```

After you have entered the details of your global command, you press END. The Global Execution Confirmation panel is displayed, so that you can confirm your action.

Usage notes

Global is a main command only. It cannot be used as a line command. If the Global command is entered without operands, the GLOBAL prompt panel is displayed.

Global processing is performed as specified on the Global prompt panel or the SET panel.

Examples

```
GLOBAL
G
G CHANGE 'CUST-MST' 'CUST-DET' ALL
GLOBAL LINE_AFTER .ZFIRST = DATALINE '/* (C) 1988'
global locate 'date'
```

H

The H command indicates in which libraries of the concatenation one or more members occur.

Syntax

```
►►──┬─H────┬──┬─member_name─┬──────────────────────────────────►◄
    └─WHERE─┘  └─DSNpatt─────┘
```

Operands

member_name
> The name of the member in the current member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

Usage notes

H can be used as a main command or a line command. The main command
WHERE is equivalent to H.

Examples

```
H ACCTMAIN
H %CCT*
H *
```

Feedback messages

-IN nnnn	The library or libraries in which the member occurs.

INFO

The INFO command is used to display information about the libraries in the
current concatenation sequence of the MSL.

Syntax

```
►►──INFO───────────────────────────────────────────►◄
```

Operands

INFO has no operands.

Usage notes

INFO is a main command only. It cannot be used as a line command.

Examples

```
INFO
```

ISPEXEC

The ISPEXEC command invokes ISPEXEC on the one or more members specified.

Syntax

```
►►──┬─ISPEXEC─┬──┬─member_name─┬──┬─────────┬──►◄
    └─I───────┘  └─DSNpatt─────┘  └─command─┘
```

Operands

member_name
    The name of the member in the current member selection list.

DSNpatt

>A member name pattern using the wildcard characters "%" and "*".

command

>The ISPEXEC function call to be invoked for this member.

Usage notes

ISPEXEC can be used as a main command. The command I can be used as a main command or a line command.

If I is entered as a line command, type the command operand in the RENAME field. If ISPEXEC or I is entered as a main command, a pattern may be used, in which case ISPEXEC is invoked on each member in the displayed list matching the pattern. If the command operand is omitted, the type of ISPEXEC call ISPF Productivity Tool constructs depends on the type of library (as indicated by the third-level qualifier in the data set name), as shown in the following table:

Library Type	Qualified Recognized	Default function cal constructed
CLIST	IS%CLIB CLIST*	ISPEXEC SELECT CMD(member)
Load module	IS%LLIB LOAD*	ISPEXEC SELECT PGM(member)
Message	IS%MLIB MSG*	ISPEXEC GETMSG(member) SHORTMSG(ZERRSM) LONGMSG(ZERRLM)
Panel	IS%PLIB PANEL*	ISPEXEC DISPLAY PANEL(member)

Note: If the command operand is omitted and the library is a panel library, the function call constructed is executed immediately displaying the panel directly.

Examples

```
ISPEXEC PANEL1
I PANEL1
I PANEL*
ISPEXEC ACCTMAIN
I PAYROLM TBOPEN
```

Feedback messages

The feedback message is the name of the function call you specified or that was implied by the library type.

J

The J command (synonym SUBMIT) submits a member as a batch job.
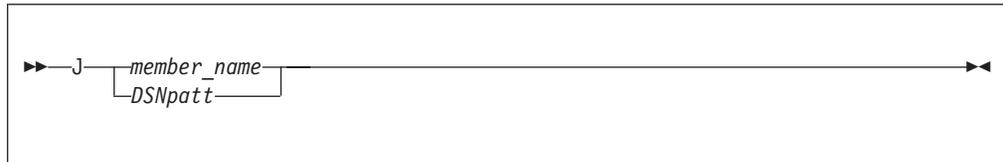
Syntax

```
►►──J──┬──member_name──┬──────────────────────────────────►◄
       └──DSNpatt──────┘
```

Operands

member_name
> The name of the member in the current member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

Usage notes

When J is entered as a line command, you can specify one operand in the RENAME field, provided it fits.

The main command SUBMIT is equivalent to J.

Examples

```
J ACCTMAIN
J ACCT*
```

Feedback messages

SUBMIT	The member was submitted.

K

The K command is used for library management functions, under SCLM.

Syntax
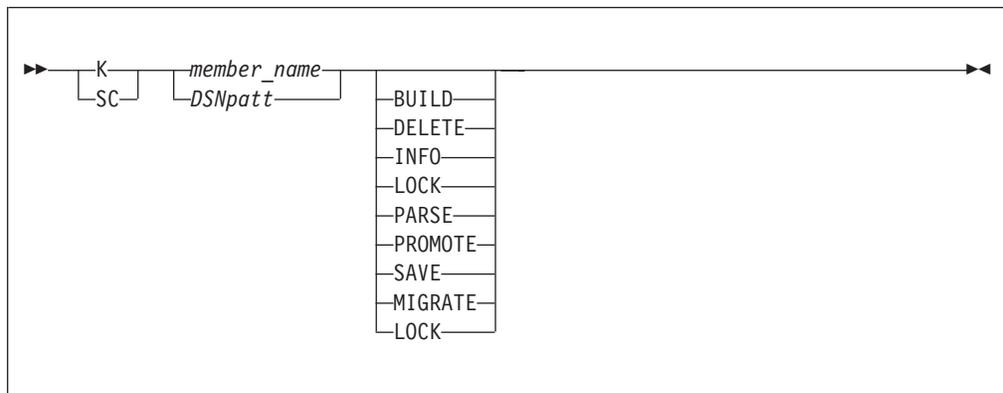
```
►►──┬──K──┬──┬──member_name──┬──┬──────────┐───────────────────►◄
    └──SC─┘  └──DSNpatt───────┘  ├──BUILD───┤
                                 ├──DELETE──┤
                                 ├──INFO────┤
                                 ├──LOCK────┤
                                 ├──PARSE───┤
                                 ├──PROMOTE─┤
                                 ├──SAVE────┤
                                 ├──MIGRATE─┤
                                 └──LOCK────┘
```

Operands

member_name
> The name of the member in the current member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

The request.
> Possible request values are:

> **BUILD**
>> Build a member.

> **DELETE**
>> Delete database components.

> **INFO** Displays change code, programming language and promoter associated with the selected member.

> **LOCK** Lock a member or assign an access key.

> **PARSE**
>> Parse a member for statistical and dependency information.

> **PROMOTE**
>> Promote a member from one library to another library.

> **SAVE** Save the member.

> **MIGRATE**
>> Produce SCLM accounting information for members in a development library.

> **UNLOCK**
>> Unlock a member in a development library.

> If there is no request, a prompt window is displayed.

Usage notes

For use as a main command, SCLMCMD invokes the same function.

Examples

```
SC PAY1293A BUILD
K PAYROL1 INFO
K paymain promote
```

LIB

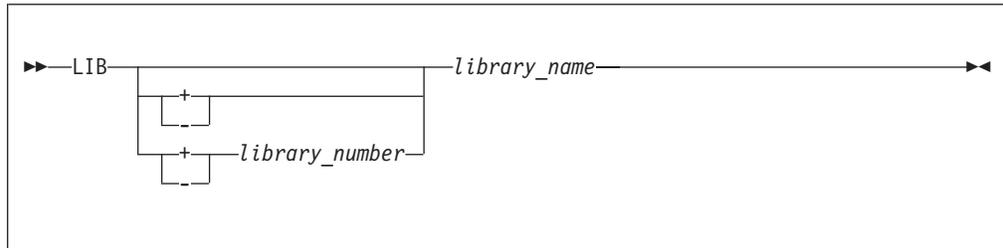The LIB command allows you to switch to other libraries by changing the middle level qualifier (GROUP) of the current displayed libraries. In a hierarchy, the LIB command adds or removes a library to the concatenation.

Syntax

```
►►──LIB──────────────────────────────────library_name──────────────────────►◄
         ┌──+──┐
         ├──────┤
         │  -   │
         ├──+──┬──library_number──┤
         └──────┘
            -
```

Operands

+   Add a single library ahead of the current concatenation.

+ *library_number*
>   Inserts a new specified group in the hierarchy concatenation. The place where the group is inserted is determined by the library number.

-         Specifies that the library specified is to be removed from the concatenation sequence.

library_name
>   The name of the library to be used as the specified library number.

Usage notes

LIB is a main command; it cannot be used as a line command.

If you have specified a library using "OTHER PARTITIONED OR SEQUENTIAL DATA SET" area of the BROWSE, EDIT, or VIEW Entry Panel, no concatenation of libraries can be defined. In this case, you cannot use the LIB command to add a library to the hierarchy, or to redefine any library other than library 1. The same restriction applies if you use the DSN command to switch libraries.

This command also provides the ability to specify the plus sign followed by a group. This notation indicates that the groups in the hierarchy concatenation should be shifted right from the specified library number, inserting the new specified group. This works only if an hierarchy (even of one library) is used upon entry to the MSL.
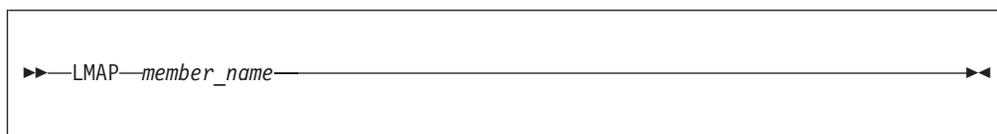
Examples

```
LIB TEST
LIB 2 TEST
LIB 2 -
LIB +1 DEV
LIB + DEV
LIB -
```

LMAP

The LMAP command is used to display a load module mapping.

Syntax

```
►►──LMAP──member_name───────────────────────────────────►◄
```

Operands

member_name
> The name of the member in the current member selection list.

Usage notes

You can also use the L line command in front of a member name to issue the LMAP on that member.

Examples

```
LMAP ABENDON
```

Locate

The Locate command positions the cursor in the member selection list panel at the member that matches the location parameters.

Syntax

```
►►──Locate──┬──loc_string────────────────┬────────────────►◄
            │              └─field_name─┘ │
            ├──'text'─────────────────────┤
            └──number──┬──#──┬────────────┘
                       ├──@──┤
                       ├──+──┤
                       └──−──┘
```
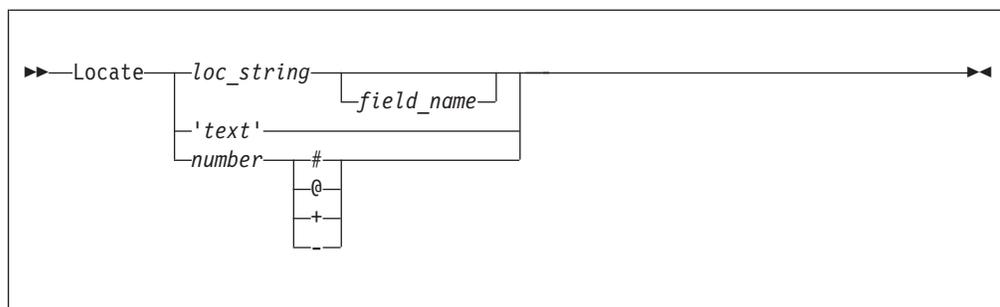
Operands

loc_string
> The leading characters of the field to be located. If the leading characters do not occur in the list, IPT positions the closest member at the top of the panel.

field_name
> The name of a member selection list column heading. If omitted, the string is matched against the main sort field. (If you have not explicitly sorted the MSL, this is the member name field.)

text   The string to be found within a member. The search starts with the member that is currently at the top of the panel. If the string is not found, then the bottommost member is displayed at the top of the panel.

number
> The row number to be displayed at the top of the panel (@ or #), or the number of rows to be skipped down (+) or up (-).

Usage notes

Locate is a main command only. It cannot be used as a line command.

A search is performed from the second member displayed on the screen to locate the first member in the displayed list for which the leading characters of the field specified (or implied) exactly match the string specified. If not found, the search starts again from the beginning of the list (that is, it wraps around). If not found again, the member closest to the locate string is selected.

The listing is positioned so that the member selected is the first member on the panel.

If the automatic preview option is on, `Locate` displays a preview window of the located member. To control this option, use the SET command.

Examples

```
LOCATE ACCTM
L ROGER USERID
L 87/02 CHANGED
L 10 @
L 2 +
L 'JCL'
```

MAPpds (PDS only)

The MAPpds command displays a MAP list of PDS members, including those that have been deleted. Deleted members can then be restored.

Syntax

```
►►──MAPpds─────────────────────────────────────────────────────►◄
            ├─library_number─┤
            └─dsn────────────┘
```
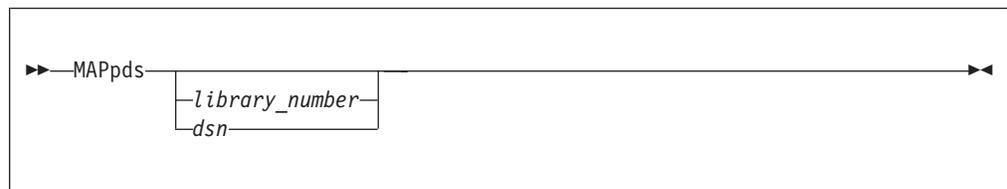
Operands

library_number
> The number of the library member. Default value is "1".

dsn   The name of a PDF library. This allows you to display the map of a PDS that is not the current PDS, without returning to an OLIST.

Usage notes

For more information see Chapter 11, "Browsing, viewing, and restoring deleted members of a PDS using the MAP list," on page 195.

Examples

```
MAP 2             - Display a map of second library.
MAP               - Display a map of first (only) library.
MAP 'TEST.LOAD'   - Display a map of TEST.LOAD
```

Move (PDS only)

The Move command moves one or more members specified to a different data set.

Syntax

```
►►──Move──member_name─────────────────────DSNpatt────────────────────►◄
                    │─out_member_name─│           │─lib─│
                    │─lib─────────────│
```

Operands

member_name
> The name of the member in the current member selection list to be moved. It is deleted from its current library after the operation, although not necessarily from the member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*" to match the name or names of the one or more members in the current member selection list to be moved. Each matching member is delet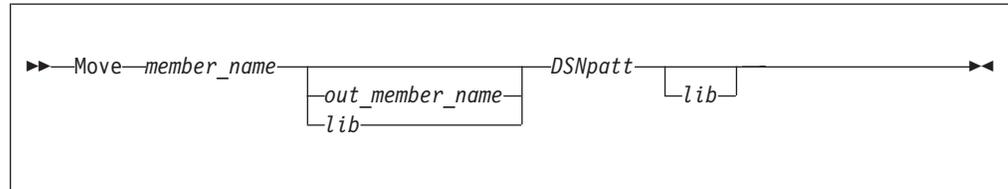ed from its current library after the operation, although not necessarily from the member selection list (since another member with the same name may still exist in a higher level library).

out_member_name
> The target member name. It is placed in the first library of the hierarchy, regardless of the current location of the source member.

lib
> The number of the library in the current concatenation list to which the source is to be moved.

Usage notes

Move can be used as a main command. M can be used as a main command or a line command.

If M is entered as a line command, type the member name to which it is to be moved in the RENAME field of the MSL. When Move or M is used as a main command, a pattern may be specified. In this case, each member matching the pattern is moved. If a pattern is specified, a target member name cannot be specified in the command. (A panel is displayed on which target member names can be individually specified.)

However the command is entered, if no destination is specified, a Move Prompt Panel is displayed. This panel allows specification of any data set as the destination.

Examples

```
MOVE PAYROL1 PAYROL
M PAYROL1 PAYROL
M PAYROL1
M ACCT 2
M ACCT* 3
M ACCT*
```

Feedback messages

-DELETED	The member was deleted before the operation was initiated.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-MOVE ER	The member was not moved because an error occurred.
-NO AUTH	Since you began working, your access to the library has been revoked.
-NO REPL	The member was not copied because the REPLACE option was set to NO.
-NOT OLD	You specified that the target is to be replaced only if it is newer than the source, and the source is not older than the target.
-NO STAT	You specified that the target is to be replaced only if it is older or newer than the source, and either the source or the target was lacking statistics.
-REVEALD	Another member with the same name was found in a higher level library, and is now being displayed in the MSL.

MOVEALl

The MOVEALl command moves all the members from the specified data set to a different data set.

Usage notes

You are prompted to specify the target library and like-named member replacement.

The target library must not be one of the currently concatenated libraries.

All present members are moved, regardless of any prior filtering. If you specify "N" to REPLACE like-named library members, then any like-named members are left on the source data set.

Examples

```
MOVEAL
```

Feedback messages

-DELETED	The member was deleted before the operation was initiated.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
-MOVE ER	The member was not moved because an error occurred.

-NO AUTH	Since you began working, your access to the library has been revoked.
-NO REPL	The member was not copied because the REPLACE option was set to NO.
-NOT OLD	You specified that the target is to be replaced only if it is newer than the source, and the source is not older than the target.
-NO STAT	You specified that the target is to be replaced only if it is older or newer than the source, and either the source or the target was lacking statistics.
-REVEALD	Another member with the same name was found in a higher level library, and is now being displayed in the MSL.

P (main command)

The P main command prints the one or more members specified to a printer or to the ISPF LIST data set, as specified on the SET panel.

Syntax
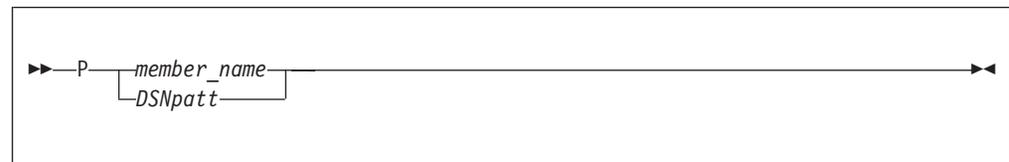
```
►►──P────member_name──────────────────────────────────────►◄
         └─DSNpatt──┘
```

Operands

member_name
> The name of the member in the current member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

Usage notes

If you specify a pattern, a confirm print request panel is displayed, allowing you to verify the members that are to be printed, and to set the print options.

If the print-out is directed to the ISPF LIST data set, use the ISPF LIST command to process the output.

Note: Don't confuse this command with the ISPF PRINT command, which prints the screen image to the ISPF LIST data set.

Examples

```
P PAYROLM
P PAYROL*
```

Feedback messages

-PRINT I	The member was printed in immediate mode.

P (main command) MSL command

-PRINT G	The member was printed in group mode.
-PRINT L	The member was printed to the ISPF LIST data set.
-NO AUTH	Since you began working, your access to the library has been revoked.
-DELETED	The member was deleted before the operation was initiated.
-EMPTY	The member selected for printing was empty.
-IO ERR	An input/output error occurred in reading the directory of the library or the member itself.

P (line command)

The P line command copies the one or more members specified.
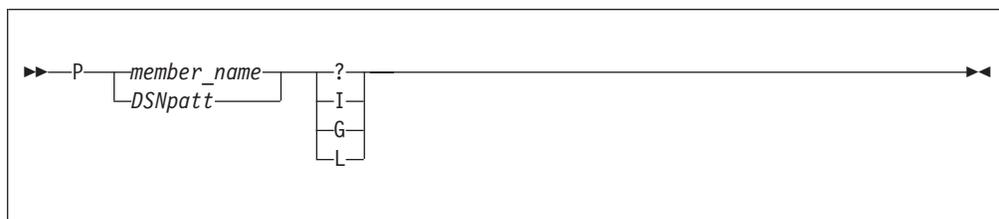
Syntax

```
>>--P----member_name-----?---------------------------------------><
          -DSNpatt-------I-
                         -G-
                         -L-
```

Operands

member_name
> The name of the member in the current member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%"and "*".

?   Request the print options screen.

I   Process mode to print immediately.

G   Process mode to group requests for later printing.

L   Process mode to print direct to the ISPF LIST data set.

Examples

```
P PAYROLM
P PAYROL*
p accounts ?
p accounts i
```

REFRESH

The REFRESH command refreshes the MSL from the directory.

Syntax

```
►►──REFRESH──────────────────────────────────────────────►◄
```

Operands

REFRESH has no operands.

Usage notes

REFRESH is equivalent to the command DSN = =.

Examples

```
REFRESH
```

PROJECT

The PROJECT command changes the library (or libraries) being processed to one with the same name as currently displayed except that the high-level qualifier is specified in the command.

Syntax

```
►►──PROJECT──project_name──────────────────────────────────►◄
```

Operands

project_name
　　　　The name of the new high-level qualifier to be used.

Usage notes

PROJECT is a main command. It cannot be used as a line command.

Examples

```
PROJECT PAYROLL
PROJECT SYS1
```

RELease

The RELease command is used to close or delete the current print group. This is applicable only if the PRINT processing mode is set to GROUP.

Syntax

```
►►──RELease──┬────────┬──────────────────────────────────────────►◄
             └─PURge──┘
```
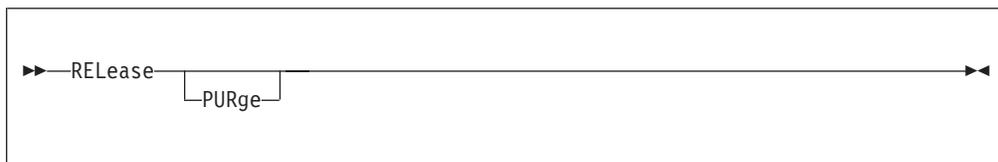
Operands

PURge Delete the current print group.

Usage notes

If you do not issue the RELease command, the current print group is automatically released when you log off or change print processing mode.

RELease is accepted from within ISPF Productivity Tool BROWSE, EDIT, and VIEW, and while an ISPF Productivity Tool enhanced member list or OLIST is active.

Examples

```
RELEASE
REL
REL PURGE
REL PUR
```

Rename

The Rename command renames a member in the current member selection list.

Syntax

```
►►──Rename──member_name──new_member_name──────────────────────────►◄
```
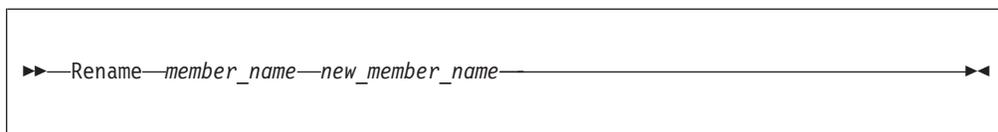
Operands

member_name
> The name of the member in the current member selection list.

new_name
> The new name of the member.

Usage notes

Rename can be used as a main command or a line command. R can be used as a line command. Patterns are not allowed with this command. Both operands are required.

When R is used as a line command, type the new name in the Rename field. If the new name already exists in the data set hierarchy, a rename confirmation panel is displayed.

> **Note:** If you continue the rename operation at this point, only the member in the lowest level of the concatenation is displayed.

Examples

Examples

```
RENAME ACCTMAIN ACCTDET
R ACCTMAIN ACCTDET
R ACCT1 ACCT@
```

Feedback messages

The name of the member before the rename operation appears in the Rename field.

RESet

The RESet command is used to reset the tailoring of the current member list. It can be used to undo all excluded members, remove all filters, clear the RENAME field, and restore the default sorting (ascending by member name).

Syntax

```
►►─ RESet ──────────────────────────────────────────────────►◄
           └─Sort─┘  └─FILTER─┘  └─EXCLUDE─┘  └─REName─┘
```
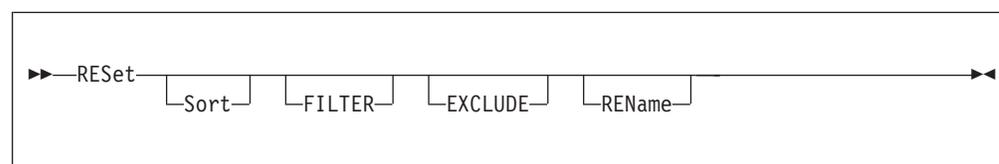
Operands

Sort   Default sorting order (ascending by member name) should be restored.

FILTER
:   All filters should be removed.

EXCLUDE
:   All excluded members should be non-excluded.

REName
:   The rename field (including all feedback messages and tags) should be cleared.

Usage notes

RESet is a main command. It cannot be used as a line command.

If no operands are specified, the default is RESET SORT FILTER EXCLUDE. The RENAME field is not reset by default.

The RESet command does not reread the directory. To do so, use the DSNAME command with the = operand.

Examples

Examples

```
RESET
RES
RES S
RES F
RES X
RES REN
RES S F X REN
```

S

The S line command selects an item and invokes the default process for that item. (The default process depends on the type of object, how MSL was invoked, and the setting on the ISPF Productivity Tool Options panel for MSL.)

Syntax

```
►►──S──────────────────────────────────────────────────────►◄
```
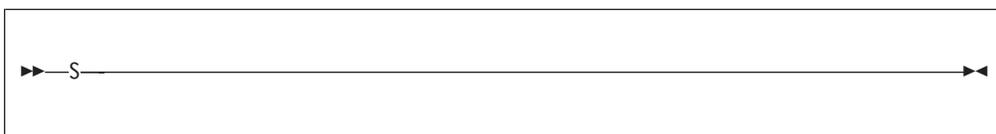
Operands

S has no operands.

Usage notes

S can be used as a line command or, following a member, as a main command.

Examples

```
s accounts
s payrol
```

SAVE

The SAVE command writes the currently displayed member selection list to a user-specified data set, a printer, or the ISPF LIST data set.

Syntax

```
►►──SAVE────────────────────────────────────────────────────►◄
        └─midl_qual─┘
```
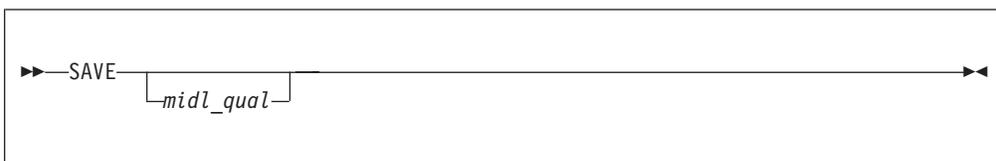
Operands

midl_qual
> The middle qualifier for the name of the data set to which the directory list is saved.

Usage notes

SAVE is a main command. It cannot be used as a line command.

If *midl_qual* is specified, ISPF Productivity Tool creates a data set whose name uses the following form:

Examples

