
1 Preface

1.1 Brief product description

PRM (Print Resource Management) is a utility routine in the form of a BS2000 subsystem for creating and managing SPOOL print resources.

It offers a uniform interface for resource processing irrespective of the type of print resource or printer involved, and can be used in interactive or batch mode as required.

PRM is mandatory for the use of SPOOL as of Version 3.0, since all actions involving the print resources are performed via PRM. This applies both to the user for creating and managing the resources and to SPOOL for accessing them.

PRM constitutes a powerful tool for the creation and management of all types of print resource on any device. Its requirements can be conveniently defined by means of SDF statements or using a menu system.

1.2 Target group

This manual is intended for both privileged and nonprivileged SPOOL users.

“Privileged” here refers to those users with the SPOOL-ADMINISTRATION or TSOS system privileges, who are authorized to define valid settings for all users and to edit the system files and the standard print resources.

1.3 Summary of contents

This manual describes the PRM utility routine, its interfaces and how it is embedded in SPOOL.

Chapter 1, “Preface”

contains introductory information.

Chapter 2, “Print resources”

Provides a general introduction to print resources and describes the SPOOL print resources and how to select them in the PRINT-DOCUMENT command.

Chapter 3, “Managing the SPOOL print resources with PRM”

Describes how PRM is embedded in SPOOL and how the print resources are classified and stored. This also includes the print resources created under Windows in the TRANS format.

Chapter 4, “Overview of the PRM interfaces”

Explains the general structure of the statement interface SDF, the structure of the statements themselves, and the general functionality of the statement generator. This chapter also describes the general layout of the masks and how to use them, as well as the meanings and functions of the keys.

Chapter 5, “Statements”

Lists all statements alphabetically, together with their syntax and descriptions of the operands.

Chapter 6, “Menu system”

Contains a detailed description of all masks and the associated actions.

Chapter 7, “Utility routines for migration and post-editing”

Describes the utility routines supplied with PRM and how to use them.

Chapter 8, “Examples”

Provides examples of converting existing print resources for use with PRM, creating and managing resources, and importing print resources in the TRANS format.

Chapter 9, “Installing PRM”

Gives an overview of the requirements for installing the program and explains the installation process.

Chapter 10, “Appendix”

Describes the standard character sets, the EBCDIC table and the SDF metasyntax.

Reference section

This section includes a glossary of the most common terms, a list of abbreviations used, a list of related publications and an index to the manual.

1.4 Converting PRSERVE and SPOOLSERVE to PRM

The utility routines PRSERVE and SPOOLSERVE for creating and managing print resources in the print control files NDFILE /HPFILE and SPOOLFILE continue to be supported. However, as of Version 3.0, SPOOL can only process resources which have been stored in the PRFILE, a resource library created by PRM. PRSERVE and SPOOLSERVE cannot access print resources stored in this file.

Existing procedures for creating and managing print resources with the utility routines PRSERVE and SPOOLSERVE can therefore still be used. However, if these resources are to be processed via SPOOL V3.0 or higher, they must first be converted from the NDFILE/HPFILE or SPOOLFILE into a PRFILE.

PRM provides an easy-to-use, largely automated function for converting or migrating the print control files.