```
'prefix.midl_qual.MEMBERS'
```

where prefix is the current TSO prefix (or user ID).

If midl_qual is omitted, the directory list is printed as specified on the SET panel.

If the print-out is directed to the ISPF LIST data set, it can be printed using the ISPF LIST command.

Examples

```
SAVE
SAVE JONES
```

SCLMCMD

The SCLMCMD command performs the specified SCLM function on the members (active only if SCLM support is active for the user).

Syntax

```
►►──SCLMCMD──┬─member_name─┬──┬─BUILD───┬──────────────────────►◄
             └─DSNpatt─────┘  ├─DELETE──┤
                              ├─INFO────┤
                              ├─LOCK────┤
                              ├─PARSE───┤
                              ├─PROMOTE─┤
                              ├─SAVE────┤
                              ├─MIGRATE─┤
                              └─UNLOCK──┘
```
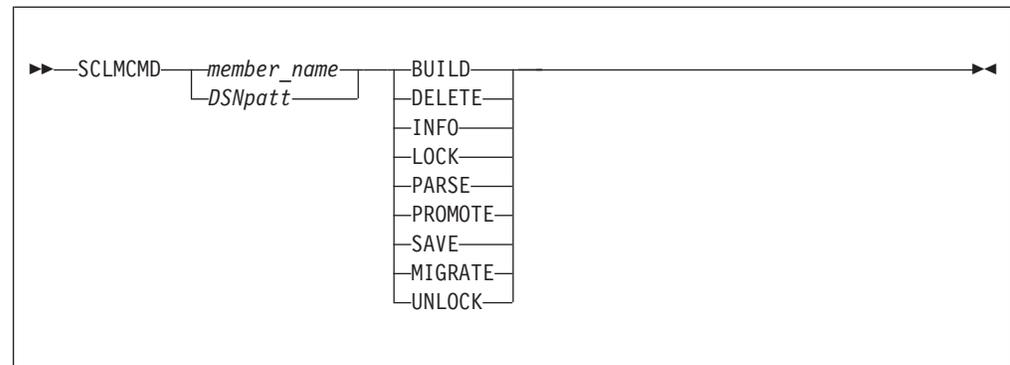
Operands

member_name
> The name of the member in the current member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

BUILD
> Build a member.

DELETE
> Delete database components.

INFO Displays change code, programming language and promoter associated with the selected member.

> **LOCK** Lock a member or assign an access key.
>
> **PARSE**
> > Parse a member for statistical and dependency information.
>
> **PROMOTE**
> > Promote a member from one library to another library.
>
> **SAVE** Save the member.
>
> **MIGRATE**
> > Produce SCLM accounting information for members in a development library.
>
> **UNLOCK**
> > Unlock a member in a development library.

Usage notes

> When used as a line command, K invokes the same function.

Examples

```
SCLMCMD PAYROL1 INFO
SCLMCMD PAYMAIN PROMOTE
```

SCLMPARM

> The SCLMPARM command displays the SCLM parameters active for the current library (active only if SCLM support is active for the user).

Syntax

```
►►──SCLMPARM───────────────────────────────────────────────►◄
```

Operands

> SCLMPARM has no operands.

Examples

```
SCLMPARM
```

SELECT

> The SELECT command processes members under the default process (BROWSE, EDIT, or VIEW), or another line command specified.

Syntax

```
►►──SELECT──┬─member_name─┬──┬─────────────┬──►◄
            └─DSNpatt─────┘  └─member_name─┘
```

Operands

member_name
> The name of the member in the current member list to be selected for the current or specified process. If the default or specified process is EDIT, this can also be the name of a new member that is to be created.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

line_command
> The line command to be used for this one or more members. Any valid MSL line command can be specified. When specified, this command overrides the default process.

Usage notes

S can be used as a main command or a line command.

If S is entered as a line command, you cannot specify the line command parameter. In this case, the current default operation is used.

When S is entered as a main command, a pattern can be specified. In this case, all members in the displayed list that match the pattern are processed. If S is entered as a main command, you can specify the line command parameter. However, no other parameters can be specified. Thus, line commands that require a parameter in addition to the member name (such as R, which requires the new name) cannot be used in this way.

Note: ISPF Productivity Tool has the ability to specify a line command for ISPF. Any line command can be entered as a main command, rather than as an operand of the SELECT command. For example, the command B ACCT* can be entered instead of S ACCT* B.

Feedback messages

The feedback messages depend on the process performed on the member.

SELECT ACCTMAIN	SELECT ACCTMAIN B
S ACCTMAIN B	S ACCT*
S ACCT* P	

SORT

The SORT command is used to put the member selection list into a specified order.

Syntax
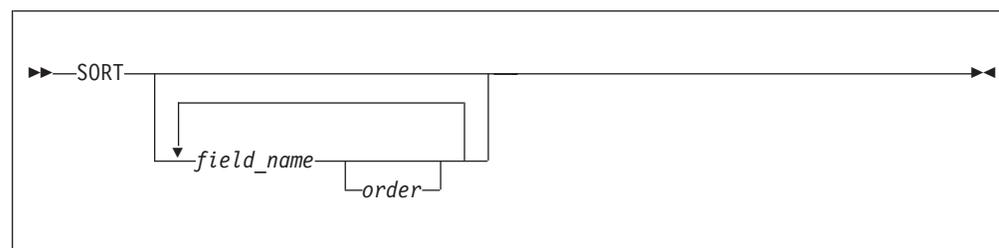
Operands

field_name
> The name of a member selection list column heading.

order   The order of sort:

> **A**   Ascending: lowest to highest.

> **D**   Descending: highest to lowest.

> The default order depends on the particular field being sorted.

Usage notes

SORT is a main command. It cannot be used as a line command. Up to six field-name and order pairs may be specified.

When SORT is entered with no operands, the default sorting order (member name, ascending) is restored.

Examples

```
SORT
SORT MEMBER D
SORT CHANGED A
SORT LIB A
SORT LIB D MEMBER A CHA
SORT LIB M CRE ID
```

SSI

The SSI command displays SSI information for the specified members.

Syntax

```
►►──SSI──member_name───────────────────────────────────────►◄
```

Operands

member_name
> The name of the member in the current member selection list.

Usage notes

SSI is available for load libraries only.

Examples

```
SSI ACCTMAIN
```

STATS

The STATS command creates, removes, or allows the user to change statistics of members.

Syntax

```
►►──STATS──┬─member_name─┬──┬────────┬──────────────────────────────►◄
           └─DSNpatt─────┘  ├─CREate─┤
                            ├─REMove─┤
                            └─CHange─┘
```

Operands

member_name
>   The name of the member in the current member selection list.

DSNpatt
>   A member name pattern using the wildcard characters "%" and "*".

CREate
>   Create new statistics. VV and MM are set to 00, the CREATED and
>   CHANGED dates of the member are set to the current date, the
>   CHANGED time is set to the current time, SIZE and INIT are set to the
>   current size of the member, MOD is set to 0, and USERID is set to your
>   user ID.

REMove
>   Remove existing statistics (if any).

CHAnge
>   Modify or create new statistics. (This is the default.)

Usage notes

STATS is a main command only. The equivalent line command is Z.

If CHANGE is specified or no operand is specified, a prompt panel is displayed.
You can make changes, or remove the statistics on the prompt panel. You reset the
fields VV, MM, CREATED, CHANGED, SIZE, INIT, and MOD selectively. (The
effect of this is as with the CREATE operand, but on each field individually.) The
fields VV, MM, and USERID can be set to any valid user-specified value.

Examples

```
STATS ACCTMAIN      STATS ACCTMAIN CREATE
STATS ACCTMAIN CRE    STATS *CCT*
STATS *CCT* REMOVE    STATS *CCT* REM
STATS AC%%MAIN      STATS AC%%MAIN CHANGE
STATS AC%%MAIN CHA
```

SUBmit

The SUBmit command submits a member as a batch job.

Syntax

```
►►──SUBmit──┬──member_name──┬─────────────────────────────────►◄
            └──DSNpatt──────┘
```

Operands

member_name
>   The name of the member in the current member selection list.

DSNpatt
>   A member name pattern using the wildcard characters "%" and "*".

Usage notes

>   SUBmit is a main command. The equivalent line command is J.

Feedback messages

SUBMIT	The member was submitted.

Examples

```
SUBMIT ACCTMAIN
SUB ACCT*
```

T

>   The T command invokes the specified TSO command or CLIST on one or more
>   members specified.
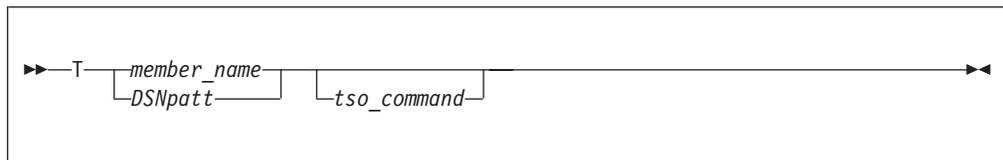
Syntax

```
►►──T──┬──member_name──┬──┬──────────────┬──►◄
       └──DSNpatt──────┘  └──tso_command─┘
```

Operands

member_name
>   The name of the member in the current member selection list.

DSNpatt
>   A member name pattern using the wildcard characters "%" and "*".

tso_command
>   The TSO command or CLIST that is to be executed for this member.

Usage notes

>   T can be used as a main command or a line command.

When T is used as a main command, a pattern can be specified. In this case, each member matching the pattern is processed.

If the T command is entered as a line command, specify the TSO command parameter in the RENAME field.

The TSO command issued has the format

Examples

```
tso-command 'library(member)'
```

where library is the name of the library in which the member resides. Omitting the TSO command parameter causes the TSO prompt panel to be displayed.

Examples

```
T PAYROLM DOWNLOAD
T PAYROL* UPLOAD
T WORKDOC
```

Feedback messages

The feedback message consists of the TSO command you specified.

TAG

The TAG command places a character string in the RENAME field of the member list of members that match the specified name or pattern.

Syntax
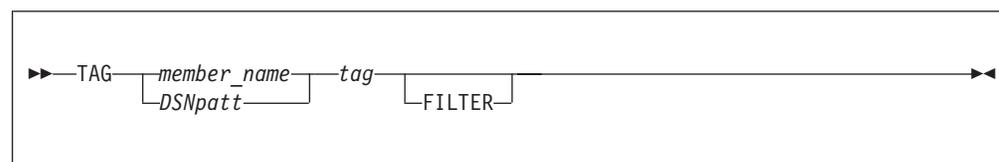
```
►►──TAG──┬─member_name─┬──tag──┬────────┬──────────────────────────►◄
         └─DSNpatt─────┘       └─FILTER─┘
```

Operands

member_name
> The name of the member in the current member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

tag   A character string of up to eight characters with no embedded blanks to be placed in the RENAME field of the specified member, or all members matching the specified pattern.

FILTER
> After the tag is applied as specified, FILTER the member list to display only those members having the specified tag (including members with this tag as a result of prior invocations of the TAG command).

Usage notes

TAG is a main command. It cannot be used as a line command.

Examples

```
TAG *AB T
TAG %ABC T
TAG *A*C T FILTER
```

Feedback messages

The specified tag is placed in the feedback message field.

TAILOR

The TAILOR command executes the MSL command or commands defined as your tailoring macro. The TAILOR command can also be used to display and change the current definition.

Syntax

```
▶▶──TAILOR──┬─Define─┬──────────────────────────────────────▶◀
            └─?──────┘
```
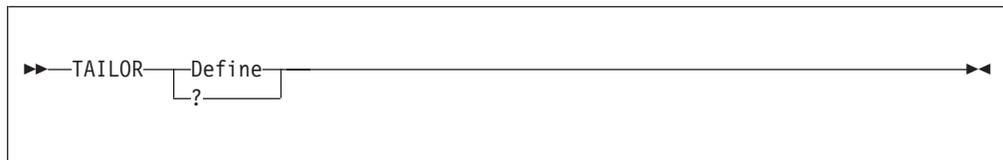
Operands

Define
> Display a panel on which to specify the sequence of commands to be executed when the TAILOR command is invoked without operands.

?
> Display the currently specified tailoring commands.

Usage notes

TAILOR is a main command only. It cannot be used as a line command.

If TAILOR is invoked without operands, the currently defined tailoring commands are executed. (If no tailoring commands are defined, a panel is displayed on which tailoring commands can be specified, as if TAILOR DEFINE had been invoked.)

The PF key currently set to RCHANGE (usually PF6) also executes the TAILOR command.

You can use the PF key set to RCHANGE with a parameter entered on the command line.

The tailoring commands can also be defined on the ISPF Productivity Tool Options panels (accessed via the SET command) or via the BROWSE, EDIT, or VIEW Entry Panel (when Execute TAILOR is set to D).

Examples

```
TAILOR
TAILOR ?
TAILOR DEFINE
TAILOR D
```

TOTALS

The TOTALS command displays statistics totals for the non-excluded and non-filtered members.

Syntax

```
►►──TOTAls──────────────────────────────────────────────────────►◄
```

Operands

TOTALS has no operands.

Usage notes

TOTALS is a main command only. It cannot be used as a line command.

Examples

```
TOTALS
```

TYPE

The TYPE command changes the library being processed with the same name as currently displayed except that the low-level qualifier is specified in the command.

Syntax

```
►►──TYPE──type_name─────────────────────────────────────────────►◄
```

Operands

type_name
>The name of the new low-level qualifier to be displayed.

Usage notes

TYPE is a main command. It cannot be used as a line command.

Examples

```
TYPE COBOL
TYPE CNTL
```

UNFilter

The UNFilter command removes the most recently applied filter, or all filters.

Syntax

```
►►──UNFILTER─────────────────────────────────────────►◄
            └─ALL─┘
```
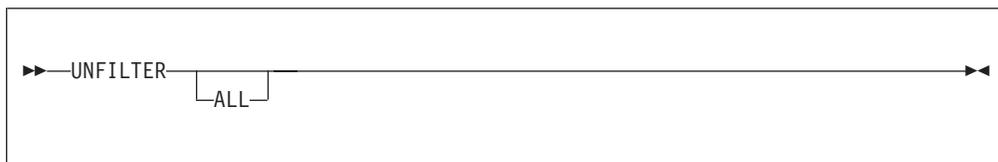
Operands

ALL   A keyword indicating that all filters are to be removed.

Usage notes

UNFilter is a main command. It cannot be used as a line command.

If ALL is not specified, one level of filtering is removed: the last applied filter is removed first.

UNFilter ALL is equivalent to entering the FILter command (page 98) with no operands, or the command RESET (page 117).

Examples

```
UNFILTER
UNF
UNF ALL
```

USAGE

The USAGE command lists library members currently in use under ISPF, and the user IDs of the TSO users accessing them.

Syntax

```
►►──USAGE──────────────────────────────────────────────►◄
```
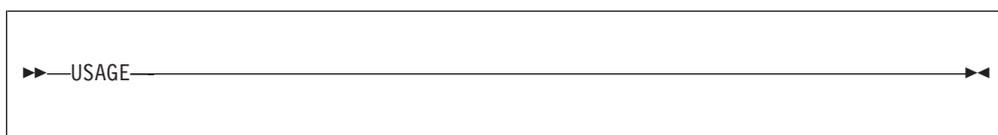
Operands

USAGE has no operands.

Usage notes

USAGE is a main command. It cannot be used as a line command.

Examples

```
USAGE
```

V

The V command invokes the view process on one or more members specified.
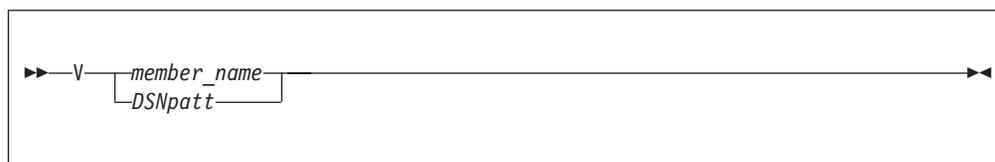
Syntax

```
>>--V----member_name--------------------------------------------><
        |_DSNpatt___|
```

Operands

member_name
> The name of the member in the current member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

Usage notes

V is not equivalent to VIEW; VIEW opens a nested level of VIEW.

V can be used as a main command or a line command.

When you use V as a main command you can specify a pattern. If you specify a
pattern, each member matching the pattern is processed.

Examples

```
V ABENDOFF
V ABEND*
```

Feedback messages

SAVED	The member was saved at some during the session just ended. (You issued a SAVE command and explicitly confirmed your SAVE request.) This feedback message is displayed if the member was saved at any time during the session, whether or not SAVE or END was the last command issued.
VIEWED	The member was viewed.
DELETED	The member was deleted before the operation was initiated.
IO ERR	An input/output error occurred in reading the directory of the library or the member itself.
NO AUTH	Since you began working, your access to the library has been revoked.

W

The W command displays a preview window in the member selection list for the
member named.

Syntax

```
►►──W──member_name──────────────────────────────────────►◄
```

Operands

member_name
> The name of the member in the current member selection list.

Usage notes

W can be used as a main command or a line command. Patterns cannot be used with this command.

Depending on the position of the assist window, the W command displays up to ten lines of the specified member.

Examples

```
W ACCTMAIN
W DEMO
```

Feedback messages

None.

WHERE

The WHERE command indicates in which concatenation libraries one or more members occur.

Syntax

```
►►──WHERE──┬──member_name──┬───────────────────────────────►◄
           └──DSNpatt───────┘
```

Operands

member_name
> The name of the member in the current member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

Usage notes

WHERE is a main command only. The equivalent line command is H.

Examples

```
WHERE ACCTMAIN
WHERE %CCT*
WHERE *
```

Feedback messages

-IN nnnn	The library or libraries in which the member occurs.

X (eXclude)

Use the X command to eliminate members from the member selection list display (or to unexclude all excluded members).

Syntax

```
►►──X──┬─member_name─┬─────────────────────────────────────►◄
       └─DSNpatt─────┘
```
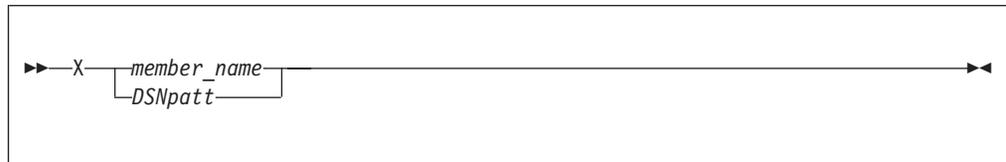
Operands

member_name
> The name of the member in the current member selection list.

DSNpatt
> A member name pattern using the wildcard characters "%" and "*".

Usage notes

If no operand is specified, all excluded members are non- excluded.

X can be used as a main command or a line command. When X is used as a main command, a pattern may be specified. In this case, all members in the current list matching the pattern are excluded.

The EXCLude command (page 96) is a main command synonym of X.

Feedback messages

None. The specified members are removed from the displayed member selection list.

Examples

```
X ACCTMAIN
X *TAT*
X TEXT%%X
X *
X
```

Z

The Z command (synonym STATS) creates, removes, or changes statistics of members.
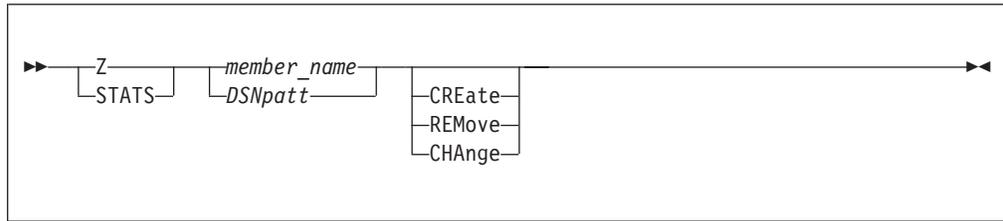
Syntax

```
►►─┬─Z────┬─┬─member_name─┬─┬────────┬──────────────────────►◄
   └─STATS─┘ └─DSNpatt─────┘ ├─CREate─┤
                             ├─REMove─┤
                             └─CHAnge─┘
```

Operands

member_name
>The name of the member in the current member selection list.

DSNpatt
>A member name pattern using the wildcard characters "%" and "*".

CREate
>Create new statistics. VV and MM are set to 00, the CREATED and CHANGED dates of the member are set to the current date, the CHANGED time is set to the current time, SIZE and INIT are set to the current size of the member, MOD is set to 0, and USERID is set to your user ID.

REMove
>Remove existing statistics (if any).

CHAnge
>Modify or create new statistics. (This is the default.)

Usage notes

Z can be used as a main command or a line command. The main command STATS is equivalent to Z.

If CHANGE is specified or no operand is specified, a prompt panel is displayed. You can make changes or remove the statistics. On the prompt panel, the fields VV, MM, CREATED, CHANGED, SIZE, INIT, and MOD can be reset selectively. (The CREATE command has similar results, but on each field individually.) The fields VV, MM, and USERID can be set to any valid user-specified value.

Z ACCTMAIN	Z ACCTMAIN CREATE
Z ACCTMAIN CRE	Z *CCT*
Z *CCT* REMOVE	Z *CCT* REM
Z AC%%MAIN	Z AC%%MAIN CHANGE
Z AC%%MAIN CHA	

Chapter 9. OLIST commands

ISPF Productivity Tool provides a function called OLIST that gives access to the different object classes.

OLIST maintains two types of object lists–temporary and permanent.

Permanent OLISTs are maintained in the user's OLIST library. By default, when the user logs on, ISPF Productivity Tool looks for a non-concatenated library with the DD name PLSTLIBW.

If it does not find this DD name PLSTLIBW pre-allocated, it tries to allocate an existing library named 'id.PLIST.LIBRARY' (later, using the Customization Wizard, you determine whether "id" is the TSO userid or the user's current TSO prefix). If such a library does not exist, it attempts to use DD IPITBLIB. If this is also unavailable, ISPF Productivity Tool dynamically creates a new 'id.PLIST.LIBRARY', with these attributes: "DSNTYPE(LIBRARY) DSORG(PO) RECFM(F B) LRECL(80) BLKSIZE(6160) SPACE=(320,160)", and the UNIT name specified with the Customization Wizard.

Note: Although ISPF Productivity Tool version 6.1 allows a user to separate the OLISTs from other persistent tables in different libraries, it is recommended that a single PDSE library be maintained for both purposes.

Main Command	Line Command	Remarks
	=	The = line command (page 138) invokes the immediately preceding line command on the item specified.
/		The same as POPULATE.
	/	The slash line command (page 138) displays the Object List Line Command input panel. From this panel you have access to all line commands that can be applied an OLIST data set. You can use the slash command when you are not sure of the available line commands.
A	A	The A line command (page 139) allocates a data set.
Assist		The ASSIST command (page 140) displays information about OLIST main and line commands.
B	B	The B line command (page 140) invokes an MSL with a default process of BROWSE, or invokes BROWSE on an object. The action taken depends on the type of object.
	BF	The BF line command (page 141) invokes a VSAM BROWSE function on an OLIST object.
C	C	The C line command (page 142) catalogs the specified data set on the indicated volume.
CANcel		The CANCEL command (page 142) ends the use of the OLIST without saving any changes you have made to the list itself.
CLRVOL		The CLRVOL command (page 143) clears the VOLUME column of a data set object.

OLIST commands

Main Command	Line Command	Remarks
CMDparms		The CMDPARMS command (page 143) controls a field in which TSO command parameters can be specified. The parameters specified in this field are appended to all TSO commands you enter on the OLIST.
COMPress (PDS only)	COMP	The COMPRESS line command (page 144) compresses the specified library.
COPY		The COPY line command (page 144) copies the one or more members specified.
COPYALl		The COPYALl line command (page 144) copies all the members of one partitioned dataset to a different data set.
CUT		The CUT command (page 144) copies the OLIST into the specified clipboard number.
	/D	The /D line command (page 145) deletes one or more entries in the OLIST. The remaining entries are renumbered.
D	D	The D line command (page 145) deletes a data set or the one or more members specified (with confirmation).
DEFault		The DEFAULT command (page 146) changes the default process invoked by the SELECT and S commands during the current OLIST session.
DSLIST	DSLIST	The DSLIST line command (page 146) invokes an ISPF data set list (option 3.4) of all items in the current catalog matching the specification.
E	E	The E line command (page 147) invokes an MSL with a default process of EDIT, or invokes EDIT on a data set or member. The action taken depends on the type of object.
	EF	The EF line command (page 148) invokes a VSAM EDIT function on an OLIST object.
EMPty	EMP	The EMPTY line command (page 148) removes all members from the specified library, or all data from a sequential data set.
eXclude	X	The EXCLUDE main command (page 149) excludes selected OLIST objects. When this command is used, the *EXCLUDE* tag appears next to the Volume or Class column on the OLIST screen. If you need to exclude a certain range of entries, use the /XX line command at the beginning of the range and the end of the range.
EXPDIR (PDS only)	EXPDIR	The EXPDIR line command (page 150) expands the library specified.
EXPORT		The EXPORT command (page 150) saves the OLIST under its current name in the specified library.
FILLVOL		The FILLVOL command (page 151) fills in the VOLUME column of data set objects.
FILTER		The FILTER command (page 151) selectively tailors the display of members in the OLIST (or to remove all filtering).
Find		The FIND command (page 152) locates the next item in the OLIST whose name contains a specified text string.
FINDMEM		Alias of MEMFIND (page 171).

Main Command	Line Command	Remarks
FINDTEXT		The FINDTEXT command (page 153) searches for the first sequential file or the first member of a library that contains the search text. The search starts from the first OLIST entry displayed on the screen. A synonym is FT.
FLIP		The FLIP command (page 155) toggles between visible and invisible (excluded and filtered-out) lines.
FM		Alias of MEMFIND (page 171).
FREe	FREe	The FREE line command (page 155) frees unused space in the specified data set.
FT		Same as FINDTEXT.
	/I	The /I line command (page 157) inserts one or more empty lines in the OLIST for the insertion additional items.
	HDELETE	The HDELETE line command (page 156) deletes a migrated (archived) data set object.
	HLIST	The HLIST line command (page 156) displays archiving information about a migrated data set object.
	I	The INFO line command (page 157) displays information about a data set object.
LEVEL		The LEVEL command (page 157) shows only data set objects that satisfy the specified level of DSNAME qualifier, thus acting like a filter.
LISTALOC		The LISTALOC command (page 158) appends allocated data sets to the current OLIST.
LISTBASE	LISTB	The LISTBASE command (page 159) appends generation-data-group base names to the current OLIST.
LISTBOOK	LISTK	The LISTBOOK command (page 159) appends BookManager BOOK data set names to the current OLIST.
LISTCAT	LISTC	The LISTCAT line command (page 160) appends catalogued data set names to the current OLIST.
LISTGDG	LISTG	The LISTGDG command (page 161) appends generation-data-group data set names to the current OLIST.
LISTHIST		The LISTHIST command (page 161) appends the most recently used data sets to the current OLIST.
LISTMIGR	LISTM	The LISTMIGR command (page 162) appends migrated (archived) data set names to the current OLIST.
LISTMULT		The LISTMULT command (page 163) appends data set names to the current OLIST from multiple list specifications.
LISTPAGE		The LISTPAGE command (page 163) appends catalogued Paging-Space data set names to the current OLIST.
LISTPDSE		The LISTPDSE command (page 164) appends catalogued PDSE library data set names to the current OLIST.
LISTSHLF	LISTF	The LISTSHLF command (page 165) appends BookManager BOOKSHELF data set names to the current OLIST.
LISTSMP	LISTZ	The LISTSMP command (page 166) appends SMP/E ZONE VSAM cluster names to the current OLIST.
LISTSYS		The LISTSYS command (page 166) appends specific system data set names to the current OLIST.

OLIST commands

Main Command	Line Command	Remarks
LISTTAPE	LISTT	The LISTTAPE command (page 167) appends catalogued TAPE library data set names to the current OLIST.
LISTVSAM		The LISTVSAM command (page 168) appends VSAM cluster names to the current OLIST.
LISTVTOC	LISTV	The LISTVTOC command (page 169) appends data set names, from specific volumes, to the current OLIST.
Locate		The LOCATE command (page 170) locates the next data set (or object) name beginning with the specified text string.
MAPpds		The MAPpds command (page 170) displays a data map of a PDS library, from which you can restore deleted members.
MEMFind		The MEMFIND command (page 171) locates the first, next, or all libraries in the OLIST that contain the specified member.
MF		Same as MEMFind.
MLIST		Same as LISTMULT.
MOVE (PDS only)	M	The MOVE line command (page 173) moves the specified member or members.
MOVEALl		The MOVEALl line command (page 173) moves all of the members from one data set to a different data set.
OLIST	O	The OLIST line command (page 173) invokes a temporary OLIST of all items in the current catalog matching the specification.
OPEN		The OPEN command (page 174) switches to another OLIST.
OPRINT		The OPRINT command (page 174) prints the current OLIST.
PASTE		The PASTE command (page 175) attaches the contents of a previously cut OLIST to the end of the current OLIST.
POPULATE		The POPULATE command (page 175) accesses a pull-down menu which allows you to select how to populate the current OLIST. This is similar to selecting the Populate option on the Action Bar. From the Populate pull-down menu, you select from nine population options.
PRINT (PDS or Sequential only)	P	The PRINT line command (page 176) copies the one or more members specified.
	/R	The /R command (page 176) repeats an existing line in the OLIST one or more specified times (presumably for subsequent editing).
REFRESH		The REFRESH command (page 176) refreshes the current OLIST display from original parameters.
RELEASE		The RELEASE command (page 177) closes or deletes the current print group.
RENAME	R	The RENAME line command (page 177) renames a data set or a member.
RFIND		The RFIND command (page 179) repeats the current FIND, EXCLUDE, FINDTEXT, or MEMFIND command.
RESet		The RESET command (page 177) clears selected (or all) columns in the display and removes the empty lines.

Main Command	Line Command	Remarks
S	S	The S line command (page 179) selects an item and invokes the default process for that item. (The default process depends on the type of object, how OLIST was invoked, and the setting on the ISPF Productivity Tool Options panel for OLIST.)
SAVE		The SAVE command (page 180) saves permanent OLIST under a new name. This command can also save a temporary list as a permanent list with a new name.
SHOWcmd		The SHOWCMD command (page 180) controls whether TSO commands, REXX EXECs, and CLISTs are to be displayed before execution (so that they can be modified) or are to be executed immediately.
SHOWCLAs		The SHOWCLAs command (page 181) shows the Class (Type) column in the OLIST display.
SHOWMigr		The SHOWMigr command (page 181) controls the display of migrated (archived) data sets.
SHOWVOL		The SHOWVOL command (page 182) shows the Volume column in the OLIST display.
SORT		The SORT command (page 183) sorts the entries in the OLIST.
SUBmit	SUBMIT	The SUBMIT line command (page 183) submits a data set or a member as a batch job.
TITLE		The TITLE command (page 183) gives you the ability to enter a description for an existing OLIST from a Define OLIST Description input panel.
U	U	The U line command (page 184) uncatalogs the data set.
UPDate		The UPDATE command (page 184) invokes the ISPF Productivity Tool EDIT panel for extensive editing of the OLIST. **Note:** You can edit and save the history command list.
UTIL		The UTIL command (page 185) opens a nested level of ISPF option 3 (Utilities) or a suboption of option 3.
V	V	The V line command (page 186) invokes an MSL with a default process of VIEW, or invokes VIEW on a data set or member. The action taken depends on the type of object.
VALIDate		The VALIDATE command (page 187) is used to compare the entries in the OLIST with the current catalog and volume, and to bring them into conformity with the catalog. It marks items on the OLIST that are not in the catalog, and corrects the volume information for those that show the wrong volume. Migrated or archived data sets are indicated.
	VF	The VF line command (page 188) invokes a VSAM VIEW function on an OLIST object.
X	X	The X command (page 189) can be used as a Main line command or a Line command to remove an Object List entry from an OLIST.
	XFER	The XFER line command (page 189) accesses a pop-up window to upload or download data sets or workstation files.

> **Note:** From the main command, you can enter a number followed by a space and a line command, or, you can enter a range of entries <from#>-<to#> followed by a space and a line command to execute the EDIT, VIEW or BROWSE commands.
>
> In the Command line, enter: 3 E to edit the entry Number 3, or, 3-6 b to browse the entries from Number 3 to Number 6.

= (equal)

The = line command invokes the immediately preceding line command on the item specified.

Syntax

```
►►──=─────────────────────────────────────────────────────►◄
```

Usage notes

= can only be used as a line command.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------  --------  ---- ----------------------- ------
B                     1 'ACCOUNTS.JONES.JCL'
=                     2 'ACCOUNTS.JONES.COBOL'
=                     3 'ACCOUNTS.TEST.COBOL'     TST001
=         ACCMAIN     4 'ACCOUNTS.TEST.COBOL'
=           PAY*      5 'ACCOUNTS.TEST.COBOL'     TST001
```

/ (slash)

The slash command displays the Object List Line Command input panel.

Syntax

```
►►──/─────────────────────────────────────────────────────►◄
```
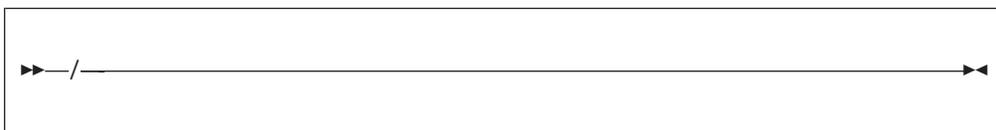
Usage notes

```
 -IPT-------------------- Object List Line Command -------------------
 COMMAND ===>
       Select line command (with "S") or point with cursor
       Press ENTER to execute or END to cancel.
 _ Allocate dataset     _ List VTOC
 _ Browse               _ Move members
 _ Catalog dataset      _ OLIST
 _ Compress library     _ Print
 _ Copy members         _ Rename dataset
 _ Delete               _ Submit members
 _ DSLIST               _ Uncatalog dataset
 _ Edit                 _ View
 _ Expand directory     _____ TSO commands
 _ Free unused space    ____    Delete line(s)
 _ Dataset information  ____    Insert line(s)
 _ Listcat             ____    Repeat line(s)

 MEMBER   NUM.  DATA SET NAME                            VOLUME
 -------- ----- ---------------------------------------- ------
           1 'SYS1.AADRLIB'                              G1703D
```

Figure 27. Object List Line Command input panel

From this panel you have access to all line commands that can be applied to an OLIST data set. Use the slash command when you are not sure of the available line commands.

The slash command can only be used as a line command.

```
   File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
 ------------------------------------------------------------------------------
 -IPT- OLIST (B) ----------- LEVEL SYS1*LIB ---------------- Row 1 to 15 of 132
 Command    ===>                                       SCROLL ===> CSR
 Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL      UPDATE  CUT     FLIP
                                                               *TEMPORARY LIST*
 TSO PARMS  ===> _____
 Command   Member  Numbr Data Set Names / Objects                      Class
 --------- -------- ----- ---------------------------------------------- -------
 /                     1 'SYS1.AADRLIB'
                       2 'SYS1.AADRYLIB'
                       3 'SYS1.ACMDLIB'
```

A

The A line command allocates a data set.

Usage notes

A can be used as a line command or, when preceded by an item number, as a main command.

The A command ignores the member name field.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ----------------------- ------
A                     2 'ACCOUNTS.JONES.COBOL'
A                     3 'ACCOUNTS.TEST.COBOL'   TST001

2 a
```

Assist

The Assist main command can either display a list of all main and line commands of OLIST or detailed information about a specific command.

```
  -IPT-                  OLIST Command Assistance
  Cmd ====>

     For more details, point cursor at selected command and press ENTER
     Enter END or CANCEL to exit
     While reviewing an ASSIST example you may enter an OLIST command,
       press ENTER, and be prompted with command over the OLIST display.

  ----------------------- MAIN Commands --------------------------------
  ASSIST   #f-#l    CANCEL   CLEARVOL CMDPARMS CUT        DEFAULT  END
  EXCLUDE  EXPORT   FILLVOL  FILTER   FIND     FINDTEXT FLIP     LEVEL
  LISTALOC LISTBASE LISTBOOK LISTCAT  LISTGDG  LISTHIST LISTMIGR LISTMULT
  LISTPAGE LISTPDSE LISTSHLF LISTSMP  LISTSYS  LISTTAPE LISTVSAM LISTVTOC
  LOCATE   MEMFIND  OPEN     OPRINT   PASTE    POPULATE QUIT     REFRESH
  RELEASE  RESET    RFIND    RIGHT    SAVE     SET      SHOWCMD  SHOWMIG
  SHOWTYPE SHOWVOL  SORT     TITLE    UPDATE   UTIL     VALIDATE


  ----------------------- LINE Commands --------------------------------
  /        /D  /DD /I       /R       /X  /XX  =          ?<Cmd>   %<Exec>
  ALLOCATE BF       BROWSE   CATALOG  COMPRESS COPY       COPYALL  DELETE
  DSLIST   EDIT     EF       EMPTY    EXPDIR   FREE       HDELETE  HLIST
  INFO     LISTBASE LISTBOOK LISTCAT  LISTGDG  LISTMIGR LISTSHLF LISTSMP
  LISTTAPE LISTVTOC MOVEALL  OLIST    PRINT    RENAME
  SELECT   SUBMIT   UNCATALO VF       VIEW     XFER       <other>
```

Figure 28. The ASSIST list of all main and line commands

command-name

> The name of the command for which you want to see an assist window. If omitted, the whole list of available OLIST commands is displayed.

Usage notes

ASSIST is a main command only. It cannot be used as a line command.

You may enter any main command while the assist window is displayed.

B

The B line command invokes an MSL with a default process of BROWSE, or invokes BROWSE on an object. The action taken depends on the type of object, as shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		Browse data set
PDS	None	Display MSL of all members with browse as default process
PDS	Pattern specified	Display MSL of matching members with browse as default process
PDS	Member specified	Browse member
LIST		Display temporary OLIST of matching items with browse as default process
VSAM		Browse VSAM file (if option installed)

TYPE	Member or pattern specification (if any)	Processing
DB2		Browse DB2 file (if option installed)
USER		Browse VSAM file (if option installed)
PC		Browse PC file (if option installed)

Usage notes

B can be used as a line command or, when preceded by an item number, as a main command.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------   --------  ---- ----------------------   ------
B                    2 'ACCOUNTS.JONES.COBOL'
B                    3 'ACCOUNTS.TEST.COBOL'    TST001
B         ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
B         PAY*       5 'ACCOUNTS.TEST.COBOL'    TST001
```

BF

The BF line command invokes a VSAM BROWSE function on an OLIST object. The action taken depends on the type of object, as shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		Invoke the VSAM browser
PDSe	None	Display MSL of all members with browse as default process
PDSe	Pattern specified	Display MSL of matching members with browse as default process
PDSe	Member specified	Invoke VSAM browser over member
SCLM	None	Display MSL of all members with edit as default process
SCLM	Pattern specified	Display MSL of matching members with edit as default process
SCLM	Member specified	Invoke ISPF browser over member
SCLM		Same as for SCLM
LIST		Display temporary OLIST of matching items with browse as default process
OLIST		Display permanent OLIST of matching items with browse as default process
VSAM		Browse VSAM file (if option installed)
USER		Invoke the USER-supplied browser (if option installed)

Usage notes

BF can be used as a line command or, when preceded by an item number, as a main command.

The VSAM browser must be first defined during IPT customization via the %IQIWIZRD CLIST. If that is not the case, this command acts like the OLIST BROWSE command.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------  -------- ---- ----------------------- ------
BF                    2 'ACCOUNTS.JONES.COBOL'
BF                    3 'ACCOUNTS.TEST.COBOL'    TST001
BF        ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
BF         PAY*      5 'ACCOUNTS.TEST.COBOL'     TST001
```

C

The C line command catalogs the specified data set on the indicated volume.

Usage notes

C can be used as a line command or, when preceded by an item number, as a main command.

The volume field must be specified.

The C command ignores the member name field.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------  -------- ---- ----------------------- ------
C                     3 'ACCOUNTS.TEST.COBOL'    TST001
```

CANcel

The CANcel command ends the use of the OLIST without saving any changes you have made to the list itself.

Syntax

```
►►──CANcel───────────────────────────────────────────────►◄
```

Operands

CANcel has no operands.

Usage notes

CANcel is a main command only. It cannot be used as a line command.

Note: On the editing panel that is displayed following the UPDate command (page 184), the CANcel command ends the editing session without saving any changes you have made; you are returned to the OLIST display panel.

Examples

```
CANCEL
CAN
```

CLRVOL

The CLRVOL command clears the VOLUME column of a data set object.

Syntax

```
►►──CLRVOL──────────────────────────────────────────────────►◄
```

Operands

CLRVOL has no operands.

Usage notes

The command is a good candidate for the OLIST Hotbar.

CMDparms

The CMDparms command controls a field in which TSO command parameters can be specified. The parameters specified in this field are appended to all TSO commands you enter on the OLIST.

Syntax

```
                    ┌─ON──┐
►►──CMDparms────────┼─────┼──────────────────────────────────►◄
                    └─OFF─┘
```

Operands

ON   Displays the field. (This is the default.)

OFF   Removes the field.

Usage notes

CMDparms is a main command only. It cannot be used as a line command.

This option is also controlled from the ISPF Productivity Tool Options panel.

Examples

```
CMDPARMS
CMD
CMD ON
CMD OFF
```

COMPress (PDS only)

The COMPress line command compresses the specified library.

Usage notes

COMPress can be used as a line command or, when preceded by an item number, as a main command.

The COMPress command ignores the member name field.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ----------------------- ------
COMPRESS           2 'ACCOUNTS.JONES.COBOL'
COMP               3 'ACCOUNTS.TEST.COBOL'   TST001
```

COPY

The COPY line command copies one or more members specified.

Usage notes

A member or pattern is required.

COPY can be used as a line command or, when preceded by an item number, as a main command.

This command is passed to MSL for processing; the COPY/MOVE prompt panel is displayed for specification of the target library and other parameters.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ----------------------- ------
COPY      *        2 'ACCOUNTS.JONES.COBOL'
COPY      *        3 'ACCOUNTS.TEST.COBOL'   TST001
COPY      ACCMAIN  4 'ACCOUNTS.TEST.COBOL'
COPY      PAY*     5 'ACCOUNTS.TEST.COBOL'   TST001
```

COPYALI

The COPYALl line command copies all members of a partitioned data set to another data set.

Usage notes

The command supports only PDS and PDSE libraries.

When you invoke this command, you are prompted to the target library and like-named member replacement. The target library must be different from the current one. All members are copied regardless of member name specification.
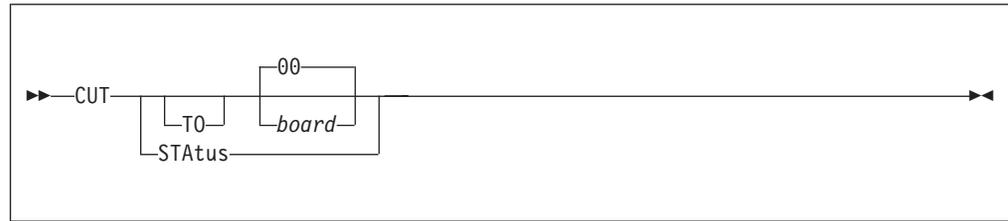
Examples

```
COPYALL
```

CUT

The CUT command copies the OLIST into the specified clipboard number.

Syntax

```
►►──CUT─────────────────┬──00──┬──────────────────────────────►◄
               ├─TO─┤   └─board─┘
               └─STAtus─┘
```

Operands

board   An integer from 00 to 99 or a name indicating the clipboard from which the data is to be pasted. If no board is specified, 00 is the default clipboard.

STAtus
       Displays the clipboard management status.

Usage notes

Use the PASTE command to copy a previously cut OLIST to the end of a displayed OLIST or to an edited file.

Examples

```
CUT TO MYLIST
CUT 91
CUT
CUT STA
```

/D

The /D line command deletes one or more entries in the OLIST. The remaining entries are renumbered.

Usage notes

/D can only be used as a line command; it cannot be used as a main command.

/D can be used with a number specifying the number of lines to delete.

/D can be used in pairs, in the form /DD, to indicate a block of lines to delete.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ----------------------- ------
/D2                  1 'ACCOUNTS.JONES.JCL'
                     2 'ACCOUNTS.JONES.COBOL'
/D                   3 'ACCOUNTS.TEST.COBOL'    TST001
/DD       ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
/DD       PAY*       5 'ACCOUNTS.TEST.COBOL'    TST001
```

D

The D line command deletes a data set or the one or more members specified (with confirmation).

Usage notes

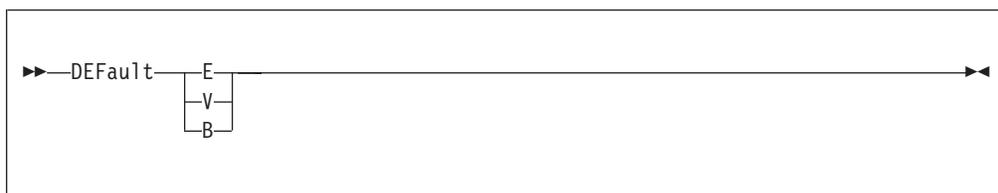D can be used as a line command or, when preceded by an item number, as a main command.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------  --------  ---- ----------------------   ------
D                    2 'ACCOUNTS.JONES.COBOL'
D                    3 'ACCOUNTS.TEST.COBOL'      TST001
D         ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
D         PAY*       5 'ACCOUNTS.TEST.COBOL'      TST001
```

DEFault

The DEFault command changes the default process invoked by the SELECT and S commands during the current OLIST session.

Syntax

```
►►──DEFault───┬──E──┬─────────────────────────────────────────►◄
              ├──V──┤
              └──B──┘
```

Operands

E   Invoke the E line command when the SELECT or S command is used in an OLIST.

V   Invoke the V line command when the SELECT or S command is used in an OLIST.

B   Invoke the B line command when the SELECT or S command is used in an OLIST.

Usage notes

DEFault is a main command only; it cannot be used as a line command.

If the operand is omitted, the current default is displayed.

Examples

```
DEFAULT E
DEF B
DEF
```

DSLIST

The DSLIST line command invokes an ISPF data set list (option 3.4) of all items in the current catalog matching the specification.

Usage notes

DSLIST can be used as a line command or, when preceded by an item number, as a main command. The item must conform to input specifications for a data set list. You must specify at least one asterisk. To get a full list of a specific level, specify it as shown in the last example below.

You can also invoke DSLIST by clicking on (or moving the cursor to) a line, and pressing the F10 (LEFT) or F11 (RIGHT) key.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ----------------------- ------
DSLIST               2 'ACCOUNTS.*.COBOL'
DSLIST               3 'ACCOUNTS.TEST.*'        TST001
DSLIST               4 'ACCOUNTS.TEST.COB*'
DSLIST               5 'ACCOUNTS.*'
```

E

The E line command invokes an MSL with a default process of EDIT, or invokes EDIT on a data set or member. The action taken depends on the type of object, as shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		Edit data set
PDS	None	Display MSL of all members with edit as default process
PDS	Pattern specified	Display MSL of matching members with edit as default process
PDS	Member specified	Edit member
LIST		Display temporary OLIST of matching items with edit as default process
VSAM		Edit VSAM file (if option installed)
DB2		Edit DB2 file (if option installed)
USER		Edit VSAM file (if option installed)
PC		Edit PC file (if option installed)

Usage notes

E can be used as a line command or, when preceded by an item number, as a main command.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ----------------------- ------
E                    2 'ACCOUNTS.JONES.COBOL'
E                    3 'ACCOUNTS.TEST.COBOL'    TST001
E         ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
E         PAY*       5 'ACCOUNTS.TEST.COBOL'    TST001
```

EF

The EF line command invokes a VSAM EDIT function on an OLIST object. The action taken depends on the type of object, as shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		Invoke the VSAM editor
PDSe	None	Display MSL of all members with browse as default process
PDSe	Pattern specified	Display MSL of matching members with browse as default process
PDSe	Member specified	Invoke VSAM editor over member
SCLM	None	Display MSL of all members with edit as default process
SCLM	Pattern specified	Display MSL of matching members with edit as default process
SCLM	Member specified	Invoke ISPF editor over member
SCLM		Same as for SCLM
LIST		Display temporary OLIST of matching items with edit as default process
OLIST		Display permanent OLIST of matching items with edit as default process
VSAM		Edit VSAM file (if option installed)
USER		Invoke the USER-supplied editor (if option installed)

Usage notes

EF can be used as a line command or, when preceded by an item number, as a main command.