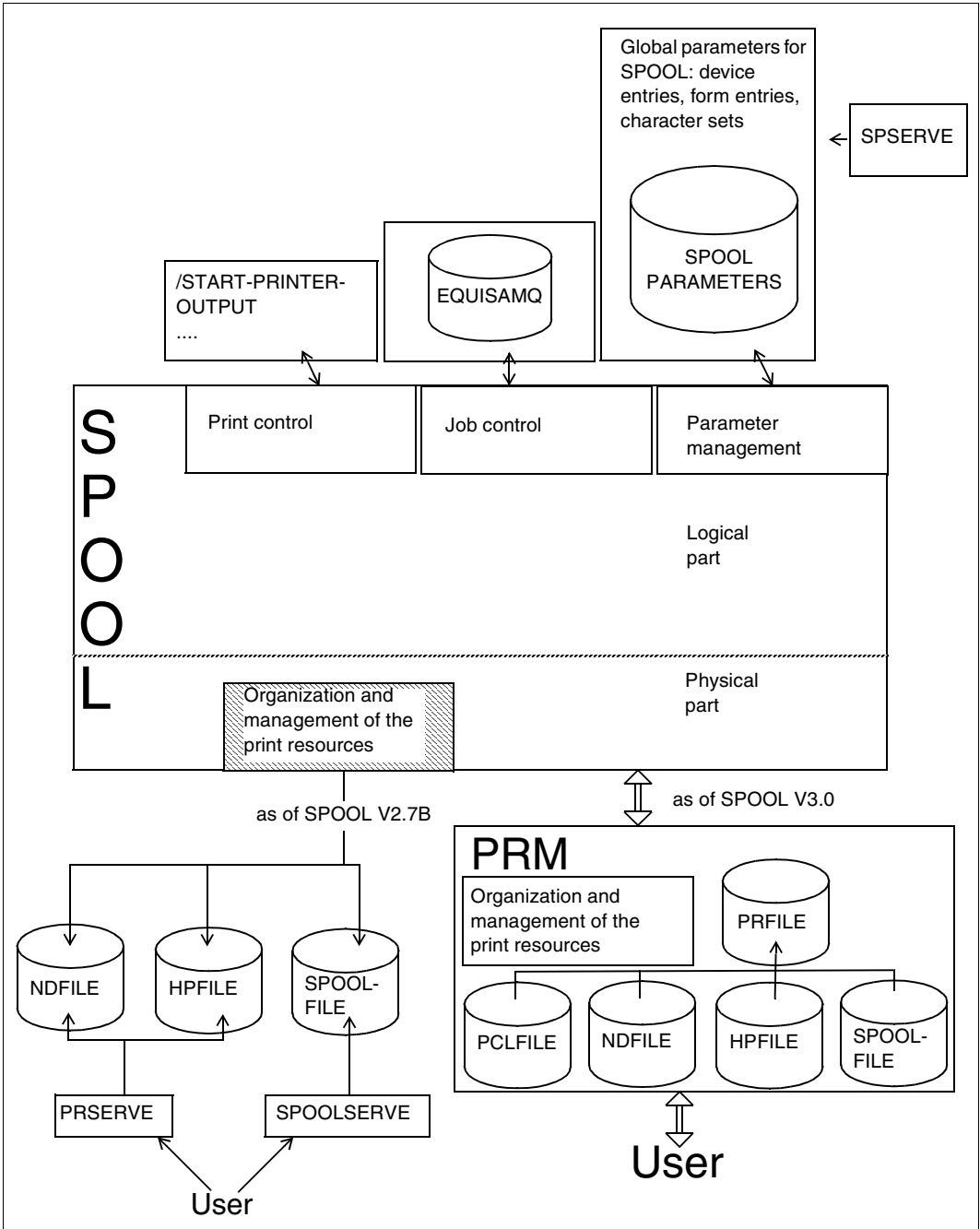
1.5 How PRM is embedded in SPOOL

In general, the processing of a print job by SPOOL can be divided into a logical part and a physical part:

- The logical part deals with all default values and “globals”, forms, character sets and device connections.
- The physical part consists of supplying the individual printers with the necessary or desired resources via print control files.

PRM covers the entire functional range of this physical part through an interface which is equally binding for both SPOOL and the user - for creating and managing the resources (user) or for accessing them (SPOOL).

The diagram below shows how PRM is embedded in the SPOOL environment:



How PRM is embedded in SPOOL

1.6 Changes since the last version of the manual (PRM V1.1A)

As of PRM Version 1.2, some print resources in the TRANS format, which can be created on a Windows system with convenient tools, can now be imported into a PRFILE.

Print resource objects	Tool
HP-FOB, PCL macro	FGL (Forms Generation Language)
HP-Font, PCL softfont	OFM (Océ Printing Systems Font Manager)

Print resources in the TRANS format can be copied to BS2000 in character mode with any data transfer program without any risk of destroying the binary data of the print resource or of damaging its logical structure. The print resource can then be imported with PRM to a print resource library PRFILE.

In order to incorporate the new function of importing print resources in the TRANS format, the PRM statement IMPORT-PRINT-RESOURCES and the “Edit” pull-down menu at the statement and menu interfaces were extended with this functionality, and the “Examples” chapter was revised accordingly.

1.7 README file

Information on any functional changes and additions to the current product version described in this manual can be found in the product-specific README file.

You will find the README file on your BS2000 computer under the file name `SYSRME.product.version.language`. The user ID under which the README file is cataloged can be obtained from your systems support group. You can view the README file using the `/SHOW-FILE` command or an editor, and print it out on a standard printer using the following command:

```
/PRINT-DOCUMENT FROM-FILE=filename, DOCUMENT-FORMAT=*PAGE-FORMAT(
CONTROL-MODE=*PAGE-MODE(LINE-SPACING=*BY-EBCDIC-CONTROL))
```

2 Print resources

2.1 General description of print resources

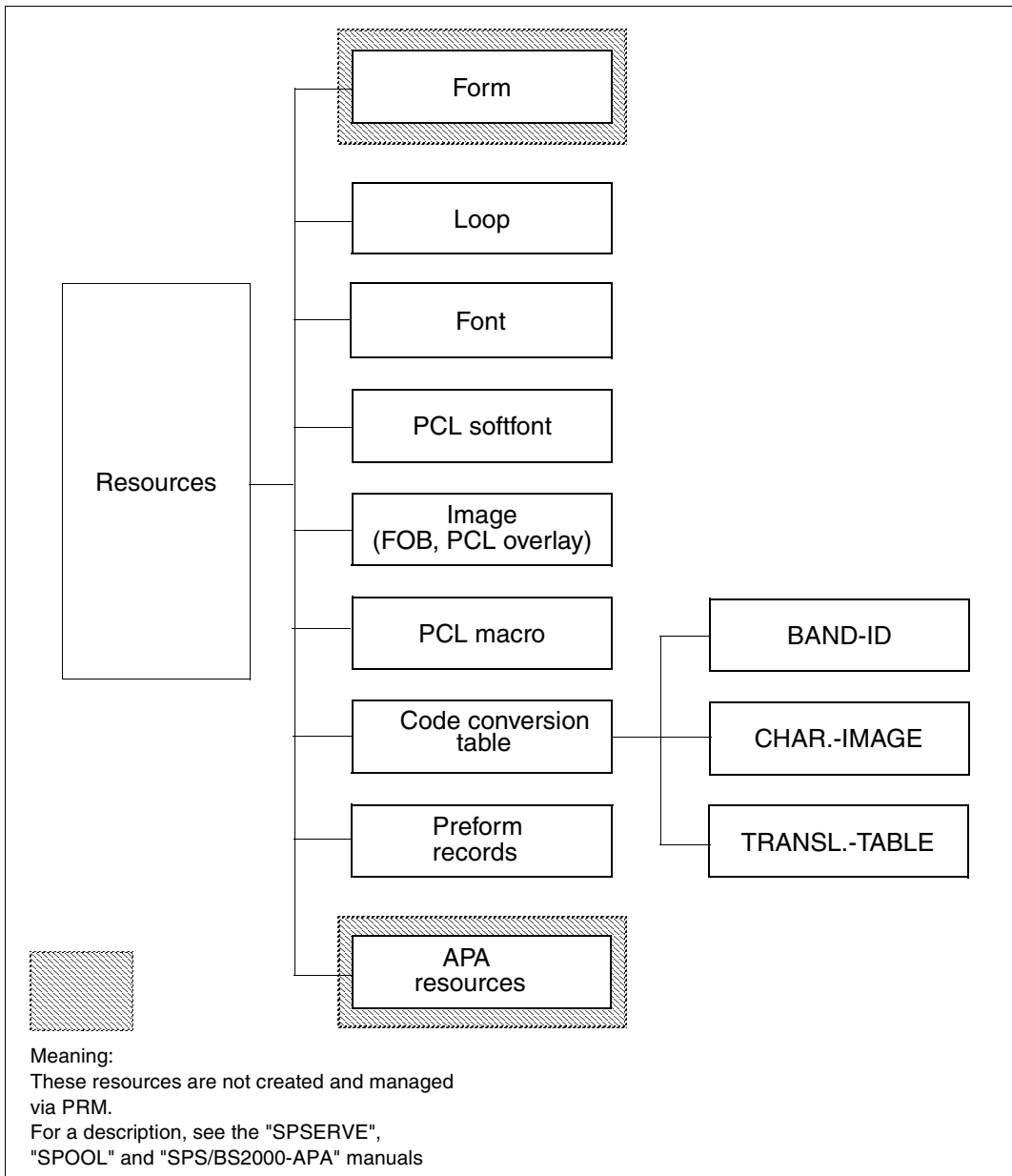
The term “print resources” is used to describe all processing aids for text and page layout which allow you to produce a printed document that is pleasing to the eye. These processing aids are part of the “format data”, which is responsible for converting the “user data”, i.e. the data stored in the file to be printed, in the printout.

The user data is the name given to the visible part of the data, i.e. the actual information. This information is constructed by the format data. A distinction is made between internal and external format data.

Internal format data is data which is stored in the file and is interpreted either directly by the printer (e.g. control sequences) or by an editing program. External format data is not included in the file; it is provided during formatting as an external processing aid for structuring the file ready for printing (e.g. character set).

The term “print resources” thus covers the processing aids for the interpretation of internal format data and the (external) processing aids for the text and page layout of a print file.

2.2 SPOOL print resources



These resources used in BS2000 are described below.

2.2.1 Form

The term “form” is a synonym for paper format.

There are usually a variety of paper formats available for the printer output; these formats vary in width and height.

All paper formats must be entered in the SPOOL parameter file, since each form is linked to one or more printer types which can support these paper formats. This device-dependence means that the print resource “form” is not managed by PRM. The creation and management of forms are described in detail in the “SPSERVE” manual.

2.2.2 Loop

A loop is an instruction which specifies with which line the print file is to be resumed following a page feed. This term originally referred to the 12-track continuous tape used in the old impact printers for paper feed control. In its present form it refers to the paper feed information which is nowadays loaded into the printer in electronic form.

The loop specifies for each individual print line the line height (line density) and the character width (character or print density). The information on paper feed control is combined to form a loop record. A loop record contains:

- the form length (and thus implicitly the height of the individual lines)
- the print density for all line ranges
- the so-called “channel feeds”.