The VSAM editor must be first defined during IPT customization via the %IQIWIZRD CLIST. If that is not the case, this command acts like the OLIST EDIT command.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------  -------- ---- ---------------------- ------
EF                    2 'ACCOUNTS.JONES.COBOL'
EF                    3 'ACCOUNTS.TEST.COBOL'    TST001
EF        ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
EF        PAY*       5 'ACCOUNTS.TEST.COBOL'    TST001
```

EMPTY

The EMPTY line command empties all data from a partitioned or a sequential data set.

Usage notes

EMPty can be used as a line command or, when preceded by an item number, as a main command.

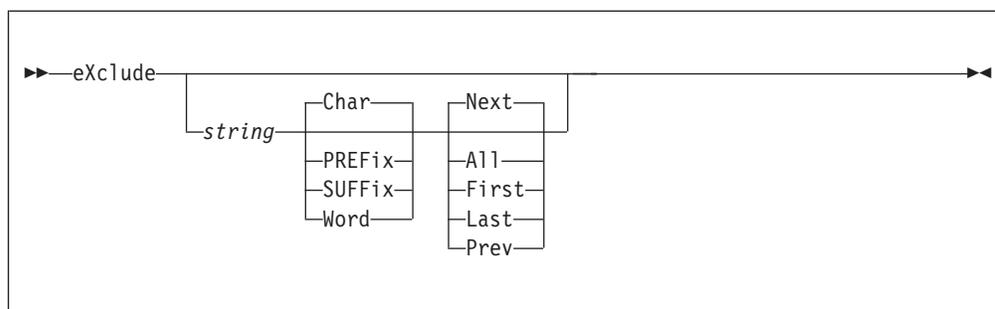The EMPty command ignores the member name field.

Examples

```
Command   Member    Num. Data Set Names/Objects  Volume
--------   --------  ---- ----------------------- ------
EMPTY                   2 'ACCOUNTS.JONES.COBOL'
E                       3 'ACCOUNTS.TEST.COBOL'   TST001
```

eXclude

Use the eXclude main command to exclude selected OLIST objects. When this command is used, the *EXCLUDE* tag appears next to the Volume or Class column on the OLIST screen.

eXclude can also be used as a line command by specifying X.

Syntax

```
►►──eXclude───────────────────────────────────────────►◄
            │          ┌─Char──┐   ┌─Next─┐           │
            └─string───┼───────┼───┼──────┼───────────┘
                       ├─PREFix─┤   ├─All──┤
                       ├─SUFFix─┤   ├─First┤
                       └─Word──┘    ├─Last─┤
                                    └─Prev─┘
```

Operands

string The text string to be found in the item name.

Char When specified, restricts search of the text string to a character within the data set name. This is the default.

PREFix
When specified, restricts search of the text string to the prefix of a qualifier within the data set name.

SUFFix
When specified, restricts search of the text string to the suffix of a qualifier within the data set name.

Word When specified, restricts search of the text string to the qualifier within the data set name.

Next Search the list for the next member specified in the string. This is the default.

All   Exclude all members that possess the text string.

First Search the list for the first member specified in the string.

Last Search the list for the last member specified in the string.

Prev Search the list for the previous member specified in the string.

Usage notes

If no operands are supplied, a menu is displayed for you to specify parameters.

Command RFIND may be subsequently used to exclude the next occurrence of the specified string.

Examples

```
EXCLUDE ASM
X SYS1 W A
X TEST SUFF F
X 'T L' P
EXCLUDE
```

EXPDIR (PDS only)

The EXPDIR line command expands the library specified.

Usage notes

EXPDIR can be used as a line command or, when preceded by an item number, as a main command.

The EXPDIR command ignores the member name field.

Examples

```
Command   Member    Num. Data Set Names/Objects  Volume
--------  --------  ---- ---------------------- ------
EXPDIR                2 'ACCOUNTS.JONES.COBOL'
EXPDIR                3 'ACCOUNTS.TEST.COBOL'   TST001
```

EXPORT

The EXPORT command saves the OLIST under its current name in the specified library.

Syntax

```
►►──EXPORT──library_name──────────────────────────────────────►◄
```

Operands

library_name
> The name of the library to be used as the specified library number.

Usage notes

Use the EXPORT command to export an OLIST to a public OLIST library.

Examples

```
EXPORT TEST
```

FILLVOL

The FILLVOL command fills in the VOLUME column of data set objects.

Syntax

```
►►──FILLVOL──────────────────────────────────────────────►◄
```

Operands

FILLVOL has no operands.

Usage notes

The command is a good candidate for the OLIST Hotbar.

Examples

```
FILLVOL
```

FILTER

The FILTER command shows only the selected objects from the current OLIST display.

Syntax

```
►►──FILTER─────┬───────────────────────────────┬──────────►◄
              │           ┌─Char─┐             │
              └─string──┬───────────┬──────────┘
                        ├─PREFix────┤
                        ├─SUFFix────┤
                        └─Word──────┘
```
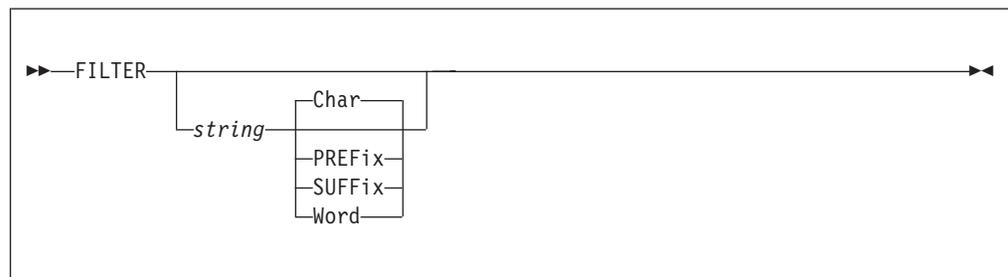
Operands

string A text string to be found in the object name.

Char Character within the OLIST.

PREFix
> First letter of a word within the OLIST.

SUFFix
> Last letter of a word within the OLIST.

Word Word within the OLIST.

Usage notes

Wildcard characters are not accepted under the command FILTER.

If no operands are supplied, a menu is displayed for you to specify parameters.

Command RLIP may be subsequently used to show all objects excluded from display.

Examples

```
FILTER TEST WORD
FILTER R CHAR
FILTER I PREFIX
FILTER T SUFFIX
```

Find

The Find command locates the next item in the OLIST whose name contains a specified text string.

Syntax

```
►►──Find──string───────────────────────────────────────────►◄
```

Operands

string   The text string to be found in the item name.

Usage notes

Find is a main command only; it cannot be used as a line command.

Do not enclose the string or pattern in quotation marks.

Find starts the search from the second entry on the list and searches to the end of the list. If nothing is found, the search starts again from the top. If again nothing is found, the list does not change it position.

```
   File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
-                                                                            -----
-                                                              -IPT-     |   132
C  | COMMAND ===>                                                        |   CSR
H  |                                                                     |   P
   | Enter selection parameters to find entries:                        |   LIST*
T  | Search string ===> 'TEXT'                                          |
C  |                                                                     |   ass
-  | Direction     ===> N (N=Next, P=Prev, L=Last, F=First, A=All)      |   -----
   | String type   ===> C (C=Character, P=Prefix, S=Suffix, W=Word)     |
   |                                                                     |
   |         Press ENTER to process or the END key to cancel.           |
   |_____|
                         5 'SYS1.ADBBLIB'
                         6 'SYS1.ADFQMLIB'
                         7 'SYS1.ADFQPLIB'
                         8 'SYS1.ADGTCLIB'
                         9 'SYS1.ADGTLLIB'
```

Figure 29. The Find command pop-up

Examples

```
FIND STAT1
F
```

FINDTEXT (FT)

The FINDTEXT (or FT) command searches for the first sequential file or the first member of a library that contains the search text. The search starts from the first OLIST entry displayed on the screen. The search is constrained by the start and end columns (see Figure 34 on page 211).

Syntax

Operands

search_string
> The string to be found. If it contains blanks or special characters, the text-string should be enclosed in quotation marks. The search string can be hexadecimal and case-sensitive SBCS characters, as well as DBCS search strings. A text string that includes single quotes (') should be enclosed with double quotes (").

> FINDTEXT handling of ampersand (&) characters in search strings conforms to ISPF EDIT conventions.

All   All libraries are searched, and finds are flagged for each library.

FINDTEXT (FT) OLIST command

First   Finds the first library where a match is found.

Last   Finds the last library where a match is found.

Next   Starts the search from the object immediately below the one at the top of the panel.

Prev   Finds the previous library where a match is found.

Usage notes

FINDTEXT is a main command only; it cannot be used as a line command.

If the MEMBER column contains a member name or a member name pattern, the search is limited to that member (or members).

If no search string is entered, a text search prompt panel is displayed. This lets you specify the search string, and also the start and end column, and other options.

```
 -IPT- OLIST (B) ----------- DATA SET HISTORY ----------------- Row 1 to 6 of 6
                          ┌─────────────────── OLIST Text Search ──────────────────┐
  -  │                                                                      -IPT-  │
  -  │  COMMAND ===>                                                               │
  C  │                                                                             │
  H  │  Specify string to search within the OLIST entries:                        │
     │             (double quote) to search for ' (single quote) characters.      │
  T  │  Note: use C'... or c'... for case sensitive search strings.               │
  C  │        use X'... or x'... for hexadecimal search strings.                  │
  -  │  Search string ===> ABCXYZ                                                  │
     │                                                                             │
     │  Specify search range in target data records:                              │
     │  START COLUMN ===> 1                                                        │
     │    END COLUMN ===> 99999                                                    │
     │                                                                             │
     │  Specify how many items to process before being prompted to resume:        │
     │    STOP AFTER ===> 9999 (Number of items to process successfully)          │
     │  PROMPT AFTER ===> 9999 (Number of items to process before                 │
     │                          a prompt screen is displayed)                     │
     │                                                                             │
     │    Specify Y (Yes) or N (No) for the following options:                    │
     │     AUTOMATIC ===> N (Process until reaches success limit?)                │
     │       EXCLUDE ===> N (Exclude failing items from displayed list?)          │
     │                                                                             │
     │         Press ENTER to process or the END key to cancel.                   │
     │                                                                             │
     └─────────────────────────────────────────────────────────────────────────────┘
```

If a search string is entered, but no keyword is entered, the search starts with the object at the top of the panel.

Once an FT is entered, RFIND (PF5) is either FT *search_string* Next or FT *search_string* Prev, depending on the initial FT "direction". Last and Prev imply the "upwards" direction (FT *search_string* Prev), otherwise the search is in the "downwards" direction.

If EXCLUDE(Y) is in effect, objects that do not include the search string (or skipped) are excluded (hidden) from display.

Since the search stops at the first member within the library, to search for multiple members switch into the member list and use the MSL GLOBAL FIND or FINDTEXT commands.

If the search is successful, to search again from the next line in the OLIST press the RFIND key, or re-enter the FT search, adding the Next keyword.

Examples

```
FINDTEXT ACCOUNTS
FT ACCOUNTS ALL
FT 'MAJOR ACCOUNTS' L
```

FLIP

The FLIP command toggles between visible and invisible (excluded and filtered-out) lines.

Syntax

```
►►──FLIP─────────────────────────────────────────────────►◄
```

Operands

FLIP has no operands.

Examples

```
FLIP
```

FREE

The FREE line command (abbreviation FRE) frees unused space in the specified data set.

Usage notes

FREE can be used as a line command or, when preceded by an item number, as a main command.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------  -------- ---- ----------------------- ------
FREE                 2 'ACCOUNTS.JONES.COBOL'
FREE                 3 'ACCOUNTS.TEST.COBOL'    TST001
FREE      ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
FREE      PAY*       5 'ACCOUNTS.TEST.COBOL'    TST001

2 FRE
```

I

The I line command provides information about a data set.

```
                           Data Set Information
   Command ===>

   Data Set Name  . . . : SYS1.ALINKLIB

   General Data                          Current Allocation
    Volume serial . . . : G1703D          Allocated blocks  . : 187
    Device type . . . . : 3390            Allocated extents . : 1
    Organization  . . . : PO             Maximum dir. blocks : 194
    Record format . . . : U
    Record length . . . : 0
    Block size  . . . . : 32760          Current Utilization
    1st extent blocks . : 187             Used blocks . . . . : 162
    Secondary blocks  . : 146             Used extents  . . . : 1
                                          Used dir. blocks  . : 162
    Creation date . . . : 2005/09/20     Number of members . : 966
    Referenced date . . : 2006/09/27
    Expiration date . . : ***None***
```

Figure 30. The Data Set Information panel

Usage notes

I can be used as a line command or, when preceded by an item number, as a main command.

The I command ignores the member name field.

Examples

```
2 i
```

HDELETE

The HDELETE line command deletes a migrated (archived) data set object.

Usage notes

If a data set by the specified name is catalogued, a confirmation panel is displayed.

If a data set by the specified name is not catalogued, an entry panel prompts you. In it you can modify the Line command, Data Set name, or Volume.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  --------  ---- ----------------------  ------
HDELETE             2    'ACCOUNTS.JONES.COBOL'
HDELETE             3    'ACCOUNTS.TEST.COBOL'   TST001
```

HLIST

The HLIST line command displays archiving information about a migrated data set object.

Usage notes

If a data set by the specified name is not catalogued, an entry panel prompts you. In it you can modify the Line command, Data Set name, or Volume.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
HLIST                2 'ACCOUNTS.JONES.COBOL'
HLIST                3 'ACCOUNTS.TEST.COBOL'    TST001
```

/I

The /I line command inserts one or more empty lines in the OLIST for the insertion additional items.

Usage notes

/I can only be used as a line command; it cannot be used as a main command.

/I can be used with a number specifying the number of empty lines to insert.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
/I                   2 'ACCOUNTS.JONES.COBOL'
/I3                  3 'ACCOUNTS.TEST.COBOL'    TST001
```

INFO

The INFO line command displays information about a data set object.

Usage notes

If a data set by the specified name is not catalogued, an entry panel prompts you. In it you can modify the Line command, Data Set name, or Volume.

If a data set is migrated (archived), the HLIST command is invoked.

If a data set is a VSAM cluster, the IDCAMS utility is invoked.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
INFO                 2 'ACCOUNTS.JONES.COBOL'
INFO                 3 'ACCOUNTS.TEST.COBOL'    TST001
```

LEVEL

The LEVEL command shows only data set objects that satisfy the specified level of DSNAME qualifier.

Syntax

```
►►──LEVEL──┬──level_number──┬──────────────────────────►◄
           └──ALL───────────┘
```
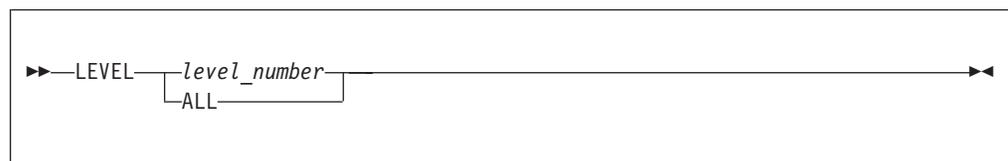
Operands

level_number
> A qualifier level number

ALL   Displays data sets of every level

Usage notes

LEVEL can only be used a main command.

If you enter the command LEVEL with no operand, a message is displayed requesting the input of either a level qualifier or the operand ALL.

The first level of qualifier is assumed. Therefore, a level of qualified specified as '1' would return data set names of two positions or less, where a level qualifier of '2' would return all data sets of three positions or less.

Level 1:	Level 2	Level 3
SERVICES	SERVICES	SERVICES
SERVICES.ACSREP	SERVICES.ACSREP	SERVICES.ACSREP
	SERVICES.ACSREP.JCL	SERVICES.ACSREP.JCL
		SERVICES.ACSREP.PCF.JCL

LISTALOC

The LISTALOC command appends allocated data sets to the current OLIST.

Syntax

```
►►──LISTAloc───────────────────────────────────────────────►◄
              └─ddname─┘
```
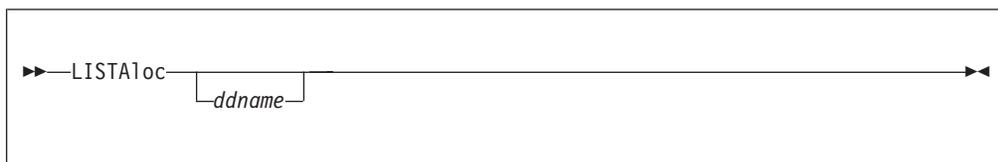
Operands

ddname
> Any DD name allocated to your TSO session.

Usage notes

LISTALOC is a main command only; it cannot be used as a line command.

You may use this command with MEMFIND (page 171) or FINDTEXT (page 153), to reveal where in the concatenation a certain member resides.

Examples

```
LISTA STEPLIB   - add to OLIST the DD STEPLIB data sets.
LISTA           - add all data sets allocated to your TSO session.
```

LISTBASE

The LISTBASE command appends generation-data-group base names to the current OLIST.
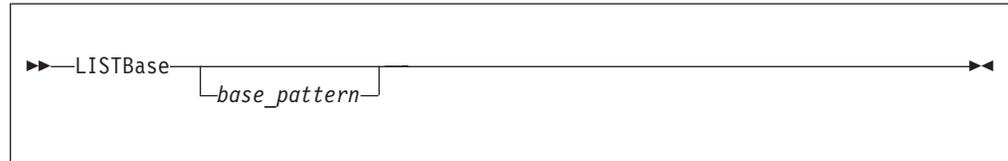
Syntax

```
►►──LISTBase──────────────────────────────────────────────►◄
              └─base_pattern─┘
```

Operands

base_pattern
> A free form pattern of GDG base name. If the pattern is not supplied, IPT displays the DSNAME pattern entry panel.

Usage notes

LISTBASE is a main command only; it cannot be used as a line command.

A pattern may have * and % wild cards in any position.

IPT supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

IPT automatically appends a `.*` to any DSN pattern that is not supported by ISPF DSLIST.

Examples

```
LISTB IMS*DAY* - add to OLIST generation-data-group base
                 names matching a pattern of IMS*DAY*
LISTB  - display command associated entry panel
```

LISTBOOK

The LISTBOOK command appends BookManager BOOK data set names to the current OLIST.

Syntax

```
►►──LISTBOOK──────────────────────────────────────────────►◄
             └─book_pattern─┘
```
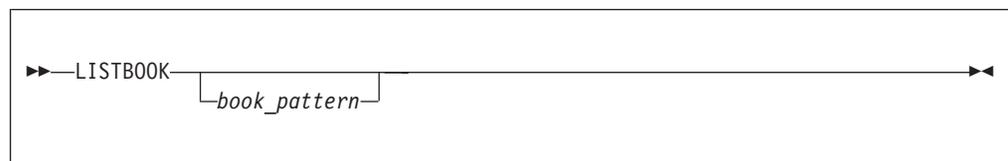
Operands

book_pattern
> A free form pattern of BookManager BOOK names. If the pattern is not supplied, IPT displays the DSNAME pattern entry panel.

Usage notes

LISTBOOK is a main command only; it cannot be used as a line command.

A pattern may have * and % wild cards in any position.

IPT supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Specifying a suffix .BOOK in the DSN pattern is not required.

Examples

```
LISTBOOK PP*DB2 - add to OLIST data set names matching a pattern
                  of PP*DB2*.BOOK
LISTK  - display command associated entry panel
```

LISTCAT

The LISTCAT command appends catalogued data set names to the current OLIST.

Syntax

```
►►──LISTCat──────────────────────────────────────────────────────►◄
            └─DSNpatt─┬─────────┬─┘
                      └─VOLpatt─┘
```

Operands

DSNpatt
> A free form pattern of a catalogued DSNAME. If the pattern is not supplied, IPT displays the DSNAME pattern entry panel.

VOLpatt
> A free form pattern of a VOLUME.

Usage notes

LISTCAT is a main command only; it cannot be used as a line command.

A pattern may have * and % wild cards in any position.

IPT supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

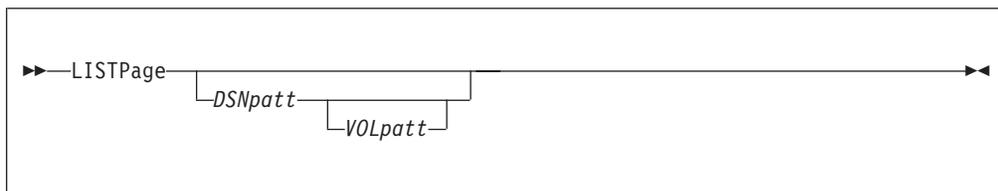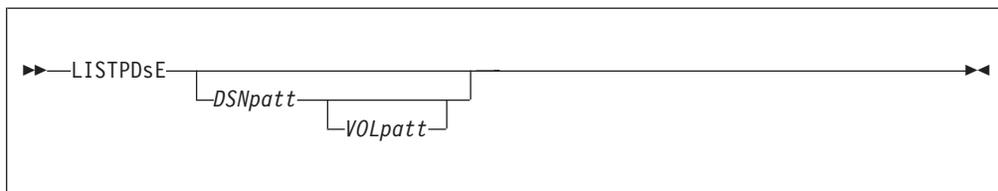IPT automatically appends a .* to any DSN pattern that is not supported by ISPF DSLIST.

Examples

```
LISTC ISP*LPA* SYS* - add to OLIST catalogued data set names
                      matching a pattern of ISP*LPA* that reside on volumes
                      matching a pattern of SYS*
LISTC SYS%.M*LIB* - add to OLIST catalogued data set names
                    matching a pattern of SYS%.M*LIB*
LISTC  - display command associated entry panel
```

LISTDGD

The LISTDGD command appends generation-data-group data set names to the current OLIST.
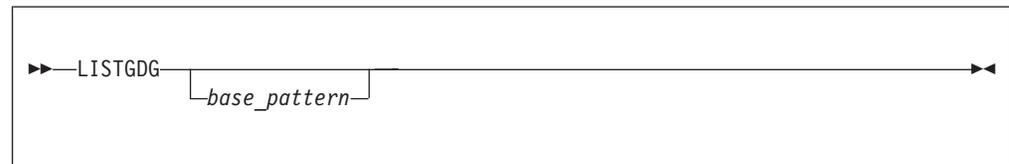
Syntax

```
►►──LISTGDG───────────────────────────────────────────────►◄
            └─base_pattern─┘
```

Operands

base_pattern
> A free form pattern of GDG base name. If the pattern is not supplied, IPT displays the DSNAME pattern entry panel.

Usage notes

LISTGDG is a main command only; it cannot be used as a line command.

A pattern may have * and % wild cards in any position.

IPT supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

IPT automatically appends a .* to any DSN pattern that is not supported by ISPF DSLIST.

GDG data set objects are displayed with a - (-*nn*) marker in the command line, where *nn* is the generation number.

Examples

```
LISTG SYS*LOG* - add to OLIST generation-data-set names
                 matching a pattern of SYS*LOG*
LISTG  - display command associated entry panel
```

LISTHIST

The LISTHIST command appends the most recently used data sets to the current OLIST.

Syntax

```
►►──LISTHistC──────────────────────────────────────────────►◄
```
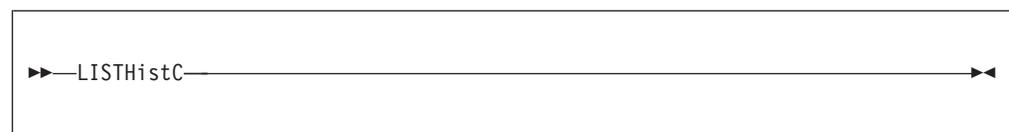
Usage notes

You may use this command to access the most recently used data sets.

Examples

```
LISTH
```

LISTMig

The LISTMig main command appends migrated (archived) data set names to the current OLIST.

Syntax

```
>>--LISTMig--------------------------------------------------><
            |_DSNpatt_|
```

Operands

DSNpatt
> A free-form pattern of a catalogued DSNAME.

Usage notes

If no operand is supplied, you are prompted to supply the DSNAME pattern.

A pattern may have * and % wild cards in any position. ISPF Productivity Tool supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

ISPF Productivity Tool automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

Examples

```
LISTM CICS*DATA* - add to OLIST migrated data set names
                      matching a pattern of CICS*DATA*
LISTM  - display command associated entry panel
```

LISTMIGR

The LISTMIGR command appends migrated (archived) data set names to the current OLIST.

Syntax

```
>>--LISTMigr------------------------------------------------><
            |_DSNpatt_|
```

Operands

DSNpatt
> A free-form pattern of a catalogued DSNAME.

Usage notes

A pattern may have * and % wild cards in any position. ISPF Productivity Tool supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

ISPF Productivity Tool automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

Examples

```
LISTM CICS*DATA* - add to OLIST migrated data set names
                   matching a pattern of CICS*DATA*
LISTM  - display command associated entry panel
```

LISTMULT

The LISTMULT main command appends data set names to the current OLIST from multiple specifications.

Syntax

```
►►──┬─LISTMULT─┬──────────────────────────────────────►◄
    └─MLIST────┘
```
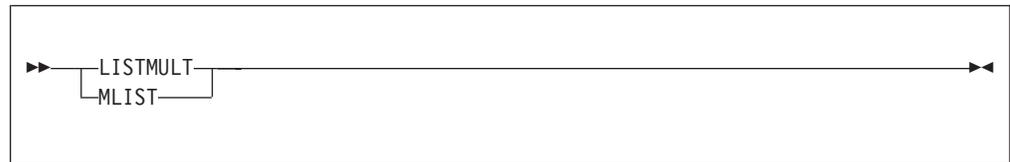
Usage notes

LISTMULT displays a data entry panel for specifying multiple LISTCAT specifications. Each specification may include a different DSNAME or VOLUME pattern.

A pattern may have * and % wild cards in any position. ISPF Productivity Tool supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

ISPF Productivity Tool automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.
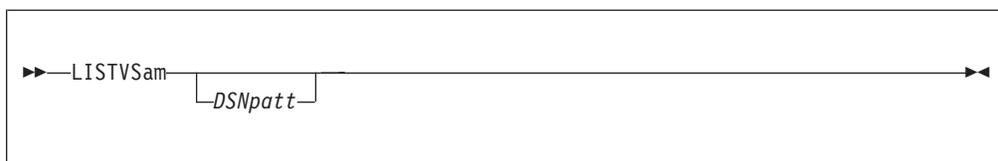
Examples

```
MLIST  - display a data entry panel for specifying multiple
         LISTCAT specifications.
```

LISTPAGE

The LISTPAGE main command appends catalogued Paging-Space data set names to the current OLIST.

Syntax

```
►►──LISTPage─────────────────────────────────────────────────►◄
              └─DSNpatt─┐
                        └─VOLpatt─┘
```

Operands

DSNpatt
> A free-form pattern of a catalogued DSNAME.

VOLpatt
> A free-form pattern of a VOLUME.

Usage notes

If no operands are supplied, you are prompted to supply the DSNAME pattern and (optionally) the volume pattern.

A pattern may have * and % wild cards in any position. ISPF Productivity Tool supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

ISPF Productivity Tool automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

Examples

```
LISTP PAGE* SYS* - add to OLIST paging-space data set names
                   matching a pattern of PAGE* that reside on volumes
                   matching a pattern of SYS*
LISTP SYS%.PAG* - add to OLIST paging-space data set names
                  matching a pattern of SYS%.PAG*
LISTP - display command associated entry panel
```

LISTPDSE

The LISTPDSE main command appends catalogued PDSE library data set names to the current OLIST.

Syntax

```
►►──LISTPDsE─────────────────────────────────────────────────►◄
              └─DSNpatt─┐
                        └─VOLpatt─┘
```

Operands

DSNpatt
> A free-form pattern of a catalogued DSNAME.

> *VOLpatt*
>> A free-form pattern of a VOLUME.

Usage notes

If no operands are supplied, you are prompted to supply the DSNAME pattern and (optionally) the volume pattern.

A pattern may have * and % wild cards in any position. ISPF Productivity Tool supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

ISPF Productivity Tool automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

Examples

```
LISTPDE INT*25* USR* - add to OLIST PDSE library names
                     matching a pattern of INT*25* that reside on volumes
                     matching a pattern of USR*
LISTPDSE IS*MAC* - add to OLIST PDSE library names
                 matching a pattern of IS*MAC*
LISTPDSE - display command associated entry panel
```

LISTSHLF

The command LISTSHLF appends BookManager BOOKSHELF data set names to the current OLIST.

Syntax

```
►►──LISTSHLF──────────────────────────────────►◄
            └─shelf_pattern─┘
```

Operands

> *shelf_pattern*
>> A free form pattern of BookManager BOOKSHELF names. If the pattern is not supplied, IPT displays the DSNAME pattern entry panel.