In chain printers a “channel” used to refer to the track of the 12-track continuous tape which contained the information for feed control.

The term is still used today for specific operands in the definition of a loop record and is represented by the control characters X'C1' (“A”, so-called channel 1) to X'BC' (so-called channel 11).

The paper format (form) used and the loop are closely related by virtue of the vertical line spacing (line density) and the form length. Each loop must be oriented toward the form used: there must be room within the paper format for at least the line with which printing is to continue after a page feed.

When a loop record is created, a channel can be assigned to any line of the form. Whenever the associated channel control character is specified in a print file, a feed occurs in this line.

The loop record can therefore be interpreted as a metapage, which specifies how the print file is to be output.

Example:

The loop record LO1 contains the following specifications:

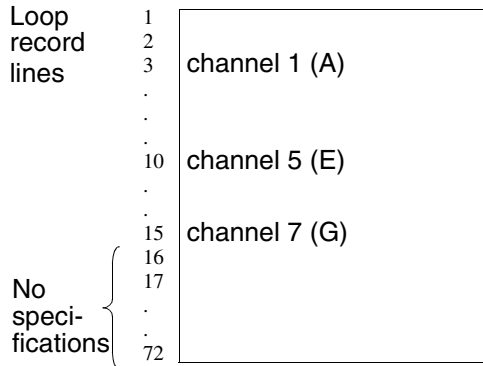
Line 3 = channel 1 (CH 1 or C1; corresponds to “A”)

Line 10 = channel 5 (CH 5 or C5; corresponds to “E”)

Line 15 = channel 7 (CH 7 or C7; corresponds to “G”)

↳ Here the loop record lines correspond to the lines with which the printout is continued on a new page after a page feed.

This metapage can be pictured as follows:



If a print file is printed with the loop “LO1”, the corresponding control characters “A”, “E” and “G” in the control character column are to be interpreted and converted accordingly for the printer output:

- whenever an “A” appears in the control character column (usually column 1), a page feed occurs; the printout is continued in line 3 of the new page as defined in the loop record.
- whenever an “E” (“G”) appears in the control character column, a page feed occurs; the printout is continued in line 10 (line 15) of the new page as defined in the loop record.

2.2.3 General loop

A general loop is a PRM auxiliary object designed to help the user when generating loops for different printer types. Each general loop functions as a general model for a set of printer types from which a printer-specific loop can be derived.

A general loop can be generated by PRM or derived from an existing loop (HP loop or LP loop), in which case it can then itself be used as a model for loops of different printer types (including for future developments).

The procedure for generating or modifying a general loop is based on the definition of sections produced by combining a group of loop lines. Each group of lines has the same characteristics and, if required, can be addressed via a channel number laid down in the definition (for further details see the example in section 8.6, "Creating an HP loop and an LP loop", on page 378).

2.2.4 Font

A font (previously called "character set" in BS2000-SPOOL) is a matching set of print characters of the same size, type and style.

The "font size" is specified in points. A point is the customary unit used for measuring the font size. One point is equivalent to 1/72 inch or 0.3527 mm.

The "font type" refers to the typeface or design of the individual letters, e.g. Helvetica, Times, Courier.

The "font style" (also called the "font attribute") indicates the nature of the font. The most common styles are normal, bold and italic, but a whole range of special and mixed styles exist.

The font family is the generic term for the classification of all font types. Every font type can be uniquely assigned to one of the following four font families:

- Roman: with serifs
- Sans serif: without serifs
- Gothic: broken type
- Script: looks like handwriting

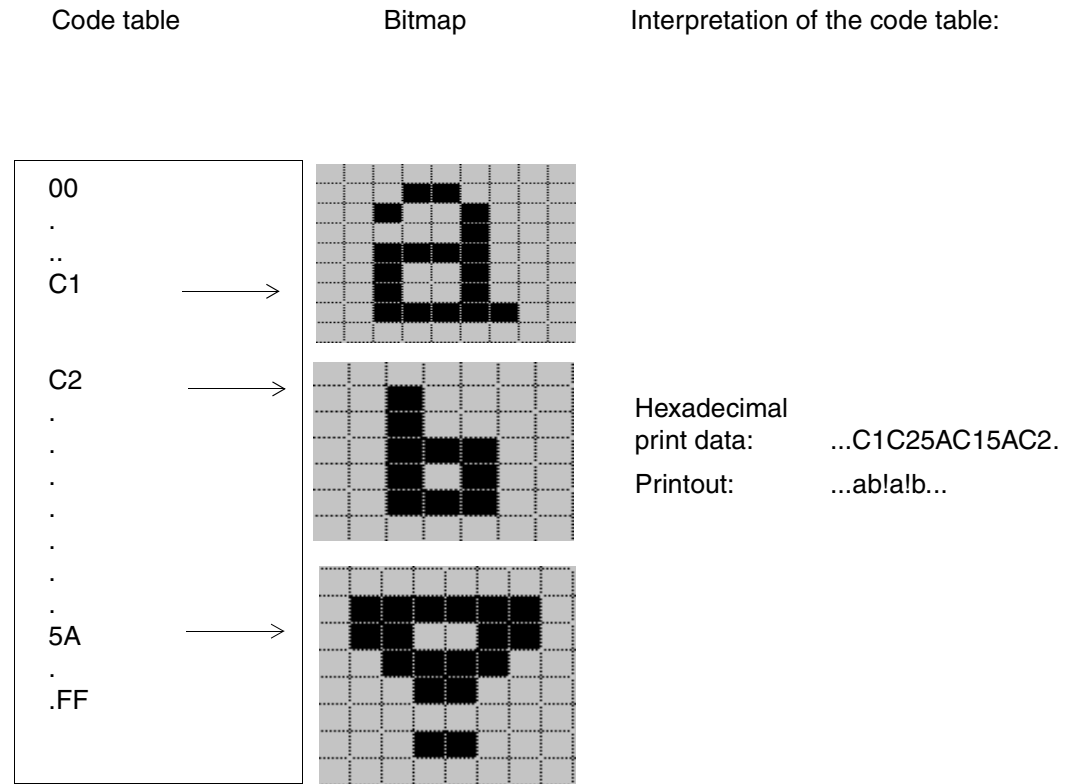
A set of print characters comprises uppercase and lowercase letters, numbers and special characters all in the same size and style.

All print characters of a font are identical in their design or in the description of how they are to be displayed with regard to size, type and style.

Each individual character must be stored in the form of a bitmap, which represents the binary coded description of the character.

When the bitmap is created, an identification attribute is defined for each character in the form of a 1-byte code; the entire set of print characters is combined to form a table of 1-byte codes. Each of the maximum of 256 characters that can be represented by a byte is identified in the print data stream by way of this code and is displayed in accordance with the bitmap.

Example



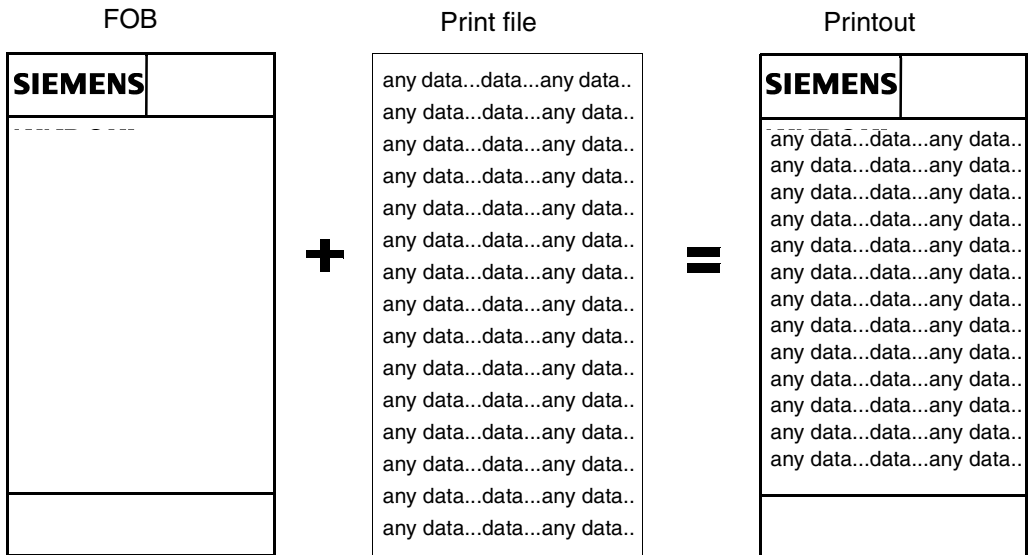
2.2.5 Image

Images are generally pictorial representations on the screen in bitmap format, such as are typically produced by scanning, digitizing or using pixel-oriented drawing programs. This print resource allows predefined logos, captions, diagrams etc., to be processed together with the print data.

In the BS2000-SPOOL environment the term “image” incorporates the print resources known as “forms overlay buffer” (FOB) and “overlay”.

An FOB or overlay is a data overlay showing the electronic version of a finished form, which can be superimposed (overlaid) on the print data. Depending on the type of printer on which the data is to be output (band, HP or PCL printer), the data overlay is addressed with an FOB or with an overlay. If several forms are to be superimposed, this must already be taken into account when the forms are created, as a data overlay cannot be freely positioned on the print page but is always superimposed starting from the top left-hand corner of the paper format. If, for example, two subforms are to be superimposed on the print data and 20 lines are defined in the first one, the first 20 lines of the second subform must be defined as blank lines. The data overlay is stored in the print control file as a pixel graphic and the data (i.e. the pixel information) is stored in the form of sublines. Depending on the different technical specifications of the printer (resolution), data overlays for HP printers can contain up to 672 sublines, those for HP90 printers up to 4032 sublines.