Usage notes

LISTSHLF is a main command only; it cannot be used as a line command.

A pattern may have * and % wild cards in any position.

IPT supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Specifying a suffix .BKSHELF in the DSN pattern is not required.

Examples

```
LISTSHLF PP*DB2 - add to OLIST data set names matching a pattern
                  of PP*DB2*.BKSHELF
LISTF  - display command associated entry panel
```

LISTSMP

The LISTSMP command appends SMP/E ZONE VSAM cluster names to the current OLIST.

Syntax

```
►►──LISTSMP──LISTZ──────────────────────────────────────────►◄
                  └─zone_pattern─┘
```
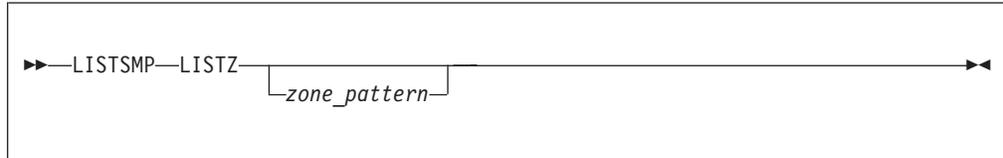
Operands

zone_pattern
> A free form pattern of SMP/E ZONE VSAM cluster names. If the pattern is not supplied, IPT displays the DSNAME pattern entry panel.

Usage notes

LISTSMP is a main command only; it cannot be used as a line command.

A pattern may have * and % wild cards in any position.

IPT supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

Specifying a suffix .CSI in the DSN pattern is not required.

Examples

```
LISTSMP SYS* - add to OLIST VSAM cluster names matching a pattern
               of SYS*.CSI
LISTZ  - display command associated entry panel
```

LISTSYS

The LISTSYS command populates the current OLIST with the libraries of the specified system libraries.

Syntax

```
►►──LISTSys─┬─────────────┬──────────────────────────────────►◄
            │   ┌──/──┐    │
            └───┼─────┼────┘
                ├─ALL────────┤
                ├─LINKLIST─┐  │
                │ └─LINK───┘  │
                ├─LPALIB───┐  │
                │ └─LPA────┘  │
                ├─AFPLIST──┐  │
                │ └─AFP────┘  │
                ├─PARMLIB──┐  │
                  └─PARM───┘
```
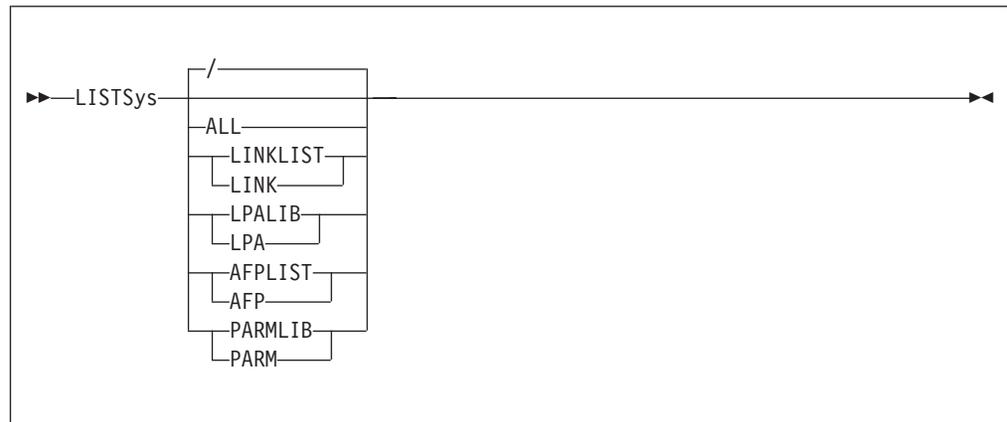
Operands

ALL   Indicates APFLIST, LINKLIST, and LPALIB (default).

APFLIST
> The authorized program facility library list.

LINKLIST
> The LINKLIST load libraries.

LPALIB
> The link pack area libraries.

PARMLIB
> The z/OS PARMLIB libraries.

Usage notes

Use this command with the MEMFind command (page 171) to locate where the system may locate a module.

Examples

```
LISTS LPA  - add to OLIST all library names included in the
             system Link-Pack-Area (LPA).
LISTS PARM - add to OLIST all library names included in the
             system parameter library list (PARMLIB).
LISTS ALL  - add to OLIST all library names included in the
             system lists of: LINKLIST, LPALIB, PARMLIB, APF.
LISTSYS    - display a menu for specifying parameters.
```

LISTTAPE

The LISTTAPE main command appends catalogued TAPE data set names to the current OLIST.
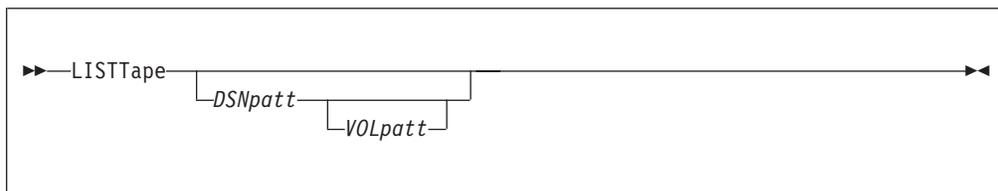
Syntax

```
►►──LISTTape─────────────────────────────────────────────►◄
              └─DSNpatt─┬──────────┘
                        └─VOLpatt─┘
```

Operands

DSNpatt
>   A free-form pattern of a catalogued DSNAME.

VOLpatt
>   A free-form pattern of a VOLUME.

Usage notes

If no operands are supplied, you are prompted to supply the DSNAME pattern and (optionally) the volume pattern.

A pattern may have * and % wild cards in any position. ISPF Productivity Tool supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

ISPF Productivity Tool automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

Examples

```
LISTT SYS*SMF* DAY* - add to OLIST TAPE data set names
                        matching a pattern of SYS*SMF* that reside on volumes
                        matching a pattern of DAY*
LISTTAP IMS*LOG* - add to OLIST TAPE data set names
                    matching a pattern of IMS*LOG*
LISTTAPE  - display command associated entry panel
```

LISTVSAM

The LISTVSAM main command appends VSAM cluster names to the current OLIST.

Syntax

```
►►──LISTVSam──────────────────────────────────────────────►◄
             └─DSNpatt─┘
```

Operands

DSNpatt
>   A free-form pattern of a catalogued DSNAME.

Usage notes

If no operands are supplied, you are prompted to supply the DSNAME pattern.

A pattern may have * and % wild cards in any position. ISPF Productivity Tool supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

ISPF Productivity Tool automatically appends a ".*" to any DSN pattern that is not supported by ISPF DSLIST.

Examples

```
LISTVS CICS*CSI*
LISTVS
```

LISTVTOC

The LISTVTOC command appends data set names, from specific volumes, to the current OLIST.

Syntax

```
►►──LISTVtoc──VOLpatt─────────────────────────────────►◄
                       └─DSNpatt─┘
```

Operands

VOLpatt
> A free form pattern of a VOLUME. If the pattern is not supplied, IPT displays the DSNAME pattern entry panel.

DSNpatt
> A free form pattern of a DSNAME. If the pattern is not supplied, IPT displays the DSNAME pattern entry panel.

Usage notes

LISTVTOC is a main command only; it cannot be used as a line command.

A pattern may have * and % wild cards in any position.

IPT supports more generic patterns than ISPF DSLIST. The whole DSN is treated as a contiguous character string, regardless of the number of dots (qualifiers).

IPT automatically appends a * to any DSN pattern that ends with a ".", or is just a first level qualifier.

Examples

```
LISTV WRK* SYS*DATA* - add to OLIST any data set names
                       matching a pattern of SYS*DATA* that reside on volumes
                       matching a pattern of WRK*
```

```
LISTV SYSRES - add to OLIST all data set names residing on
              volume SYSRES
LISTV - display command associated entry panel
```

Locate

The Locate command locates the next data set (or object) name beginning with the specified text string.

Syntax

```
►►──Locate──┬──string───┬──────────────────────────────►◄
            ├─DSNpatt──┤
            └─number───┘
```
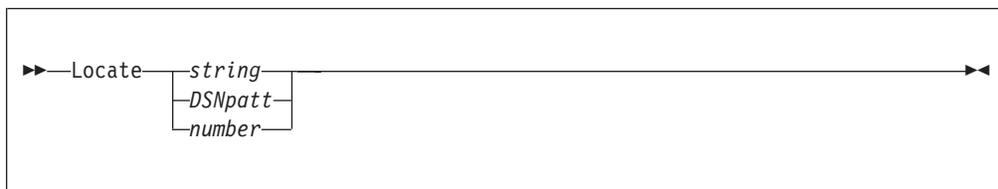
Operands

string   The text string the data set name is to begin with.

DSNpatt
>   A pattern representing the text string to be located at the beginning of the item name using the wildcard characters "%" and "*".

number
>   The entry number of the item to be located.

Usage notes

Locate is a main command only; it cannot be used as a line command.

If the specified text string does not begin with a quotation mark ('), quotation marks beginning data set names are ignored. If the specified text string begins with a quotation mark, only data set names beginning with a quotation mark are considered to match.

Examples

```
LOCATE ACCOUNTS
L 'ACCOUNTS
LOCATE A*B
L 23
```

MAPpds (PDS only)

The MAPpds command displays a map of all existing and deleted members of a PDS library. Deleted members may be browsed, viewed, and restored into the directory.

Syntax

```
►►──MAPpds──────────────────────────────────────────────►◄
```
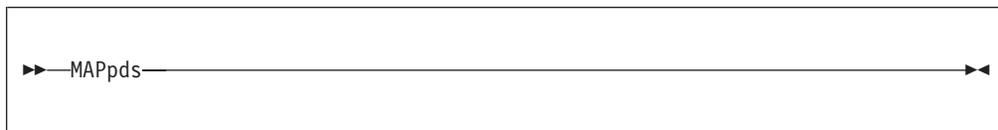
Operands

MAPpds has no operands.

Usage notes

MAPpds is a line command only; it cannot be used as a main command.

For more information about MAPPds, see Chapter 11, "Browsing, viewing, and restoring deleted members of a PDS using the MAP list," on page 195.

MEMFind

The MEMFind command locates the first, next, or all libraries in the OLIST that contain the specified member.

Syntax

```
>>──┬─MEMFind──┬──────────────────┬─Next──┬──────────────────────>◄
    ├─MF──────┤   └─member_name─┬──────┤
    ├─FINDMem─┤                 ├─All──┤
    └─FM──────┘                 └─First┘
```
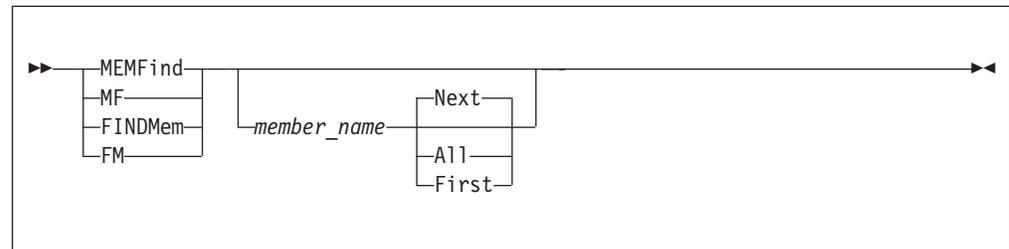
Operands

member_name
>   The name of the member, or a generic unrestricted member_name pattern.

Next   Search the list for the next library containing the member specified. This is the default.

All   Search all libraries for the member specified.

First   Search the list in order; stop as soon as a library is found containing the member.

Usage notes

MEMFIND is a main command only; it cannot be used as a line command.

The search starts at the first OLIST entry displayed on the screen.

If no operands are supplied, a menu is displayed for you to specify parameters:

```
 -IPT- OLIST (B) ---------- DATA SET HISTORY ---------------- Row 1 to 6 of 6
 C --------------------------- OLIST Find Member -------------------------- R
 H │ -IPT-     Cmd ===>                                                    │ E
   │ The MEMFIND command must be followed by a member name                 │ ST*
 T │ Specify member name(s) to search within the OLIST libraries:          │
 C │ Member name(s) ===>          (Specific name                           │ s
 - │                                or unrestricted name pattern            │ ---
   │                                                                        │
   │ Search scope   ===> 1  1=Start from Olist NEXT entry                   │
   │                        2=Start from Olist FIRST entry                  │
   │                        3=Search ALL Olist entries                      │
   │                                                                        │
   │ Exclude failed ===> N  Y/N                                             │
   │                                                                        │
   │    Press ENTER to process or the END key to cancel.                    │
   │                                                                        │
   └------------------------------------------------------------------------
```

If NEXT, FIRST, or ALL is not specified, the search begins with the next item on the current display.

Following a MEMFind, the RFIND command (or the key assigned to RFIND, normally PF5) repeats the last MEMFind (with the operand NEXT assumed).

When the member is found, MEMFind places the member name in the MEMBER field.

When ALL is specified with GLOBAL EXCLUDE(YES) in effect, only matching libraries are displayed.

Examples

```
MEMFIND PAYMAIN
MEMFIND PAYM*
MEMF PAYMAIN FIRST
MEMFIND PAYMAIN NEXT
MEMFIND P* NEXT
MEMF TAX1990 ALL
```

MLIST

The MLIST command populates the current OLIST with entries from multiple list specifications.

Syntax

```
►►──MLIST────────────────────────────────────────────────────────────►◄
```

Operands

MLIST has no operands.

Usage notes

This command is identical to LISTMULT (see page 163).

MOVE (PDS only)

The MOVE line command moves the specified member or members.

Usage notes

A member or pattern is required.

MOVE can be used as a line command or, when preceded by an item number, as a main command.

This command is passed to MSL for processing; the COPY/MOVE prompt panel is displayed for specification of the target library and other parameters.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------  --------  ---- ----------------------   ------
MOVE      *          2 'ACCOUNTS.JONES.COBOL'
MOVE      *          3 'ACCOUNTS.TEST.COBOL'     TST001
MOVE      ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
MOVE      PAY*       5 'ACCOUNTS.TEST.COBOL'     TST001
```

MOVEALl

The MOVEALl line command moves all members from the nominated data set to a different data set.

Usage notes

You are prompted to specify the target library and like-named member replacement.

The target library must not be one of the currently concatenated libraries.

All present members are moved, regardless of any prior filtering.

Examples

```
MOVEAL
```

OLIST

The OLIST line command invokes a temporary OLIST of all items in the current catalog matching the specification.

Usage notes

OLIST can be used as a line command or, when preceded by an item number, as a main command. The first level must be fully qualified. In all other levels, wildcards ("%" and "*") can be used freely.

OLIST is the default process whenever a generic data set specification is selected. The VOLUME field is ignored.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------  -------- ---- ---------------------- ------
OLIST                2 'ACCOUNTS.%PAY*.COBOL'
OLIST                3 'ACCOUNTS.%%TEST.*'      TST001
OLIST                4 'ACCOUNTS.TEST'
```

OPEN

The OPEN command switches to another OLIST.

Syntax

```
▶▶──OPEN──olist_name──────────────────────────────────────▶◀
```

Operands

olist_name
> The name of the OLIST you want to switch to.

Usage notes

Usually, it is easier to switch to another OLIST by typing over the permanent OLIST name. However, when operating in a temporary OLIST, the Open list field is not visible. This is when the OPEN command is useful.

Examples

```
open ledger1
open payrol
```

OPRINT

The OPRINT command prints the current OLIST.

Syntax

```
▶▶──OPRINT────────────────────────────────────────────────▶◀
```

Operands

OPRINT has no operands.

Examples

```
OPRINT
```

PASTE

The PASTE command attaches the contents of a previously cut OLIST to the end of the current OLIST.
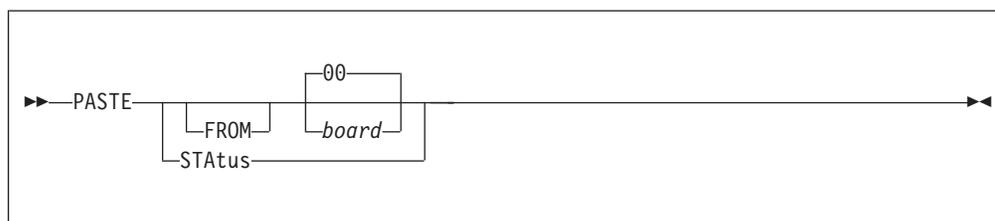
Syntax

```
►►──PASTE──┬────────────────────┬──────────────────►◄
           │         ┌─00──┐     │
           ├─FROM─┤─board─┤      │
           └─STAtus─────────────┘
```

Operands

board An integer from 00 to 99 or a name, indicating the clipboard from which the data is to be pasted. If no board is supplied, the default clipboard is 00.

STAtus
 Displays clipboard management status.

Usage notes

Use the CUT command (page 144) and the PASTE command (page 175) to copy lines among different OLISTs.

The selected clipboard must have been created by a previous OLIST CUT command.

Examples

```
PASTE 5
PASTE
```

POPULATE

The POPULATE command accesses a pull-down menu which allows you to select how to populate the current OLIST. This is similar to selecting the Populate option on the Action Bar. From the Populate pull-down menu, you select from nine population options.

Syntax

```
►►──POPULATE──────────────────────────────────────►◄
```
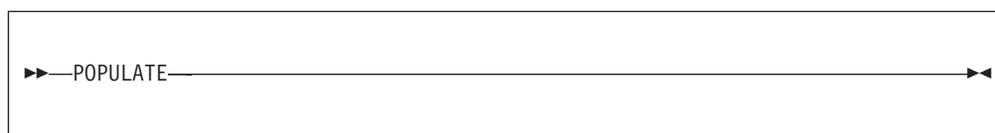
Operands

POPULATE has no operands.

Examples

```
POPULATE
```

PRINT (PDS or Sequential only)

The PRINT line command prints a sequential data set or invokes the MSL PRINT command for a partitioned data set.

Usage notes

A member or pattern may be specified.

PRINT can be used as a line command or, when preceded by an item number, as a main command.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------  --------  ---- ----------------------   ------
PRINT       *          2 'ACCOUNTS.JONES.COBOL'
PRINT       *          3 'ACCOUNTS.TEST.COBOL'    TST001
PRINT     ACCMAIN      4 'ACCOUNTS.TEST.COBOL'
PRINT     PAY*         5 'ACCOUNTS.TEST.COBOL'    TST001
```

/R

The /R command repeats an existing line in the OLIST one or more specified times (presumably for subsequent editing).

Usage notes

/R can only be used as a line command; it cannot be used as a main command.

/R can be used with a number specifying the number of times to repeat the line.

You can overtype the information in the other input fields (MEMBER, DATA SET NAME, VOLUME). The original line remains intact. The cursor is positioned on the first of the newly inserted lines, so that you can select it by pressing the Enter key.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------  --------  ---- ----------------------   ------
/R                     2 'ACCOUNTS.JONES.COBOL'
/R3                    3 'ACCOUNTS.TEST.COBOL'    TST001
```

REFRESH

The REFresh line command refreshes the current OLIST from original parameters.

Usage notes

A **permanent** OLIST is refreshed by reloading its latest stored copy from the OLIST library. A **temporary** OLIST that was created from a given DSN pattern, is refreshed by revisiting the catalog or VTOCs to match the originally specified pattern. A **temporary** OLIST, created from the IPT Data Set History List, is refreshed from the most recent version of that list.

Examples

```
REF
REFRESH
```

RELEASE

The RELease main command closes or deletes the current print group.

Syntax

```
►►──RELease──────────────────────────────────────────────►◄
           └─PURge─┘
```
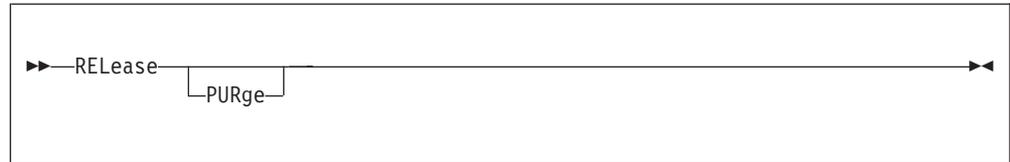
Operands

PURge
When this keyword is specified, the current print group closed and deleted. If the keyword is not specified, the current print group is closed and unallocated.

Usage notes

Current print group is written out to dynamically allocated SYSOUT data set with DD name IQISOUT.

Examples

```
RELEASE
REL PUR
```

RENAME

The RENAME line command renames a data set or a member.

Usage notes

RENAME can be used as a line command or, when preceded by an item number, as a main command.

RENAME does not accept a pattern in the member field.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ----------------------- ------
RENAME             2 'ACCOUNTS.JONES.COBOL'
R                  3 'ACCOUNTS.TEST.COBOL'    TST001
R         ACCMAIN  4 'ACCOUNTS.TEST.COBOL'
```

RESet

The RESet command clears selected (or all) columns in the display and removes the empty lines.

Syntax

```
►►──RESet─┬──────Command──────┬──────────────────────►◄
          ├─All────┤
          ├─CLAss──┤
          ├─DEL────┤
          ├─Member─┤
          ├─VOLume─┤
          ├─Type───┤
          ├─FILTER─┤
          └─EXCLUDE┘
```

Operands

Command
> Blank out the Command column. This is the default.

All   Blank out the Command column, the Member column, and the Volume or CLass column.

CLAss   Blank out the Class column.

Del   Following a VALIDATE command, remove from the OLIST entries that contain "*DEL*" in the Class column because they do not correspond to any object in the catalog or on the volume.

Member
> Blank out the Member column.

Type   Blank out the Class column.

Volume
> Blank out the Volume column.

Filter   Remove all OLIST filtering.

Exclude
> Restore all OLIST excluded objects.

Usage notes

RESet is a main command only; it cannot be used as a line command.

When RESet is issued (with or without operands), empty lines are removed and the entries are renumbered.

If RESet FILTER or RESET X is used, all other parameters stay the same.

Examples

```
RESET
RES ALL
RESET COMMANDS
RES C
RESET DEL
RES DEL
RES FILTER
RESET MEMBER
```

```
RES M
RES X
RESET VOLUME
RESET VOL
```

RFIND

The RFIND main command repeats the current FIND, EXCLUDE, FINDTEXT, or MEMFIND command.

Syntax

```
►►──RFIND───────────────────────────────────────────────►◄
           └─parms─┘
```
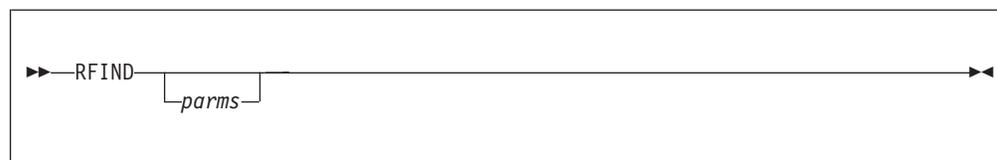
Operands

parms   Any valid operands of OLIST command FIND.

Usage notes

If any of FIND, EXCLUDE, FINDTEXT, or MEMFIND are executed on the current OLIST, only the most recently used is in effect for RFIND.

Command RFIND is usually available via F5 key and is most effective when used without any operands.

When EXCLUDE is in effect, RFIND excludes, from the OLIST display, the next object matching the exclusion criteria.

Examples

```
RFIND
```

S

The S line command selects an item and invokes the default process for that item. (The default process depends on the type of object, how OLIST was invoked, and the setting on the ISPF Productivity Tool Options panel for OLIST.)

Usage notes

S can be used as a line command or, when preceded by an item number, as a main command.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
S                    2 'ACCOUNTS.JONES.COBOL'
S                    3 'ACCOUNTS.TEST.COBOL'    TST001
S         PAYMAIN    4 'ACCOUNTS.TEST.COBOL'    TST001
S         PAYM*      5 'ACCOUNTS.TEST.COBOL'    TST001

5 S
```

SAVE

The SAVE command saves a permanent OLIST under a new name.

Syntax

```
►►──SAVE─────────────────────────────────────────────────►◄
         └─new_name─┘
```

Operands

new_name
New name of the indicated OLIST.

Usage notes

SAVE is a main command only; it cannot be used as a line command.

If no new-name is specified, the OLIST is saved under the current name.

Examples

```
SAVE
```

A temporary OLIST can be saved as a permanent OLIST. When saving as a permanent OLIST, you need to rename the OLIST with a new name.

SHOWcmd

The SHOWcmd command controls whether TSO commands, REXX EXECs, and CLISTs are to be displayed before execution (so that they can be modified) or are to be executed immediately.

Syntax

```
                 ┌─ON──┐
►►──SHOWcmd──────┼─────┼──────────────────────────────────►◄
                 └─OFF─┘
```

Operands

ON   TSO commands, REXX EXECs, and CLISTs are to be displayed before execution. This is the default.

OFF   TSO commands, REXX EXECs, and CLISTs are to be executed immediately.

Usage notes

SHOWcmd is a main command only; it cannot be used as a line command.

This option is also controlled from the ISPF Productivity Tool Options panels.

The SHOWcmd setting is saved in your PROFILE and stays in effect for all subsequent OLIST displays.

Examples

```
SHOWCMD
SHOW ON
SHOW
SHOW OFF
```

SHOWCLAs

The SHOWCLAs command shows the Class (Type) column in the OLIST display.
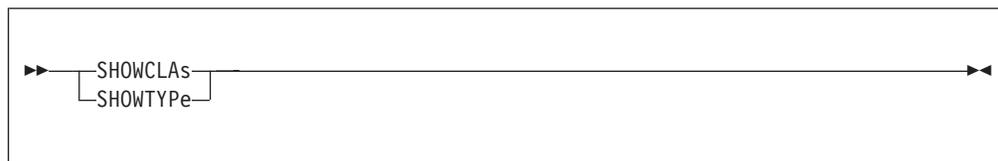
Syntax

```
►►─┬─SHOWCLAs─┬────────────────────────────────────►◄
   └─SHOWTYPe─┘
```

Usage notes

The OLIST display may include either a Class or Volume column on the right hand side of the Object name.