Example



2.2.6 Code conversion table

A code conversion table (or code translation table) is an instruction for the conversion of hexadecimal codes. This print resource enables each individual character represented in hexadecimal code in the print file to be converted into some other character.

In contrast to the print resource “font”, however, the characters to be printed are not produced themselves; instead, the “target code” is defined in hexadecimal form. In BS2000-SPOOL, three variants of this print resource are supported: BAND-ID, CHARACTER-IMAGE and TRANSLATION-TABLE. These code conversion tables can be created and edited using PRM.

The code conversion table **BAND-ID** is a resource which is only available for band printers. With these printers, the character set in which the lines are printed is defined by the printer tape inserted. For each printer tape available in the printer, a corresponding entry, represented by the code conversion table BAND-ID, must be stored in the print control file. The table can specify how the characters are to be converted from the file into existing print characters (i.e. letters on the printer tape). The use of this resource is device-dependent - it can only be assigned to one device.

The code conversion table **CHARACTER-IMAGE** is only available for output to line printers. Unlike with BAND-ID, the codes are here converted not in the printer itself, but before the printer output appears and during formatting of the data by the printer driver. This resource can only be used indirectly through allocation to a device or a form.

Use of the code conversion table **TRANSLATION-TABLE** depends on the type of printer employed: each individual character in the print file is translated into the desired code before output to the printer and before formatting by the printer driver. The conversion can be requested directly through specification of a code conversion table in the PRINT-DOCUMENT command.

The code conversion tables BAND-ID, CHARACTER-IMAGE and TRANSLATION-TABLE can be distinguished as follows with regard to the attributes “device-specific use” and “time of processing”:

Code conversion table	Attribute	
	device-specific use	time of processing
BAND-ID	Band printers only	After formatting the data; in the printer
CHARACTER-IMAGE	Line printers only	During formatting
TRANSLATION-TABLE	All printer types	Before formatting

Example

A code conversion table is to be created which converts each existing “1” character (hexadecimal code “F1”) in the print file into the printable character “0” (hexadecimal code “F0”) and vice versa.

The code conversion table to be edited is in the form of a matrix and is interpreted as follows: the element a_{ij} of the matrix with i = column of the matrix and j = line of the matrix denotes the character codes present in the print file; the value of the element denotes the printable character into which the code is to be transformed if required.

The following page shows a code conversion table in which the character codes F0 and F1 are exchanged. This produces the following results when the file is printed:

Before conversion:

Hexadecimal code:
... F0F1F7F8F0F0...
Printout: 0 1 7 8 0 0

After conversion:

Hexadecimal code:
... F1F0F7F8F1F1...
Printout: 1 0 7 8 1 1

Column positions:

[0 1 2 3 4 5 6 7 8 9 A B C D E F]

Line positions:

0	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
1	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
2	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F
3	30	31	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E	3F
4	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F
5	50	51	52	53	54	55	56	57	58	59	5A	5B	5C	5D	5E	5F
6	60	61	62	63	64	65	66	67	68	69	6A	6B	6C	6D	6E	6F
7	70	71	72	73	74	75	76	77	78	79	7A	7B	7C	7D	7E	7F
8	80	81	82	83	84	85	86	87	88	89	8A	8B	8C	8D	8E	8F
9	90	91	92	93	94	95	96	97	98	99	9A	9B	9C	9D	9E	9F
A	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	AA	AB	AC	AD	AE	AF
B	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	BA	BB	BC	BD	BE	BF
C	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC	CD	CE	CF
D	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	DB	DC	DD	DE	DF
E	E0	E1	E2	E3	E4	E5	E6	E7	E8	E9	EA	EB	EC	ED	EE	EF
F	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9	FA	FB	FC	FD	FE	FF

10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F
30	31	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E	3F
40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F
50	51	52	53	54	55	56	57	58	59	5A	5B	5C	5D	5E	5F
60	61	62	63	64	65	66	67	68	69	6A	6B	6C	6D	6E	6F
70	71	72	73	74	75	76	77	78	79	7A	7B	7C	7D	7E	7F
80	81	82	83	84	85	86	87	88	89	8A	8B	8C	8D	8E	8F
90	91	92	93	94	95	96	97	98	99	9A	9B	9C	9D	9E	9F
A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	AA	AB	AC	AD	AE	AF
B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	BA	BB	BC	BD	BE	BF
C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC	CD	CE	CF
D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	DB	DC	DD	DE	DF
E0	E1	E2	E3	E4	E5	E6	E7	E8	E9	EA	EB	EC	ED	EE	EF
F0	F1	F2	F3	F4	F5	F6	F7	F8	F9	FA	FB	FC	FD	FE	FF

2.2.7 Preform records

This print resource can only be used for the printer type LP-EMULATED-PRINTER, i.e. for line printers of type 3337, which are operated via SINIX printer emulation on CPUs with bus peripherals (e.g. C70 system).