Main command SHOWVOL switches back to a Volume display.

Use main command RCHANGE (F6) to toggle between SHOWTYPE and SHOWVOL.

SHOWCLAs is a main command only; it cannot be used as a line command.

Examples

```
SHOWCLA
SHOWTYPE
```

SHOWMigr

The SHOWMigr command controls the display of migrated (archived) data sets.

Syntax

```
►►──┬─SHOWMigr─┬──────────────────────────────────────────────►◄
    │          │
    ├─ON──┤
    ├─OFF─┤
    └─?───┘
```

Operands

OFF   Migrated data sets are initially hidden (excluded) from the OLIST display.

ON   Migrated data sets are displayed as usual.

?   Displays the current SHOWMigr status.

If no parameter is supplied, the SHOWMigr option toggles between ON or OFF.

Usage notes

The SHOWMIGR setting is saved in your PROFILE and stays in effect for all subsequent OLIST displays.

Examples

```
SHOWMIGR
SHOWM OFF
```

SHOWVOL

The SHOWCOL command shows the Volume column in the OLIST display.
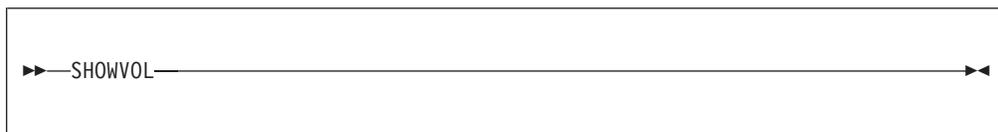
Syntax

```
►►──SHOWVOL────────────────────────────────────────────────────►◄
```

Usage notes

The OLIST display may include either a Class or Volume column on the right hand side of the Object name.

Main command SHOWCLAS switches back to a Class display.

Use main command RCHANGE (F6) to toggle between SHOWTYPE and SHOWVOL.

SHOWVOL is a main command only; it cannot be used as a line command.

Examples

```
SHOWVOL
```

SORT

The SORT command sorts the entries in the OLIST.

Syntax

```
►►──SORT──field_name─────────────────────────────────────────────►◄
                     └─order─┘
```
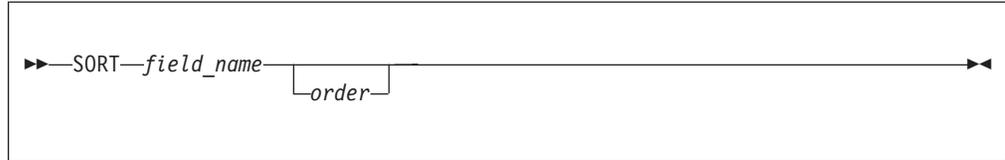
Operands

field_name
>   The name of an OLIST field: COMMAND, DSNAME, MEMBER, CLASS, or VOLUME.

order   The order of sort:

>   **A**   Ascending: lowest to highest.
>
>   **D**   Descending: highest to lowest.

Usage notes

SORT is a main command only; it cannot be used as a line command.

The SORT command ignores a leading quote (or hyphen) in the item name.

Examples

```
SORT DSN
SORT MEMBER
SORT MEMBER D
SORT DSN D MEMBER A
SORT VOLUME
SORT class VOLUME
```

SUBmit

The SUBmit line command submits a data set or a member as a batch job.

Usage notes

SUBmit can be used as a line command or, when preceded by an item number, as a main command.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ----------------------- ------
SUBMIT              2 'ACCOUNTS.JONES.COBOL'
SUB                 3 'ACCOUNTS.TEST.COBOL'    TST001
SUBMIT    ACCMAIN   4 'ACCOUNTS.TEST.COBOL'
SUB       PAY*      5 'ACCOUNTS.TEST.COBOL'    TST001
```

TITLE

The TITLE command gives you the ability to set a permanent OLIST heading.

Syntax

```
►►──TITLE──────────────────────────────────────────────►◄
          └─heading─┘
```
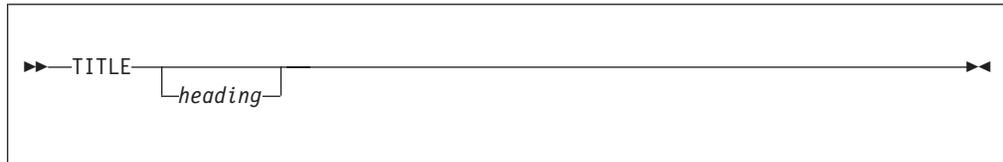
Operands

heading
    The heading text (in free form).

Usage notes

TITLE is a main command only; it cannot be used as a line command.

The TITLE command always displays an entry panel to let you modify the OLIST heading before saving it.

The description is saved in the reference list

Examples

```
TITLE My Project
TITLE
```

U

The U line command uncatalogs the data set.

Usage notes

U can be used as a line command or, when preceded by an item number, as a main command.

The U command ignores the member name field.

Examples

```
Command  Member   Num. Data Set Names/Objects  Volume
--------  --------  ---- ----------------------- ------
U                     3 'ACCOUNTS.TEST.COBOL'   TST001

3 U
```

UPDate

The UPDate command invokes the ISPF Productivity Tool EDIT panel for extensive editing of the OLIST.

Syntax

```
►►──UPDATE─────────────────────────────────────────────►◄
```
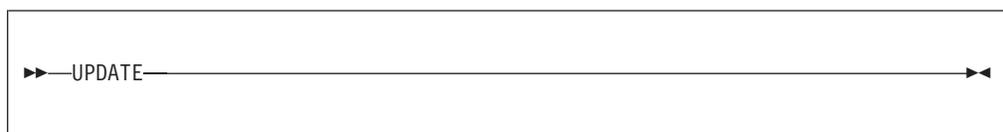
Operands

UPDate has no operands.

Usage notes

UPDate is a main command only; it cannot be used as a line command.

Examples

```
UPDATE
UPD
```

UTIL

The UTIL command opens a nested level of ISPF option 3 (Utilities). or a suboption of option 3.

Syntax

```
>>──UTIL───────────────────────────────────────────><
         └─option─┘
```
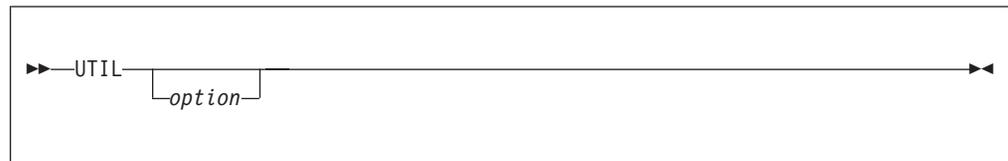
Operands

option   An integer indicating a menu item of option 3.

Usage notes

UTIL is a main command only; it cannot be used as a line command. If no option is supplied, the ISPF Utility Selection panel is displayed.

UTIL OLIST command

```
   Menu  Help
 ─────────────────────────────────────────────────────────────────
                        Utility Selection Panel
 Option ===>

 1  Library     Compress or print data set.  Print index listing.  Print,
                   rename, delete, browse, edit or view members
 2  Data Set    Allocate, rename, delete, catalog, uncatalog, or display
                   information of an entire data set
 3  Move/Copy   Move, or copy members or data sets
 4  Dslist      Print or display (to process) list of data set names.
                   Print or display VTOC information
 5  Reset       Reset statistics for members of ISPF library
 6  Hardcopy    Initiate hardcopy output
 7  Transfer    Download ISPF Client/Server or Transfer data set
 8  Outlist     Display, delete, or print held job output
 9  Commands    Create/change an application command table
 11 Format      Format definition for formatted data Edit/Browse
 12 SuperC      Compare data sets                           (Standard Dialog)
 13 SuperCE     Compare data sets Extended                  (Extended Dialog)
 14 Search-For  Search data sets for strings of data        (Standard Dialog)
 15 Search-ForE Search data sets for strings of data Extended (Extended Dialog)
 16 Tables      ISPF Table Utility
 17 Udlist      Print or display (to process) z/OS UNIX directory list




                 ┌──────────────────────────────────────────┐
                 │    Press the END key to return to OLIST   │
                 └──────────────────────────────────────────┘
```

Figure 31. The Utility Selection panel

Examples

```
UTIL
UTIL 2
```

V

The V line command invokes an MSL with a default process of VIEW, or invokes
VIEW on a data set or member. The action taken depends on the type of object, as
shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		View data set
PDS	None	Display MSL of all members with view as default process
PDS	Pattern specified	Display MSL of matching members with view as default process
PDS	Member specified	View member
LIST		Display temporary OLIST of matching items with view as default process
VSAM		View VSAM file (if option installed)
DB2		View DB2 file (if option installed)
USER		View VSAM file (if option installed)
PC		View PC file (if option installed)

Usage notes

V can be used as a line command or, when preceded by an item number, as a main command.

Examples

```
Command   Member   Num. Data Set Names/Objects   Volume
--------  -------- ---- ----------------------- ------
V                    2 'ACCOUNTS.JONES.COBOL'
V                    3 'ACCOUNTS.TEST.COBOL'    TST001
V         ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
V         PAY*       5 'ACCOUNTS.TEST.COBOL'    TST001

4 V
```

VALIDate

The VALIDate command is used to compare the entries in the OLIST with the current catalog and volume, and to bring them into conformity with the catalog. It marks items on the OLIST that are not in the catalog, and corrects the volume information for those that show the wrong volume. Migrated or archived data sets are indicated.

Syntax

```
►►──VALIDate───────────────────────────────────────────────►◄
```

Operands

VALIDate has no operands.

Usage notes

VALIDate is a main command only; it cannot be used as a line command.

Following VALIDate, use the RESET DEL command to remove entries that have the feedback message "-NOT FND-" in the command column because they were not found in the catalog or the volume.

Examples

VALIDATE

```
   File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
 -------------------------------------------------------------------------------
 -IPT- OLIST (B) ----------- Objects List -------------------- Row 1 to 4 of 4
 Command    ===>                                             Scroll ===> CSR

 Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL      UPDATE   CUT     FLIP
 +------------------------------------------------------------------- Assist -+
 | NOTE: Enter the "RESET DEL" command to remove items marked as deleted      |
 |       (Those with "-NOT FND-" in the COMMAND column)                       |
 +---------------------------------------------------------------------------+
 Open list  ===> NEWLIST  (or BLANK for reference list)
 TSO PARMS  ===>
 Command   Member   NUM  Data Set Names / Objects                   Class
 --------- -------- ---- -------------------------------------------- ------
 -NOT FND-            1  'INTT125.CNTL.JCL'                          *DEL*
                     2  'INTT025.SPFE.JCL'                          PDS
                     3  CLIST                                       PDS
                     4  )u/intt125/MYDATA                           OE
                     --------------- END OF LIST ----------------


                     ┌─────────────────────────────────┐
                     │ IQIP908  1 item(s) not found     │
                     └─────────────────────────────────┘
```

VF

The VF line command invokes a VSAM VIEW function on an OLIST object. The action taken depends on the type of object, as shown below:

TYPE	Member or pattern specification (if any)	Processing
SEQ		Invoke the VSAM editor
PDSe	None	Display MSL of all members with browse as default process
PDSe	Pattern specified	Display MSL of matching members with browse as default process
PDSe	Member specified	Invoke VSAM editor over member
SCLM	None	Display MSL of all members with edit as default process
SCLM	Pattern specified	Display MSL of matching members with edit as default process
SCLM	Member specified	Invoke ISPF editor over member
SCLM		Same as for SCLM
LIST		Display temporary OLIST of matching items with edit as default process
OLIST		Display permanent OLIST of matching items with edit as default process
VSAM		Edit VSAM file (if option installed)
USER		Invoke the USER-supplied editor (if option installed)

Usage notes

EF can be used as a line command or, when preceded by an item number, as a main command.

The VSAM editor must be first defined during IPT customization via the %IQIWIZRD CLIST. If that is not the case, this command acts like the OLIST VIEW command.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
VF                   2 'ACCOUNTS.JONES.COBOL'
VF                   3 'ACCOUNTS.TEST.COBOL'   TST001
VF        ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
VF        PAY*       5 'ACCOUNTS.TEST.COBOL'   TST001
```

/X

The /X line command excludes one or more entries in the OLIST.

Usage notes

/X can only be used as a line command; it cannot be used as a main command.

/X can be used with a number specifying the number of lines to exclude.

/X can be used in pairs, in the form /XX, to indicate a block of lines to exclude.

Examples

```
Command   Member   Num. Data Set Names/Objects  Volume
--------  -------- ---- ---------------------- ------
/X2                  1 'ACCOUNTS.JONES.JCL'
                     2 'ACCOUNTS.JONES.COBOL'
/X                   3 'ACCOUNTS.TEST.COBOL'   TST001
/XX       ACCMAIN    4 'ACCOUNTS.TEST.COBOL'
/XX       PAY*       5 'ACCOUNTS.TEST.COBOL'   TST001
```

X

The X main command is identical to the EXCLUDE main command (see "eXclude" on page 149).

The X line command is identical to the /X line command (see "/X").

Examples

```
2 X
5-11 X
```

XFER

The XFER line command accesses a pop-up window to upload or download data sets or workstation files.

You must have an active workstation connection using the ISPF Workstation Client to use this command.

Syntax

```
►►──XFER───────────────────────────────────────────────────────────►◄
```
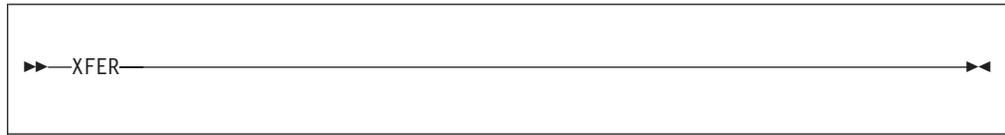
Operands

XFER has no operands.

Examples

```
XFER
```

Chapter 10. TSO command shell

ISPF Productivity Tool's TSO Command Shell provides a convenient way of entering TSO commands, CLISTs, REXX EXECs, and ISPEXECs from within ISPF. The TSO Command Shell maintains two independent lists: History Command List and Permanent Command List.

Both History Command List and Permanent Command List can store up to 999 commands. You can invoke any command from either list by selecting the number of that list from the TSO Command Shell, or, directly from any ISPF panel without having to display the TSO command processor panel. The commands in History Command List are stored chronologically-- from the most recent to the least recent. Both History Command List and Permanent Command List are remembered across ISPF session.

TSO shell options

Using the command IPT SET, you can select the TSO settings. From the TSO Shell Options panel, you are asked to select one of the two options:
- Use the ISPF Productivity Tool TSO shell
- Use the standard ISPF TSO shell

When you select the ISPF Productivity Tool TSO shell, you can set your panel preference:
- Enter "H" to show History Command List in the Initial screen, or "P" to show Permanent Command List
- Enter "Y" to automatically fill Permanent Command List or History Command List, or "N" without automatic filling
- Enter a number in "Output line number" to display the output of TSO commands

The **Command list limit** field lets you nominate the maximum number of entries to be stored in permanent and history command lists.

Invoking the TSO command shell

You can invoke the TSO Command Shell using one of the following methods:
- From the ISPF main menu, select option 6
- On the command line of any panel, enter the TSO command with a question mark:

  tso ?

To exit the TSO Command Shell, press the END key.

TSO shell commands

ISPF Productivity Tool TSO Shell has the following commands:

Command	Remarks
/IS	Uses standard ISPF/TSO.

Command	Remarks
/H	Displays history command list.
/EH	Edits the history command list.
/EP	Edits the permanent command list.
/SAV	Saves the command list in the library.
/RES	If you did not save your new entries in the library, you can always use this command to restore the command list to its original one.
<c><entry number>	<c> can be a question mark "?", or a slash "/", or can be omitted.

Invoking a command

In the ISPF Productivity Tool TSO Command Shell panel, you can invoke the commands on History Command List or Permanent Command List using the following methods:

- Enter a command entry number on the main Command line and press Enter.
- Enter a question mark followed by a command entry number (for example, ?3), and press Enter.
- Move the cursor to a command on Permanent Command List and press Enter.
- Enter a slash and a command number (for example /5), and press Enter. This brings up the whole command to one screen no matter how long the command is.

Note: To avoid redundancy, the command invoked by number is not added to History Command List.

You can also invoke an ISPF Productivity Tool TSO command from other panels:

- Enter a command entry number from Permanent Command List, for example TSO 3.
- Use the equal sign to invoke the most recently executed command, for example, TSO =.
- Invoke the TSO Command Shell with a new command on the main Command line, for example:

  TSO ?ALLOC FILE(INPUT) DA('ACCT.TEST') SHR [ENTER]

Adding entries to permanent command list

You can add an entry to Permanent Command List using one of the following methods:

- Type the command directly into the command line field
- Use the Edit command to "Cut" and "Paste"
- If your "Automatic filling" is set up, you can type a new command in the main command line and press ENTER.

Modifying a command

Before executing a command, you can modify the command. To modify the command, invoke the command first to bring it to the main Command line. Edit the command and press ENTER to execute it. If your Automatic filling is set up, the new command is shown in Permanent Command List.

To ensure that a command is correct before you execute it, you can proceed a command from Permanent Command List with a question mark and bring it to the main Command line. Make appropriate changes if you need to.

Chapter 11. Browsing, viewing, and restoring deleted members of a PDS using the MAP list

The MAP list (member selection list) is reached by entering the OLIST MAPpds line command, or the MSL MAPpds main command.

```
-IPT--PDS-MAP  L2-- TESTUR.TEST.PDS -----------------------ROW 00001 OF 00137
COMMAND  ===>                                               SCROLL ===> PAGE
          *SORT*                                  ON VOLUME C$US02
   NAME    SYNONYM  SEQNUM    TTR DATASIZE BLKNUM RECNUM
           9Z000609     50 000609 00000A00      1
           9Z000607     49 000607 000007D0      1
           9Z000605     48 000605 00000C80      1
           9Z000603     47 000603 00000B40      1
           9Z000601     46 000601 00000A00      1
           9Z00060F     53 00060F 00000B40      1
           9Z00060D     52 00060D 00000A00      1
           9Z00060B     51 00060B 000008C0      1
           9Z000517     45 000517 000007D0      1
           9Z000515     44 000515 000008C0      1
  IQICDEL0              1 00002A 000009B0      1
  IQICDEL1              2 000101 00000EB0      1
  IQICDEL2              3 000103 00000DC0      1
  IQICDEL3              4 000105 00000C80      1
  IQICDEL4              5 000107 00000B90      1
  IQICF001              6 000109 00000BE0      1
  IQICF002              7 00010B 00000BE0      1
  IQICLIP               8 00010D 00000690      1
  IQICLIPS              9 00010F 00000780      1
  IQICOPAS             10 000111 00001B30      1
```

Here is further explanation of some of these columns:

NAME

This field is blank if the member is a currently-deleted member, otherwise it shows the member name. If a deleted member is restored without supplying the member name, then the SYNONYM value becomes the NAME value.

When the MAP list is sorted by NAME, then currently deleted members appear at the top of the list (since they have a blank NAME), and members that have been restored without supplying a name are at the bottom of the list (because "9" sorts after letters).

SYNONYM

This field is blank for current members. If a member has been deleted, then the SYNONYM is the TTR of the member with a leading "9Z". This guarantees a unique synonym.

When you sort by SYNONYM, the column is sorted in descending order. This means that the most-recently-created deleted member is at the top of the list.

SEQNUM

This is the default sort order. If you sort by this column, then the "*SORT*" indicator disappears, and the column heading is not highlighted.

TTR The TTR is used as a portion of the SYNONYM for deleted blocks.

Browsing, viewing, and restoring deleted members of a PDS using the MAP list

RECNUM
This column is only populated when you have browsed or viewed a member.

Main commands available on the MAP list are:

Assist Shows main and line commands available in the MAP list.

EXIT Terminates the member list "MAP mode" display processing.

EXPDIR
Same as the MLS EXPDIR command (see "EXPDIR" on page 75.

Find Finds a member entry in a PDS MAP list. The syntax is "Find *seqn*" or "Find *name*" where *seqn* is the member entry sequence number. and *name*.

INFO Displays data set information for the library or libraries being processed.

If multiple libraries are concatenated in the member list, side-by-side information is displayed.

REFresh
Refreshes the member selection list from the directory. This is equivalent to the command "DSN = =".

SORT Sorts the entries in the MAP list. See "Sorting members in the MAP list" on page 197 for more information.

UNLock (or DEQ)
Releases exclusive control of a PDS library.

The MAPpds command display attempts to acquire exclusive control in anticipation of a subsequent attempt to restore a deleted member.

Line commands available on the MAP list are:

B Browses a member or range of members.

When used as a line command, browses just this member.

When used as a main command, you can name the member (for example `B IQICDEL0`, or you can nominate a range of members (for example `5-12` to browse the members with the sequence number 5 to the sequence number 12). `B *` browses all members, one at a time.

To stop in the middle of browsing a range of members, enter `QUIT`, and then respond to the message by pressing ENTER.

You can browse deleted members.

After you have browsed (or viewed or edited) a member, the total number of records (RECNUM) is updated.

E Edits a member or range of members. You cannot actually edit a member using E. It acts more like the V command. However, when you view using the E command, you can CUT into a clipboard (see "Enhanced CUT and PASTE" on page 35).

R Restores deleted members. See "Restoring deleted members" on page 197 for more information.

V Views a member. Same as E.

Sorting members in the MAP list

The quick way to sort is to point and shoot a column heading. When you do this, SEQNUM is the second sort key. "*SORT*" above the SYNONYM column indicates that the list is sorted, and the column it is sorted by is highlighted. SEQNUM is the default sort order. If you sort by SEQNUM then the "*SORT" indicator is turned off, and no column is highlighted.

Alternatively, you can enter the SORT main command. You can specify the column (Name, Synonym, SEQnum, Ttr, DATasize, Blknum, Recnum) and order (Ascending, which is the default, or Descending).

Restoring deleted members

The Restore line and main command restores deleted members.

To see which members have been deleted, sort the MAP list by SYNONYM or NAME. Either method places the deleted members (which have a blank NAME and a non-blank SYNONYM) at the top of the list. The only difference is that when you sort by SYNONYM, the most-recently created member is at the top of the list. This is more likely to be a member that you want to restore.

To restore a member so that it has the value of SYNONYM as its NAME, enter the R line command against the entry, or nominate the member in a restore range on the R main command.

Examples:

```
R 5    - restores deleted member with sequence number 5
R 4-7  - restores deleted members with sequence number 4 through 7
R 9-*  - restores deleted members with sequence number 9 to the end of deleted members
```

If you nominate a range, and the range includes current (not-deleted) members, then the deleted members in the range are restored, but nothing happens to the current members.

If you restore a range of members, you can then sort the MAP list by descending name (SORT N D), and the restored members (which have names beginning with "9Z") are displayed at the top of the list. You can now rename them.

To restore a member and give it a name (different from the SYNONYM), enter the line command R *name* against the entry, or the main command R *sequence_number name*. The name must be unique.

Note: Deleted members are lost after a COMPRESS.

Chapter 11. Browsing, viewing, and restoring deleted members of a PDS using the MAP list **197**

Chapter 12. Panel Extension Language

The ISPF Productivity Tool (IPT) Panel Extension Language (PEL) provides new functionality to the ISPF panel language. PEL is implemented as a dynamic panel preprocessor. PEL reads panel members from the panel library, preprocesses the panel lines, and lets ISPF use the results. Using this technique, PEL provides several advantages:

- Common panel sections can be shared across multiple panels via the include member statement. This facility provides the means to design a common interface (for example, a pull-down menu) that can be used across multiple panels, applications, or the entire ISPF session. With centralization of common panel elements and the ability to change a member and have its effects reflected on all panels, installations benefit from reduced maintenance costs.

- Multiple panel versions can be dynamically generated based upon environmental conditions. With this facility, panels can be created with different lines used for different versions of ISPF, different groups of users, different logon procedures, different programs, and more. These versions can be maintained in the same panel library as they originate from the same source. Here again, installations benefit from reduced maintenance effort.

- Access to new variables not available in the standard panel language without writing code.

- Ability to create panels that co-exist in multiple ISPF environments. For example, while preparing the migration to a new version of ISPF, panel code can be written so that it does not affect users working on the previous version of ISPF, while allowing users who have already migrated to the new version take advantage of new facilities.

Users are provided with the ability to display or hide the action bars on panels.

The following panel uses PEL to display different lines depending on the presence of a pre-allocated DDNAME. It also demonstrates an INCLUDE statement and some PEL assignment statements.

```
)BODY
%--------- LOCALLY WRITTEN UTILITIES -----------
%COMMAND ==>_ZCMD
+Current system:&SYS running MVS &MVS &FMID
%  1 + SMFEXT - Browse SMF extracts
))IF-DDNAME=OPERLIB
%  2 + SCHED  - Scheduling system
))ELSE
%  2 + SDSF   - Display Jobs
))IF-END
%  3 + HDF    - Hardware Definitions
%  X + EXIT   - Return to main menu
)INIT
))INC:SYSVARS
)PROC
 &ZSEL=TRANS(&:ZCMD
              1,'PGM(SMFEXT) PARM(PROMT,PANEL=SMPX12)'
))IF-DDNAME=OPERLIB
              2,'CMD(%SCD01)'
))ELSE
              2,'PGM(SDSF)'
```

```
))END-IF
            3,'CMD(%HDF)'
            x,'EXIT' )
)END
```

The included member SYSVARS contains three lines:

```
))ASSIGN:SYS=SYSID
))ASSIGN:MVS=MVSLEVEL
))ASSIGN:FMID=MVSFMID
```

As you can see, PEL checks for the presence of a preallocated DD name
"OPERLIB". If it is present, the menu will contain a job scheduling utility, and if
not, it will contain SDSF. On a particular system, the panel could be generated as:

```
)BODY
%--------- LOCALLY WRITTEN UTILITIES -----------
%COMMAND ==>_ZCMD
+Current system:&SYS running MVS &MVS &FMID
%  1 + SMFEXT - Browse SMF extracts
%  2 + SCHED  - Scheduling system
%  3 + HDF    - Hardware Definitions
%  X + EXIT   - Return to main menu
)INIT
&SYS='SYST'
&MVS='SP4.3.0'
&FMID='HBB4430'
)PROC
 &ZSEL=TRANS(&:ZCMD
            1,'PGM(SMFEXT) PARM(PROMT,PANEL=SMPX12)'
            2,'CMD(%SCD01)'
            3,'CMD(%HDF)'
            x,'EXIT' )
)END
```

The panel would be displayed as:

```
--------- LOCALLY WRITTEN UTILITIES -----------
 COMMAND ==>_ZCMD
 Current system: SYST running MVS SP4.3.0 HBB4430
   1   SMFEXT - Browse SMF extracts
   2   SCHED  - Scheduling system
   3   HDF    - Hardware Definitions
   X   EXIT   - Return to main menu
```

Statement syntax

PEL statements are identified by right parenthesis in the first and second positions
of the panel line.

Comment lines are identified by "))*" beginning in column one. These lines are
ignored by ISPF.

Some PEL statements place a dependency on the availability of IPT in the ISPF
session. Some may be optional, and provide support for panel elements that are
not needed when IPT is not active. To allow use of PEL statements within panels
that are sometimes processed outside the IPT environment, the leading left
parentheses may be replaced with the tag "/*<<IBMIPT>>" or "/*<<SPFE>>". The
alternate tag starts with the standard comment indicator, and is valid for
non-BODY sections of the panel.

For example, these two lines provide the identical function:

```
))INC:OPERUTIL

/*<<IBMIPT>>INC:OPERUTIL
```

When PEL statements are evaluated

PEL is a dynamic preprocessor. You need not run a special utility to activate the PEL statements. However, due to panel caching, PEL statements are evaluated the first time the user references a panel. Subsequent displays of the same panel reuse the previous evaluation. For example, after displaying the menu shown in the example above, the menu will show the same information even if the user frees or allocates the OPERLIB DD name. To cause the panel statements to be re-evaluated, perform the same actions as you would if the panel source had changed. For example:
Run the ISPF session in Dialog Test mode. This is the least recommended method since running under Dialog Test incurs significant overhead.

- Use the IPT panel testing facility to specify that the panel is being tested and should be constantly refreshed. This is a more efficient solution than running under Dialog Test because panel refreshing will occur only for the specified panel. The IPT panel testing facility is activated via the IPTDTEST command shortcut, or by clicking the Test option on the MSL or OLIST action bar and select Panel testing and diagnosis.
- Restart your ISPF session. You need not re-logon.

Assignments

With PEL, you can set dialog variables to values that are not otherwise accessible. For example, you can set a variable to the program name specified in the PGM= statement on the logon procedure.

Each PEL assignment statement generates a single panel assignment statement where the assigned value is a character constant created by IPT at the time the panel is evaluated. For example, the statement:

```
ASSIGN:DEST=TSODEST
```

generates (in a specific installation) the following line:

```
DEST='REMOTE12'
```

Like any other assignment statement, PEL assignment statements are only valid in the sections where ISPF assignment statements are valid.

The following table lists the available assignments:

Table 2. Complex table example

Keyword	Value returned	Notes
Keyword	Value Returned	Notes
APPL	ISPF application ID	Similar to ZAPPLID
CPUID	Current CPUID	CPU serial number
CPUMODEL	Current model	CPU model number
GUI	GUI workstation mode	Returns Y or N (based upon ZGUI variable)
LOGPGM	Logon procedure program	From PGM= statement in LOGON JCL.

Assignments

Table 2. Complex table example (continued)

Keyword	Value returned	Notes
MIGSYS	Name of migration system	As specified during IPT customization
MIGVOL	Name of migration volume from IPT customization	If none specified, the value from the DELVOL in ISRCONFG is used.
MVSFMID	Current MVS FMID	Example: HBB4430
MVSLEVEL	Current MVS level	Example: SP4.3.0
OPER	Operator authority	From PSCBCTRL. Returns Y or N
PANEL	Name of current panel	Useful in included panels
PGM	Program invoking panel	From SELECT PGM()
SMS	Indicates if SMS is active	Returns Y or N
SMSLEVEL	Current SMS level	
SPFEVER	IPT Version	Four character maintenance version (for example, 5001)
SRC.MGR	Checks which source manager is active (SCLM, or not).	If SCLM activated for user (using IPT customization) returns S, otherwise returns N.
SYSID	The SYSTEMID	From CVTSNAME
TSODEST	Default destination	From PSCBDEST
TSOUNIT	Default allocation unit	From PSCBGPNM
VER	ISPF Version	Similar to part of ZENVIR

Conditional statements

PEL provide a set of conditional statements to allow inclusion or omission of panel lines.

The general structure of the conditional statement block is as follows:

```
    ))IF-CONDITION
(panel statements included if condition is true)
    ))ELSE
(panel statements included if condition is false)
    ))IF-END
```

The))ELSE construct is optional, but the))IF-END line is required. Up to 8 nested levels of IF statements can be specified.

ISPF version testing

```
    ))IF-VER<OP>ISPFVERSION
```

Where:

<op>   Is one of the comparison symbols =, <, or >.

ispfversion
            Is a three character specification of the ISPF version being tested.

Example:

```
      PROC
      .
      .
      ))IF-VER>3.2
          8,'PGM(MYPROG) PARM(A) SUSPEND'
      ))ELSE
          8,'PGM(MYPROG) PARM(A) '
      ))IF-END
      .
      .
      )END
```

Since the SUSPEND keyword is only supported on ISPF versions above 3.2, a test is included to pass different statements based on the version of ISPF.

Environment testing

PEL lets you check several environment values to conditionally pass panel lines to ISPF. This feature provides the ability to custom tailor panels for different groups of users based on userid, logon procedure name, the allocation of a DDNAME, or for different programs.

```
))IF-<environment-keyword>=<environment-value>
```

Where:

<environment-keyword>
Is one of the environment variables.

<environment-value>
Is the value the environment variable is tested against.

The following table lists the supported environment fields:

Table 3. Complex table example

Environment keyword	Valid environment values	Notes
Environment keyword	Valid environment values	Notes
APPL	current applied	From ZAPPILD
DD	DD name to be tested	True if DD allocated
GUI	Y or N	If running in GUI mode
HOTBAR	Y or N	Set by the user with the SET command (in MSL or PLIST).
LOGPGM	Logon proc program name	From PGM= on the logon JCL
MIGSYS	name of migration system or N/A if none specified	From IPT customization.
MIGVOL	Migration system volser	From IPT customization or ISRCONFG
OPER	Y or N	From PSCBCTRL
PANEL	current panel	Used in included members
PGM	current program	From SELECT PGM()
SECTION	current panel section	Used in included members
SRC.MGR	S or N or Y	If SCLM active for userid (as set by IPT customization), and S is true.
SYSID	System ID	From CVTSNAME

Table 3. Complex table example (continued)

Environment keyword	Valid environment values	Notes
TSODEST	Default destination	From PDSCDEST
TSOUNIT	Default allocation unit	From PSCBGPNM
USERID	Current userid	

For example, assume that you want the system group (which uses the LOG$SYS logon procedure) to have access to a special system utilities menu. You could change the main menu)BODY section to have the following lines:

```
))IF-LOGONPROC=LOG$SYS
    %Y + - SYSTEM UTILITIES
))IF-END
```

Similarly, in the &ZSEL statement on the)PROC section:

```
))IF-LOGONPROC=LOG$SYS
    Y,'PANEL(SYSUTIL)'
))IF-END
```

As another example, assume that you include menu definition lines in an external member called MENUDEF1 that is included from both the main menu (ISR@PRIM) and the utilities menu (ISRUTIL). The following lines can be used in MENUDEF1 to change the description of the X command:

```
))IF-PANEL=ISR@PRIM
    %X  - TERMINATE ISPF USING LOG/LIST DEFAULTS
))ELSE
    %X  - RETURN TO PREVIOUS PANEL
))IF-END
```

Unconditional branching

Two statements allow you to define labels and branch to a label, bypassing lines in between:

```
))JMP:<label>
))LBL:<label>
```

where:

<label>
> Is an 8 character label (padded with blanks if necessary). Labels have the same syntax rules as member names. They must start with alphabetic, @, $, or #, and be followed by alphanumeric or $, @, #.

Example:

```
))JMP:LABEL1
    %Y + - SYSTEM UTILITIES
    THE ABOVE LINE IS IGNORED
))LBL:LABEL1
```

Note: IPT will ignore all statements up to the first label statement matching the JMP statement label. You can therefore have multiple non-unique labels. The label specified in the JMP statement is searched for in the forward direction only.

Statements between the JMP and the matching LBL pair are never cached.

Including external members

The))INC:xxxx statement is used to include external members into the processed panel. Up to eight levels of nesting are allowed.

```
))INC:<member-name>
```

Where:

<member-name>
    Is the name of the member to be included.

Example:

```
))INC:SYSOPT
```

PEL requirements

Panels pre-processed by the ISPF panel preprocessor (ISPPREP) are ignored by PEL. Panels that contain PEL statements cannot be pre-processed by the ISPF preprocessor. The performance penalty of not using the ISPF panel preprocessor is more than offset by the PEL caching mechanism used within IPT.

The panels and referenced members (included members) must reside in the ISPPLIB library. LIBDEFs cannot be used.

The panels must be allocated to the ISPPLIB library using real allocation. Products (such as TSO/PLUS) that simulate real allocation but allocate the library in another address space cannot be used with PEL.

PEL quick reference

Table 4. Complex table example

Statement	Function
))ASSIGN:variable=KEYWORD	Assign value to variable
))ELSE	IF condition alternative
))IF-APPL=applid	Test for ZAPPLID
))IF-DDNAME=allocatedddname	Test for allocated DD
))IF-END	IF block terminator
))IF-GUI=Y-or-N	Test if running in GUI mode
))IF-LOGONPROC=logonproc	Test LOGON PROC name
))IF-OPER=Y or N	Test for operator authority
))IF-PANEL=panel-name	Test displayed panel name
))IF-PGM=program-name	Test SELECT PGM() caller
))IF-TSODEST=destination	Test for destination
))IF-TSOUNIT=unitname	Test for default unit name
))IF-UID=userid Test	TSO USERID
))IF-VER<v.r	Test ISPF version
))IF-VER=v.r	Test ISPF version
))IF-VER>v.r	Test ISPF version
))INC:member	Include member (with caching)

Table 4. Complex table example (continued)

Statement	Function
))JMP:label	Branch to label
))LBL:label	Label definition

Appendix A. Documenting an IPT failure for IBM level 2 support

In the unlikely event that you are having problems with IPT, IPT can create files of information that you can forward to IBM level 2 support for diagnosis.

Here is the suggested sequence you should use to trap relevant information:

1. Logon to IPT.
2. Enter `IDIAG TR`, which is the shortcut for `IPT DIAG TRACE ON` (and automatically forces `IPT DIAG LOG ON`).
3. Work through your scenario.
4. Enter `ISNAP`, which is the shortcut for `IPT SNAP`.
5. Download `DD(IQILOGPR)` and `DD(IQITRSNP)` of your TSO session and send them to me along with screen shots of every step of your failing scenario.

Please additionally supply the output generated by the `IVER` shortcut (`IPT VER`) or the `IMAINT` shortcut (`IPT MAINT`). This output shows the list of APARs applied against IPT.

For more information, see:

- "DIAG" on page 59
- "SNAP" on page 60
- "VER" on page 59
- "MAINT" on page 59

Documenting an IPT failure for IBM level 2 support

Appendix B. Controlling ISPF Productivity Tool processing (the SET command)

To display the panels controlling these options, enter the SET command.

The panel that is displayed depends on whether you ISPF Productivity Tool displays a panel like these:

```
-IPT- ----------------Member Selection List options--------------------------
COMMAND ===>

  Automatic preview (with LOCATE/FIND)        ==> Y (Y=Yes, N=No)
  Replace existing members (COPY/MOVE)        ==> O (Y=Yes, N=No, O=Target Older)
  Member list line command pad character      ==> _ (Blank,Dot,Quote,Underscore)
  Main menu option 1 default process          ==> B (B=Browse, V=View)
  Main menu option 1,2 @H display             ==> Y (Y=Olist, N=No)
  Default cursor position                     ==> M (M=Main command, L=Line cmd)
  Include member names in dataset history     ==> N (Y=Yes, N=No)
  Prompt with FIND command after a Global FIND ==> Y (Y=Yes, N=No)
  Double-Byte-Character-Set (DBCS) support    ==> N (Y=Yes, N=No)
    If DBCS supported, use case-sensitive search strings    ==> N


  Commands executed by TAILOR command:
    ===> REFRESH;SORT CHA;FILT CHA -40


 Press ENTER for options menu, END to exit, CANCEL for installation defaults.
```

Figure 32. The Member Selection List options panel

```
 -IPT- ------------------OLIST - Object List Options---------------------------
 COMMAND ===>

  Default command (when selecting an item) ===> B  (B=Browse, E=Edit, V=View)
  Show VOLSER of catalogued data-sets      ===> Y  (Y=Yes, N=No)
  Check edit recovery when the list opens  ===> N  (Y=Yes, N=No)
  Provide a field for TSO command parms    ===> Y  (Y=Yes, N=No)
  Display mode (right column shows)        ===> C  (C=Class, V=Volume)
  Default cursor position                  ===> M  (M=Main command, L=Line cmd)
  Include member names in dataset history  ==> N  (Y=Yes, N=No)
  Double-Byte-Character-Set (DBCS) support ==> N  (Y=Yes, N=No)
    If DBCS supported, use case-sensitive search strings    ==> N

 Press ENTER for options menu, END to exit, CANCEL for installation defaults.
```

Figure 33. The Object List Options panel

The rest of this Appendix explains each option.

MSL options

Line number for member list windows
> Specify the line number (relative to the first entry in the MSL) at which the top of assist and preview windows is to be positioned, with a value from 1 to 24.

Automatic preview (with LOCATE/FIND)
> Control the automatic preview of members found by LOCATE, FINDTEXT, or FIND:

> **Y**   Display a preview window of the member found.
>
> **N**   Don't display a preview window of the member found.

Display list of commands on the panel
Turn on or off the MSL automatic assist window:

> **Y**   Display the assist window at all times.
>
> **N**   Don't display the assist window unless requested.

Replace existing members (COPY/MOVE)
When you issue a COPY or MOVE command, the setting here controls the
standard ISPF option of whether or not like-named members in the target
should be replaced by those in the source:

> **Y**   Always replace members in the target that have the same name as
> those in the source.
>
> **N**   If a member in the target has the same name as one in the source,
> don't copy or move that member.
>
> **O**   Always replace members in the target, unless the time and date
> stamp of the target in the member is later than that of the source.

Prompt with FIND command after a Global FIND
When you issue a global find command, the setting here controls whether
a FIND command (with the same parameter) is displayed on the
Command line for the individual member.

> **Y**   The FIND command is displayed.
>
> **N**   The FIND command is not displayed.

Double-Byte-Character-Set (DBCS) support
Indicates whether you want to support DBCS.

> **Y**   DBCS is supported.
>
> **N**   DBCS is not supported.

> If you indicate that DBCS is supported, you must also indicate if you want
> to use case-sensitive search strings.

Commands executed by TAILOR command
Specify one or more MSL commands (such as SORT, FILTER, and
<->EXCLUDE) here to tailor the MSL to your liking. These MSL commands
can be executed via the TAILOR command, and, optionally, automatically
when an MSL is invoked via the EDIT, VIEW, or BROWSE Entry panel.

OLIST options

Default OLIST command
Specify the process to be invoked by default when an item on a OLIST is
selected by number:

> **V**   The default process is VIEW.
>
> **B**   The default process is BROWSE.
>
> **E**   The default process is EDIT.

Check pending edit recovery in OLIST
Specify whether or not edit recovery is checked whenever OLIST is
invoked:

Y   Check for pending edit recovery whenever OLIST is invoked.

N   Don't check for pending edit recovery whenever OLIST is invoked.

Display list of commands on the panel
>Specify whether or not the OLIST panel should include a list of the OLIST commands:

Y   Use the form of the panel that shows the commands.

N   Don't use the form of the panel that shows the commands.

Provide a field for TSO command parms
>Specify whether or not to display the OLIST panel should include a field on which to enter parameters to be appended to the command as issued:

Y   Use the form of the panel that provides a parameter input field.

N   Don't use the form of the panel that provides a parameter input field.

OLIST display mode
>The right-most column of the OLIST panel can either display the object type or the volume. Specify which mode you want:

C   Class

V   Volume

>When a OLIST is on display, the PF key defined as RCHANGE (usually PF6) toggles between the two forms of the display.

>To accept the values shown and end the display of the options panels, press the END key. To display the second options panel, which contains the Member Selection List GLOBAL EDIT processing options, press Enter.

>ISPF Productivity Tool displays a panel like the following and options are included afterwards.

```
 -IPT- ----------------GLOBAL/FINDTEXT commands options------------------------
COMMAND ===>

             MSL GLOBAL Control
  STOP AFTER   ===> 9999 (Number of items to process successfully)
  PROMPT AFTER ===> 50   (Number of items to process before prompt is issued)
  START COLUMN ===> 1      (Quick FIND starting column in target data record)
    END COLUMN ===> 99999 (Quick FIND end column in target data record)
  Specify Y (Yes) or N (No) for the following options:
  AUTOMATIC    ===> Y (Process without editing successful items?)
  LINK         ===> Y (Process each command only if previous command succeeds?)
  PRINT        ===> N (Generate listing of each member changed and saved?)
  EXCLUDE      ===> N (Exclude failing items from selection list?)


             OLIST FINDTEXT/MEMFIND Control
  STOP AFTER   ===> 10   (Number of items to process successfully)
  PROMPT AFTER ===> 10   (Number of items to process before prompt is issued)
  START COLUMN ===> 1      (Starting column in target data record)
    END COLUMN ===> 99999 (End column in target data record)
  Specify Y (Yes) or N (No) for the following options:
  AUTOMATIC    ===> N (Search without stopping at successful items?)
  EXCLUDE      ===> N (Exclude failing items from object list?)

 Press ENTER or END to exit. Enter CANCEL for installation defaults.
```

Figure 34. GLOBAL/FINDTEXT commands options

MSL GLOBAL command options

STOP AFTER

In global EDIT, this controls the number of members to be processed successfully before stopping. This allows you to stop after finding a single member meeting particular specifications. You can set this field to any number between 1 and 9999.

PROMPT AFTER

In global EDIT and FINDTEXT, this controls the number of members to be processed before a prompt is offered to you. The prompt gives you a chance to cancel the rest of the GLOBAL processing of the library, or to change the value in this field. You can set this field to any number between 1 and 9999.

AUTOMATIC

In global EDIT, this controls whether or not you are placed into an EDIT session of members for which the commands succeeded:

Y   Don't invoke an EDIT session for each successfully processed member. Proceed immediately to the next member to be processed.

N   Invoke EDIT for each member for which the global EDIT command succeeded. You can review the changes, perform further editing, or cancel the changes. You can also terminate all pending processing.

LINK   This controls whether each of the commands you specify on the GLOBAL prompt panel are to be considered separate, or are to be treated as a group. If LINK is set to NO, any one of them may fail, and the other commands are processed. If LINK is set to YES, each of them must terminate successfully for any of the rest to be processed. If any command fails, the EDIT session for the member is cancelled, so the previous commands, if any, have no effect (unless one of the previous commands was SAVE).

The possible values are:

Y   Process the commands as a group.

N   Process the commands individually.

PRINT

This controls whether or not members modified (and saved) under global EDIT are to be printed as specified in the print options:

Y   Print each successfully processed member.

N   Don't print the successfully processed members.

EXCLUDE

This controls whether, when the global EDIT command has finished processing, members that were not successfully processed are still to be listed:

Y   Exclude members that were not successfully processed.

N   Don't change the member list.

To accept the values as displayed, press the END key.

To display the third options panel, which contains the print processing options, press Enter.

ISPF Productivity Tool displays the following panel:

```
 -IPT- -----------------------Print options---------------------------------
  COMMAND ===>

   Suppress page formatting    ===> N (N=No, Y=Yes - file is already formatted)
   Print changed lines in bold ===> N (N=No, Y=Yes)
   Highlight program elements  ===> Y (N=No, Y=Yes - emphasize recognized items)
   Process mode                ===> G (I=print immediately)
                                     (G=Group requests for later printing)
                                     (L=print direct to the ISPF LIST data set)
   For process modes I and G:

     DESTINATION ID     ===>                  (Node-id<.User-id>)
     CLASS              ===> A      (or Sysout class)
     WRITER name        ===>        (Output WRITER)
     Number of copies   ===> 1      (How many?)
     Lines per page     ===> 60     (page size)
     Keep in HOLD queue ===> N      (Y=Yes, N=No)
     FORM number        ===>
     FCB name           ===>

   NOTE: Under process modes I and G, your USERID will be on the separator page.

   Press ENTER or END to exit. Enter CANCEL for installation defaults.
```

Figure 35. Print options panel

Print options

Print changed lines in bold

> This specifies whether or not you want lines in the current modification
> level of each member (that is, lines changed in the last EDIT session) to be
> highlighted by printing in bold print. (This makes them very easy to find.)
> Options are:

> **Y**   Highlight lines in the current modification level.

> **N**   Do not highlight any lines.

Process mode

> You can control how and where items you select for printing (such as
> individual members, the member list, and clipboards) are to be printed:

> **I (Immediate)**

>> Each member or other item is printed to the printer separately,
>> with separators between each.

> **G (Group)**

>> Everything you specify for printing is accumulated in one print
>> group until you issue the RELEASE command, issue the SET
>> command and change the process mode to I or L, or end your
>> session. The entire print group is printed together, without
>> separators between individually printed items. For example, in
>> GROUP mode, to get a list of all members starting with "PAY",
>> followed by a print-out of each such member, you would issue the
>> commands:

>> ```
>> FILTER PAY*
>> SAVE
>> P *
>> RELEASE
>> ```

> **L (List)**

>> The print-out is directed to the ISPF LIST data set.

> **Note:** If you direct the print-out to the ISPF LIST data set, you can print it using the ISPF command LIST.

The following options apply only if you have specified process mode I or G:

CLASS
> This specifies the SYSOUT class if you are printing to a printer.

DESTINATION ID
> This specifies the SYSOUT destination ID (that is, the route code) of the printer. It may be either `Node-Id` or `Node-Id.User-Id`.

Number of copies
> This specifies how many copies you want to be printed.

Lines per page
> This specifies how many lines per page you want to print.
>
> If Process mode is L (ISPF LIST data set), use ISPF option 0 (ISPF parameters) to control PAGESIZE of the ISPF LIST data set.

Keep in HOLD queue
> This specifies whether or not you want the SYSOUT to be held:
>
> **Y** Put the generated SYSOUT in the HOLD queue.
>
> > **Note:** Use the TSO OUT command, SDSF, or another output browser to release held SYSOUTs. The jobname is your TSO userid.
>
> **N** The generated SYSOUT is immediately available (is released).

FORM number
> This specifies the SYSOUT form number to be used for printing.

FCB name
> This specifies the SYSOUT FCB code to be used for printing.
>
> To accept the values as displayed, press ENTER or the END key.
>
> **Note:** When invoking SET, you can specify which set of options you want to look at by specifying the parameter OLIST, MSL, OUTPUT (or PRINT), or GLOBAL. For example, display the third SET panel (which displays the options controlling print processing), you can enter the command `SET PRINT`.

Appendix C. Patterns

In a number of commands and fields where a name can be entered, ISPF Productivity Tool also accepts a pattern. For example, in MSL, when a line command is entered as a main command, a pattern can be used instead of a member name, so that the command acts on all names matching the pattern. A pattern contains one or more wildcard characters, which allow it to match more than one name. The wildcard characters are the percent sign ("%") and the asterisk "*". Any character in the data in the same position as a percent sign is considered to match it. (A blank in the data is not considered to match.) Any number of characters from the position of the asterisk to the right are considered to match the asterisk. The asterisk can be in any position. Trailing blanks match the asterisk. In addition, the underscore character ("_") is used to indicate a blank space. (Although blank spaces cannot appear in some fields, such as the member name field in an MSL, they can appear in the RENAME column of an MSL, where the feedback messages appear, and in load module attribute fields.)