Preform records are made up of strings of printer-specific control characters, each containing up to 256 characters (so-called escape strings). These control character sequences are linked to a form and device entry and are sent to the LP-EMULATED-PRINTER as the first character of a print job.

2.2.8 APA print resources

The following APA print resources are available (APA = all points addressable):

- form definition (Formdef, format definition)
- page definition (Pagedef)
- font resources (symbol set): font character set, code page, coded font
- page segment
- overlay

These print resources are managed either in a standard SPSLIB or in user-defined SPSLIBs. For further information, see the “SPS/BS2000-APA“ manual.

2.2.9 PCL font object

This object establishes the connection between a Spool & Print character set and a PCL font. The PCL font type is part of the metadata of the PCL font object.

There are three different types of PCL font object:

Font characteristics

This type refers to a PCL escape string which defines the characteristics of a PCL font (e.g. symbol set, spacing, pitch, ...). These characteristics are used by SPOOL to select a corresponding PCL font. For this reason a corresponding font **must** be available in the PCL printer (it will not be loaded into the printer).

Font ID

This type refers to a font ID which is used by SPOOL to select a PCL font. For this reason a PCL font with the specified font ID **must** be available in the PCL printer (it will not be loaded into the printer).

Softfont object reference

This type refers to a PCL softfont object (which **must** be in the same PRFILE) which SPOOL loads into the PCL printer.

2.2.10 PCL softfont object

This object contains the PCL-coded softfont description (imported from a file) which SPOOL loads into the PCL printer, provided this PCL softfont object is assigned to a PCL font object (of type softfont object reference). The PCL-coded softfont description **must not** contain a font ID assignment.

2.2.11 PCL overlay object

This object establishes the connection between a Spool & Print overlay name or an FOB name (forms overlay buffer) and a PCL overlay. The PCL overlay type is part of the metadata of the PCL overlay object.

There are two different types of PCL overlay object:

Macro ID

This type refers to a macro ID used by SPOOL to select a PCL macro and use it as an automatic overlay. For this reason a corresponding PCL macro **must** be available in the PCL printer (it will not be loaded into the printer).

Macro object reference

This type refers to a PCL macro object (which **must** be in the same PRFILE) which SPOOL loads into the PCL printer.

2.2.12 PCL macro object

This object contains the PCL-coded macro description, i.e. logo, text, picture (imported from a file), which SPOOL loads into the PCL printer and uses as an automatic overlay, provided this PCL macro object is assigned to a PCL overlay object (of type macro object reference). The PCL-coded macro description **must not** contain a macro ID assignment or start / stop commands (it is the task of SPOOL or the filter to manage the macro ID assignment and its activation at the time of loading).

2.2.13 Print resources in the TRANS format

The following print resources in the TRANS format are supported by PRM:

- HP fonts
- PCL softfont
- HP-FOBs
- PCL macro

These print resources are created under Windows NT with the resource generation programs OFM and FGL in the TRANS format and are transferred to BS2000, from where they can then be imported with PRM into a PRFILE. A more detailed description of these print resources can be found in section 3.5, “Print resources in the TRANS format”, on page 37

2.3 Selecting print resources in the PRINT-DOCUMENT command

To select the print resources you want to use for printing your print file, you use the PRINT-DOCUMENT command. The individual operands of this command allow you to define your requirements concerning the structure. All operands (and therefore resources) that are not specified are usually set to default values.

In the PRINT-DOCUMENT command the possible selection parameters can be found within the RESOURCE-DESCRIPTION structure, which has the effect of parentheses enclosing the appropriate operands:

PRINT-DOCUMENT
<pre> FROM-FILE = . . ,RESOURCE-DESCRIPTION = *PARAMETERS (...) *PARAMETERS(...) | FORM-NAME = | ,LOOP-NAME = | ,ROTATION-LOOP-NAME = | . | ,CHARACTER-SETS = | . | ,OVERLAY-RESOURCES = *PARAMETERS (...) | *PARAMETERS(...) | | ,FORMS-OVERLAY-BUFFER = *NONE / <alphanum-name 1..4> | | . | | ,USER-RESOURCES-FILE = | | ,TRANSLATION-TABLE = | | . | | . </pre>

The following table shows the print resources and the (sub)operands of the PRINT-DOCUMENT command:

Print resource	Operand in command
Form	FORM-NAME =
Loop	LOOP-NAME = ROTATION-LOOP-NAME =
Font	CHARACTER-SETS =
Image	OVERLAY-RESOURCES= *PARAMETERS(FORMS-OVERLAY-BUFFERS =)
Code conversion table (TRANSLATION-TABLE)	TRANSLATION-TABLE =