The following examples illustrate how patterns work:

Table 5. Pattern matching definitions

Pattern	Contents of Field	Match	Reason
DEMO%0	DEMO10	YES	Nothing in position 5
	DEMOZ0	YES	Last character not "0"
	DEMO	NO	
	DEMO	NO	
AB%D*	ABCD	YES	
	ABCDE	YES	Nothing in position 3
	AB1D234	YES	Position 4 not "D"
	AB	NO	Position 4 not "D"
	ABC	NO	
	ABBB	NO	
AB%	ABC	YES	Nothing in position 3
	AB1	YES	More than three characters
	AB	NO	Position 1 not "A"
	ABCD	NO	
	BBB	NO	
*	ABCDEFG	YES	Matches any name
%	A	YES	Matches any single-character name
_	(empty)	YES	
A_C	A C	YES	Position 2 not blank
	ABC	NO	
AB_	AB	YES	Position 3 not blank
	ABC	NO	
A*C	ABC	YES	
	AC	YES	
	BC	NO	Does not start with "A"
	AB	NO	Does not start with "C"

Patterns

Table 5. Pattern matching definitions (continued)

Pattern	Contents of Field	Match	Reason
*A*B	AB	YES	
	$ABC	YES	
	ABEND	YES	No "A" in string preceding "B"
	A23B4	YES	No "B" in string following "A"
	CCBD	NO	
	ZAREA	NO	

Appendix D. MSL feedback messages

The RENAME field of the MSL displays descriptive information about the result of the process performed on the member:

Table 6. MSL feedback messages

Message	Meaning	Process
-BROWSED	The member was browsed.	B
-COPIED	The member was copied.	COPY
-COPY ER	An error occurred during a COPY operation.	COPY
-DELETED	The member in your selection list was deleted by you or another user.	All
-EMPTY	The member was selected for printing but was empty.	PRINT
-FREED	The member was freed.	K
-G:FAIL	GLOBAL failed for this member.	GLOBAL
-G:ERROR	You entered an invalid command under GLOBAL and ended processing without correcting it.	GLOBAL
-G:INUSE	GLOBAL was unable to process this member because it was in use.	GLOBAL
-G:OK	GLOBAL succeeded for this member.	GLOBAL
-G:QUIT	GLOBAL terminated (QUIT executed).	GLOBAL
-IN USE	The member is in use by the indicated USERID.	E
-IN nnnn,	The member is in the library or libraries indicated.	H,WHERE
-INV NAM,	The member has an invalid name (it includes non-display characters).	All
-IO ERR	An input/output error occurred in reading the directory of the library or a member.	All
-MOVE ER	An error occurred during a MOVE operation.	MOVE
-NO AUTH	You have no authority to perform this operation.	All
-NO REPL	The member was not copied or moved because the member existed in the destination library and the REPLACE option was set to NO.	COPY, MOVE
-NO SAVE	The member was not saved because CANCEL was issued or because no change was made to it.	E
-NO STAT	The member was not copied or moved because statistics were mot available for either the source or the target.	COPY, MOVE
-NOT OLD	The member was not copied or moved because a member in the target library with the same name was not older than it.	COPY, MOVE
-NOT STD	The member has a non-standard directory entry.	All
-PRINT G	The member was printed in group mode.	PRINT
-PRINT I,	The member was printed in immediate mode.	PRINT

MSL feedback messages

Table 6. MSL feedback messages (continued)

Message	Meaning	Process
-PRINT L	The member was printed to the ISPF LIST data set.	PRINT
-PROMOTE	The member was promoted.	K
-REVEALD	A member with the same name in a lower library was deleted from the list.	DELETE MOVE RENAME
-SAVED	The member was saved.	E
-STATS	The statistics of the member were created, removed, or changed.	STATS
-SUBMIT	The member was submitted as a batch job.	SUBMIT, U
-TXT FND	The member contains the specified text string.	FINDTEXT
-VIEWED	The member was viewed.	V
old-name	The original member name.	RENAME
Text	The text specified by the TAG command.	TAG
-function	The ISPF function called.	ISPEXEC
-command	The TSO command executed.	T

Appendix E. MSL keywords, and default sorting order

The FILTER, LOCATE, and SORT commands operate on the fields displayed on the MSL panel. The keywords used to specify the fields are the corresponding column headings on the MSL panel. In addition, a few synonyms are acceptable for some fields.

MSL provides two different member selection list panels, one for text file libraries (that is, all types of libraries except load module libraries), and one for load module libraries.

Text File Library panel

The field names, alternative acceptable names, meanings, and default sorting order are shown in the following table.

Field Name	Synonyms	Meaning	Default Sort Order
NAME	MEMBER M N	Member name	Ascending
RENAME		Contents of RENAME field (feedback messages, old names of renamed members, and tags)	Ascending
LIB	LIBRARY	Library number in concatenation sequence	Ascending
VV	VERSION	Version number	Ascending
MM	LEVEL	Modification level	Ascending
CREATED	CRE	Date of creation	Descending
CHANGED	CHA	Date and time of last modification	Descending
SIZE		Number of lines currently in member	Descending
INIT		Number of lines initially in member.	Descending
MOD		Number of lines changed in member	Descending
ID	ID USERID	ID of user that last modified member	Ascending

Load Library panel

The load library panel field names, alternative acceptable names and meanings are shown in the following table:

Field Name	Synonyms	Meaning	Default Sort Order
NAME	MEMBER M N	Member name	Ascending

Load Library panel

Field Name	Synonyms	Meaning	Default Sort Order
RENAME		Contents of RENAME field (feedback messages, old names of renamed members, and tags)	Ascending
LIB	LIBRARY	Library number in concatenation sequence	Ascending
SIZE		Size of load module (hexadecimal)	Descending
TTR		Relative track/record of start of load module	Ascending
ALIAS-OF	ALIAS	Name of member to which this member is aliased	Ascending
AC	APF	APF authorization code	Ascending
RENT		Reentrant	YES first
REFR		Refreshable	YES first
REUS		Reusable	YES first
TEST		Test	YES first
AMOD	AMODE	Addressing mode (31, 24, ANY)	Descending
RMOD	RMODE	Residency mode (24, ANY)	Descending
OVLY		Overlay format	YES first
LOAD		Only loadable	YES first
NXEC		Not executable	YES first
SCTR		Scatter load format	YES first
PAGE		Load on page boundary	YES first
EDIT		Cannot be reprocessed by linkage editor	YES first

Note: For the load module attributes RENT, REFR, TEST, OVLY, LOAD, NXEC, SCTR, PAGE, and EDIT, blank is equivalent to "NO". For the load module attributes AMOD and RMOD, a blank value means that the linkage editor did not specify a value for this field. The underscore character ("_") can be used (with commands such as FILTER) to indicate a blank in these fields.

Appendix F. Invoking MSL from an application or CLIST

MSL can be invoked by an application or CLIST. It must be called from a valid ISPF environment, using the ISPF Dialog Manager SELECT service. The format of the command should be as follows:

```
►►──SELECT──NEWAPPL(ISR)──PGM(IQIMSL)──────────────────────────────►

►──PARM(fnct,──────────────,────────,──────────)──────────────►◄
              ┌─dsn──────┐    └─vol─┘   └─return─┘
              └─<<PROMPT>>┘
```

What	How
When an error occurs while invoking ISPF Productivity Tool, you need ISPF Productivity Tool to give you a return code of 8 instead of displaying the EDIT entry panel.	`ISPEXEC SELECT PGM(IQIMSL)` `PARM(E,'JONES.TEST.COBOL',,Y)` 'JONES.TEST.COBOL' is a library.

However invoked, on termination, control returns to the invoking application or CLIST.

The following is the description of the operands in the SELECT command:

fnct   This is the function code. It defines the default process. The values for the process are:
  E   EDIT (This is the default value for the default process.
  V   VIEW
  B   BROWSE

dsn   This is the data set name. If specified as <<PROMPT>> (including the greater-than and less-than symbols as shown), the entry panel is always displayed. If it is not specified, a prompt is displayed unless the cursor is on a valid ISPF Productivity Tool object name. The data set name can be specified in one of the following ways:
  • PAYROL.JONES.COBOL, as a fully qualified name
  • JONES.COBOL, as a partially qualified name

  If this is a library, it invokes a member list of the library. If this is a sequential file, it simply invokes that file.

  In a library name with a member name, for example, 'PAYROLL.JONES.COBOL(ACCTMAIN)', it invokes the member ACCTMAIN in the library PAYROLL.JONES.COBOL. This form can be used with partially qualified library names.

  In a library name with a pattern, for example, 'PAYROLL.JONES.COBOL(ACCT*)', it invokes a filtered member list of the library listing all members whose names start with 'ACCT'.

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Invoking MSL from an application or CLIST

In a member name 'PAYROLL', it invokes the member PAYROLL in the current library, or the last library processed (or, if the screen has been split, the last library processed in the split).

In a pattern 'PAY', it invokes a filtered listing of the members matching the pattern in the current library, or the library processed (or, if the screen has been split, the last library processed in this split).

Note: Access to catalogued data sets by DD name is fully supported when MSL is invoked in an application or CLIST. You can invoke an MSL on a pattern on the particular level of the current PANELLIB concatenation by specifying dsn as: @@DD.PANELLIB.#2(ACCT*).

vol   This is the volume serial number. If it is specified, MSL looks for the data set only on the specified volume. Otherwise, it consults the catalog to find the data set.

return This operand decides whether or not to return to the calling application with a return code of 8 if an error occurs when invoking ISPF Productivity Tool:

N   Display the entry panel if an error occurs. This is the default.

Y   Return to the calling application with a return code of 8 if an error occurs.

Appendix G. Invoking OLIST from an application or CLIST

You can invoke OLIST from an application or CLIST. It must be called from a valid ISPF environment, using the ISPF Dialog Manager SELECT service.

You can create and display a temporary OLIST or a permanent OLIST. You can also display an existing OLIST, the default OLIST, or a selection list of OLISTs.

To invoke OLIST, issue a SELECT command in this form:

```
►►──SELECT──NEWAPPL(ISR)──PGM(IQIPLST)────────────────────────────────►

►──PARM(pname────────────────────────────────────)──────────────────►◄
         └─,─level─┐
                  └─,─cmd─┐
                         └─,─exit─┘
```

What	How
Invoking the default OLIST with the default process	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST)`
Invoking the default OLIST with the process returning to the calling program on error	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(,,,Y)`
Invoking the default OLIST with the default process of BROWSE	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(,,,B)`
Creating and displaying a new OLIST named SYS1, listing all data sets starting with 'SYS1'	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(SYS1)`
Creating and displaying a new OLIST named NEWLIST, listing all data sets starting with SYS1	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(NEWLIST,SYS1)`
Displaying a temporary OLIST of all data sets starting with SYS1	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(SYS1.*) or, ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(_TEMP_,SYS1)`
Displaying a selection list of existing OLISTs	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(*)`
Creating and displaying a OLIST named NEWLIST of all data sets to match the specification 'ACCOUNTS.%PAY*.COB*' with a default process of VIEW and with OLIST being terminated and returned to the caller on error	`ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) ISPEXEC SELECT NEWAPPL(ISR) PGM(IQIPLST) PARM(NEWLIST,ACCOUNTS.%PAY*.COB*,VIEW,Y)`

The SELECT command has this syntax:

Invoking OLIST from an application or CLIST

```
►►──SELECT──NEWAPPL(ISR)──PGM(IQIPLST)──────────────────────────────────►

►──PARM(pname──────────────────────────────────────)──────────────►◄
          └─,─level─┐
                    └─,─cmd─┐
                            └─,─exit─┘
```
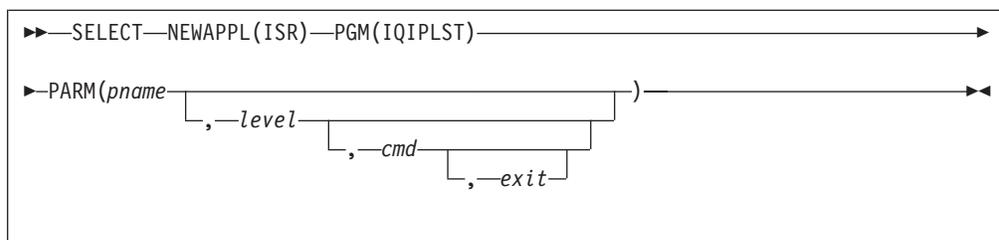
The operands are:

pname The OLIST is to be displayed or created.
>   *   to display the List of Referenced Object Lists
>   **_TEMP_**   to create a temporary OLIST.

>If "*" or "_TEMP" is omitted, the default OLIST is displayed.

level This is a fully or partially qualified data set level. The first level of a generic data set specification must be fully specified, but the following levels can be specified using the wildcards % and * freely. If an existing OLIST is specified, the level is ignored.

>If level is omitted, pname is checked to see if it occurs as a first-level qualifier. If it occurs as a first-level qualifier, it creates a OLIST prefilled with a list of all data sets using pname as the first-level qualifier. If it does not, it creates a OLIST with the ISPF libraries on the user's EDIT entry panel.

cmd The values for the command are as follows:
>   **B**   BROWSE
>   **E**   EDIT
>   **V**   VIEW

>If the values are omitted, the default process is defined as on the user's ISPF Productivity Tool Options panels.

>This command can be specified as the following:
>- PAYROL.JONES.COBOL, as a fully qualified name
>- JONES.COBOL, as a partially qualified name

>If this is a library, this command invokes a member list of the library. If this is a sequential file, it simply invokes that file.

>In a library name with a member name, for example, 'PAYROLL.JONES.COBOL(ACCTMAIN)', the command invokes the member ACCTMAIN in the library PAYROLL.JONES.COBOL. This form can be used with partially qualified library names.

>In a library name with a pattern, for example, 'PAYROLL.JONES.COBOL(ACCT*)', this command invokes a filtered member list of the library listing all members whose names start with 'ACCT'.

>In a member name 'PAYROLL', this command invokes the member PAYROLL in the current library, or the last library processed (or, if the screen has been split, the last library processed in the split).

>In a pattern 'PAY', this command invokes a filtered listing of the members matching the pattern in the current library, or the library processed (or, if the screen has been split, the last library processed in this split).

Note: Access to catalogued data sets by DD name is fully supported when MSL is invoked in an application or CLIST. You can invoke an MSL on a pattern on the particular level of the current PANELLIB concatenation by specifying dsn as: @@DD.PANELLIB.#2(ACCT*).

exit　It allows you to decide whether or not OLIST should be terminated on error:

Y	On error, return to the caller.
N	On error, remain in OLIST, where the user is able to correct the error (possibly by specifying a different OLIST). This is the default.

Invoking OLIST from an application or CLIST

Appendix H. Invoking user commands from MSL

The % line command in MSL is used to invoke user-written commands. It invokes CLISTs, REXX execs, or other TSO commands accessible from ISPF. The name of the command is specified in the RENAME column.

```
  File  Display  Library  SCLM  Settings  Menu  Utilities  Test  Help  Exit
  -----------------------------------------------------------------------------
  -IPT--EDIT L1------ INTT025.IPT.MSGS ----------------------ROW 00001 OF 00004
  COMMAND  ===>                                             SCROLL ===> CSR
  HOTBAR: REFRESH  FLIP     GLOBAL    INFO     COMPRESS EXPDIR  TAILOR   TOTALS
                                              ON VOLUME USR004
     NAME    RENAME    LIB VV.MM CREATED    CHANGED      SIZE  INIT   MOD USERID
  % NEWSTUFF MAILIT     1 01.01 07/01/26 07/01/26 13:52   23    21     2 SUPPORT
    RESTORE             1 01.01 07/01/26 07/01/26 13:52   13    14     0 SUPPORT
    SYSTEMS             1 01.01 07/01/26 07/01/26 13:52    6     8     0 SUPPORT
    TRAINS              1 01.01 07/01/26 07/01/26 13:52   19    16     3 SUPPORT
    --END--
```

Figure 36. Entering the % line command in MSL

The MAILIT command is used on the NEWSTUFF member. MAILIT must be available to ISPF for processing (SYSPROC, SYSEXEC, linklist TSO command, etc.). ISPF Productivity Tool invokes the command with the data set name and the member name as the first parameter. In this example, the command is invoked as follows:

```
ISPEXEC SELECT CMD(MAILIT 'SAMPLE.TEST.MSGS(NEWSTUFF)')
```

In addition, ISPF Productivity Tool stores in the shared pool several ISPF variables that can be used by the invoked application. See Appendix K, "Adding your own commands to MSL," on page 233 for the list of available variables and their usage.

Appendix I. Invoking user commands from OLIST

When a line command entered in OLIST is not a built-in line command, OLIST assumes it is a TSO command or CLIST/REXX exec. The invoked command is passed the data set name (with the member name, if specified) as a parameter. The user may also specify other parameters. If the command is preceded by a question mark, or SHOWCMD is set to ON, ISPF Productivity Tool displays a prompt screen showing the command buffer before execution. The ? command prefix overrides built-in line commands, allowing you to execute installation commands with names like B, E, I etc.

When creating your own commands to be called from OLIST, remember that these must be available to ISPF (via SYSPROC/SYSEXEC or other normal module concatenation libraries).

An example of a command that uses the TSO XMIT command to transmit data sets is:

```
CLIST NAME: DSNSENU

PROC 1 DSNAME TO(JONES01)
XMIT (&TO) DATASET(&DSNAME)
```

The command would be invoked from OLIST as shown below:

```
   File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
 -----------------------------------------------------------------------------
 -IPT- OLIST (B) ----------- ALLOCATION LIST FOR "ISPPLIB" -- Row 1 to 15 of 26
 Command    ===>                                          SCROLL ===> CSR
 Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL     UPDATE   CUT    FLIP
                                                          *TEMPORARY LIST*

 TSO PARMS  ===>
 Command   Member   Numbr Data Set Names / Objects                      Class
 --------- -------- ----- --------------------------------------------- -------
 DSNSEND   IQI@PRIM    1 'SPFE.IBM.RLSE590.PLIB'
                       2 'ISP.SISPPENU'
                       3 'FMN.V6R1M0.SFMNPENU'
                       4 'PP.XDC.Z16.XDCPLIB'
                       5 'AUZ.SAUZPENU'
```

To override the destination parameter in the CLIST, the TO(...) parameter can be specified in the TSO PARMS field as follows:

```
   File  Edit  Find  Display  Populate  Settings  Menu  Util  Test  Help  Exit
 -----------------------------------------------------------------------------
 -IPT- OLIST (B) ----------- ALLOCATION LIST FOR "ISPPLIB" -- Row 1 to 15 of 26
 Command    ===>                                          SCROLL ===> CSR
 Hotbar: OPRINT   REFRESH  CLRVOL   FILLVOL  UTIL     UPDATE   CUT    FLIP
                                                          *TEMPORARY LIST*

 TSO PARMS  ===>  TO(JERRY)
 Command   Member   Numbr Data Set Names / Objects                      Class
 --------- -------- ----- --------------------------------------------- -------
 DSNSEND   IQI@PRIM    1 'SPFE.IBM.RLSE590.PLIB'
                       2 'ISP.SISPPENU'
                       3 'FMN.V6R1M0.SFMNPENU'
                       4 'PP.XDC.Z16.XDCPLIB'
                       5 'AUZ.SAUZPENU'
```

Invoking user commands from OLIST

Appendix J. Calling enhanced EDIT, VIEW, or BROWSE from dialogs

You can dynamically invoke the ISPF Productivity Tool enhanced EDIT, VIEW, or BROWSE function from a dialog.

To invoke EDIT with the ISPF Productivity Tool enhancements, do one of the following:

- Specify !IQIEMAC as the initial macro on the ISPEXEC EDIT statement.
- If you already have an initial macro on the ISPEXEC EDIT statement, issue ISREDIT !IQIEMAC in your own initial macro.

To invoke VIEW, do one of the following:

- Specify !IQIVMAC as the initial macro on the ISPEXEC EDIT statement.
- If you already have an initial macro on the ISPEXEC EDIT statement, issue ISREDIT !IQIVMAC in your own initial macro.

Note: If you are not using the ISPF Productivity Tool Librarian or Panvalet support and if you invoke EDIT on non-standard libraries (for example, Librarian files) or use the EDIF EDIT interface, use !IQIPMAC instead of !IQIEMAC or !IQIVMAC.

To invoke BROWSE, use the parameter PANEL(IQIBROB) on the ISPEXEC BROWSE statement.

Appendix K. Adding your own commands to MSL

The T (TSO) command is a convenient vehicle to add more commands to MSL. You can create Assembler Language TSO commands, CLISTs, or REXX EXECs that accept a data set name (with a member) as a first parameter to perform a number of different functions on a member, such as compiling a member or downloading or uploading a member to or from a PC.

When a user enters a T command, MSL issues a command to TSO in the format

```
command 'library-name(member)'
```

where command is as specified in the rename field (if T is issued as a line command), or is the second parameter of the T main command.

The following ISPF dialog variables are stored in the SHARED pool and are available to the TSO command, CLIST, or REXX EXEC being called:

Variables always available

ZLLIB	Position of member in concatenation hierarchy
MEMBER	Member name
DIRTYPE	Type of member: S - ISPF statistics are available N - ISPF statistics are not available L - Load module
TYPE	Data set type (last qualifier)
IPIDSN1	Name of library 1 in concatenation hierarchy
IPIDSN2	Name of library 2 in concatenation hierarchy
IPIDSN3	Name of library 3 in concatenation hierarchy
IPIDSN4	Name of library 4 in concatenation hierarchy

Variables available if ISPF statistics are available

ZLVERS	Version number
ZLMOD	Modification level
ZLCDATE	Creation date
ZLMDATE	Last modification date
ZLMTIME	Last modification time
ZLCNORC	Current number of records
ZLINORC	Beginning number of records
ZLMNORC	Number of records modified
ZLUSER	Used ID of user that last modified member

Variables available for load modules

ILMSIZE	Load module size
ILMAPF	Load module authorization code (AC)

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Adding your own commands to MSL

Variables available for load modules

ILMRENT	YES if reentrant
ILMREFR	YES if refreshable
ILMREUS	YES if reusable
ILMTEST	YES if link-edited with the TEST attribute
ILMAMOD	Load module AMODE
ILMRMOD	Load module RMODE

When entered as a main command, the T command requires a member name or pattern. If a TSO command, CLIST, or REXX EXEC creates a new member, MSL adds it to the member list. For example, if you create a TSO command, CLIST, or REXX EXEC called UPLOAD, you can issue the following command to upload a file from the PC into a new member called NEWNAME:

```
T NEWNAME UPLOAD
```

The essential elements of such a CLIST or REXX EXEC would look like this:

```
PROC 1 DSNAME
ALLOC REUSE FILE(OUT) SHR DA(&DSNAME)    /* ALLOCATE OUTPUT FILE
*/
CALL 'DEMO.LOAD(DOUPLOAD)' 'UPLOAD'    /* ASSUME THIS IS THE UPLOAD
PROGRAM */
FREE FILE(OUT)                 /* FREE THE OUTPUT DDNAME */
```

When entered as a main command, the T command accepts patterns. You may want to QUIT the processing of members not yet processed if a return code from a TSO command, CLIST, or REXX EXEC indicates a severe error. To do so, it's necessary to issue the appropriate ISPEXEC command, like this:

```
PROC 1 DSNAME
ALLOC REUSE FILE(OUT) SHR DA(&DSNAME)    /* ALLOCATE OUTPUT FILE
*/
CALL 'DEMO.LOAD(DOUPLOAD)' 'UPLOAD'    /* ASSUME THIS IS THE UPLOAD
PROGRAM */
IF (&MAXCC>8) THEN DO           /* HANDLE SEVERE ERRORS */
   WRITE SEVERE ERROR (RETURN CODE IS &MAXCC)
   ISPEXEC SELECT PGM(IQIQUIT) PARM(N)  /* ISSUE MSL 'QUIT' */
END                 /* END DO */
FREE FILE(OUT)                 /* FREE THE OUTPUT DDNAME */
```

Appendix L. Adding your own point-and-shoot general commands

You can add general commands to ISPF. If you use the TSO shell provided by ISPF Productivity Tool, the commands you add can make use of the point-and- shoot interface. For example, if you have (or create) a CLIST that compiles a data set, users are able to specify the data set to be compiled simply by typing the command name on the command line, putting the cursor on the data set name, and pressing Enter. If a PF key is set to the command name, users are able to invoke the command simply by placing the cursor on the data set name and pressing the PF key.

To add a general command, add an entry in ISPCMDS (the ISPF command table) or in an application command table (xxxxCMDS, where xxxx is the application ID). For example, assume that the CLIST named COMPILE accepts a source data set name as its first parameter. Add an entry like the following to the command table:

ZCTVERB	ZCTTRUNC	ZCTACT
COMPILE	0	SELECT PGM(IQITSO) PARM(-, %COMPILE /)

ISPF Productivity Tool replaces the slash ("/") in the command parameter with the data set name that the cursor is on. (If the cursor is not on a valid name, no substitution is performed, and the slash is passed to the application.)

Appendix M. Persistent Table Library

Persistent Table Library is a personal library that serves as a repository for ISPF Productivity Tool persistent objects. Persistent Table Library can be dynamically allocated or disabled.

In the Persistent Table Library Options panel, Persistent Table Library provides the following options:

Command	Remarks
A	This command allows you to allocate an existing library or a new library.
B	This command allows you to back up the current table library and allocate space for a new library.
T	This command allows you to temporarily disable the library for the current section.
P	This command allows you to permanently disable the library.

Allocating a library

ISPF Productivity Tool recommends a dedicated PDSE library for storing its persistent tables. You may either specify an existing library or allocate a new library for this purpose. When you allocate a valid library, its name is stored in your profile and is automatically used as long as DD (IPITBLIB) is not included in your LOGON procedure.

ISPF Productivity Tool suggests you use the library name of the existing permanent OLIST library, or if DD (PLSTLIBW) is missing, use a name and volume derived from your PROFILE library name.

You can disable the library or select a library by using the following commands in the main Command line:

Command	Remarks
D	Disable the current library.
S	Select a library. This is a default setting.

Backing up the table library

ISPF Productivity Tool allows you to back up your persistent table library or allocate a larger library when your current library is running out of space. ISPF Productivity Tool provides the following options:

Figure 37. Persistent Table Management panel

Backing up the table library

```
 -IPT-------------------- Persistent Table Management -------------------------
 COMMAND ===>

   IBMIPT persistent table library just encountered an unrecoverable
   error ( ABEND     ). In order to complete your request, a larger
   library needs to be allocated.

   If you elect to proceed with allocating a larger library, IBMIPT
   will perform the following steps to ensure integrity of your data:
   1) Rename library to: INTT125.SYSA.ISPF.IPITBLB0
   2) Allocate a larger: INTT125.SYSA.ISPF.IPITBLIB
   3) Copy old library into the new one.
   4) Resume operation with new library.

   If you decline to proceed with the above, your currently used
   persistent table will not be saved as requested.

 Press ENTER to process or F3    to cancel.

   Current Allocation
    Data set name type  : LIBRARY
    Allocated blocks  . : 327        Block size  . . . . : 6160
    Maximum dir. blocks : no limit   Number of members . : 0
```

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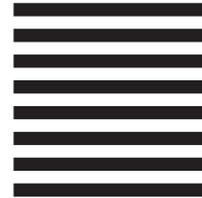
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