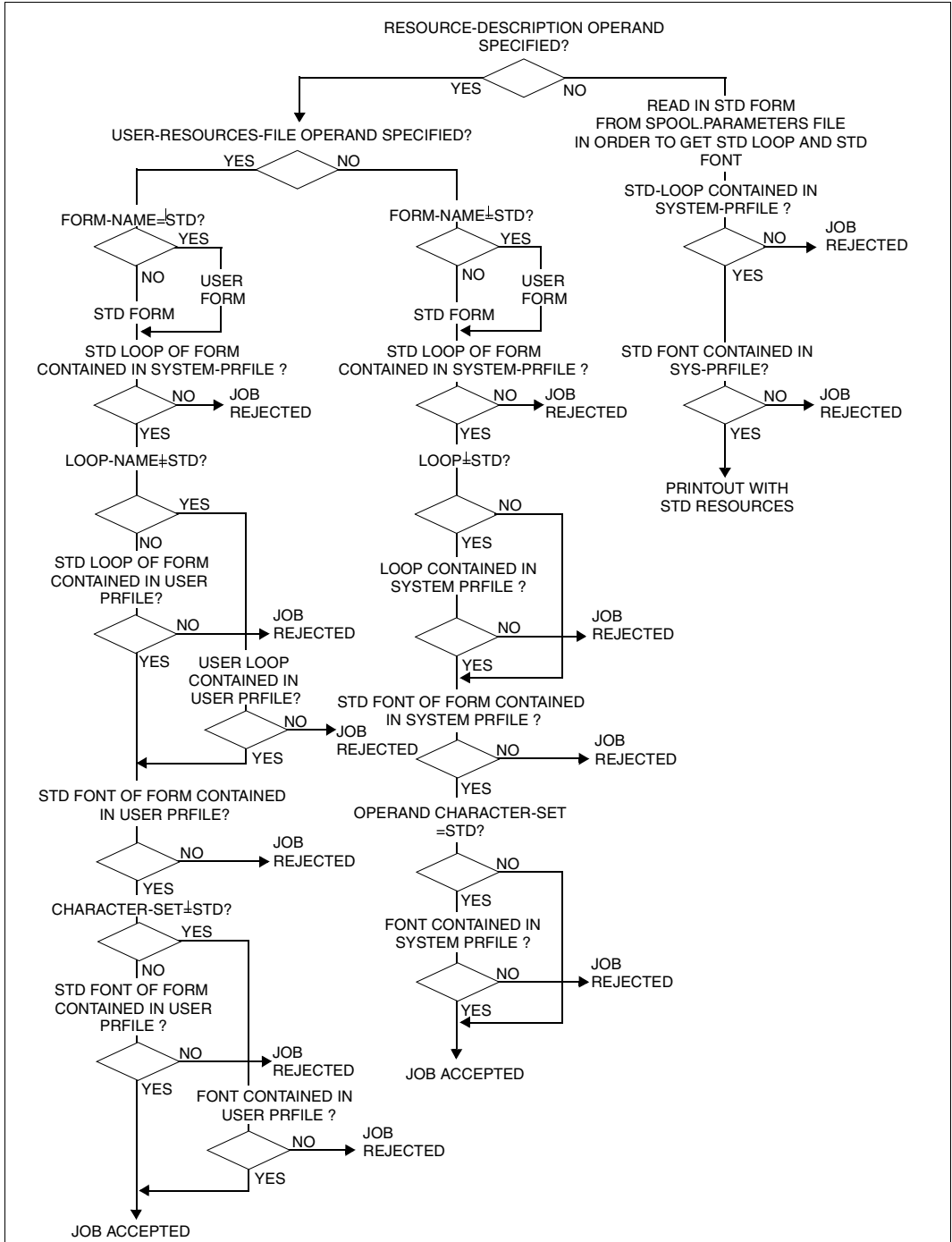
All implicitly required (e.g. by form linking) resources and those specified explicitly in the command must be stored in full either in the default PRFILE or in a user-specific resource library (user PRFILE). Both resource libraries cannot be used together, only on their own. The name of the user PRFILE must be specified additionally with the USER-RESOURCES-FILE operand.

If only the file name of the user PRFILE is specified in the PRINT-DOCUMENT command, SPOOL searches for this file under the user ID of the caller and also under the user ID SYSSPOOL. If the user ID is also specified in the file name, SPOOL only searches under this user ID.

A detailed description of the PRINT-DOCUMENT command can be found in the manual "SPOOL & Print Commands".

The following page shows a flowchart that illustrates the process of operand selection and the provision of resources by SPOOL.

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3 Managing the SPOOL print resources

3.1 The subsystem structure and how it is embedded in SPOOL

The PRM utility routine comprises the two components PRMMAN and PRMPRES, each performing different tasks.

The privileged subsystem PRMMAN manages the print resources and handles all accesses to them. The nonprivileged subsystem PRMPRES represents the parts of PRM that are “visible” to the user and is responsible for presentation of the data. The availability of the PRMPRES subsystem can be controlled by the system operator using the START-SUBSYSTEM or STOP-SUBSYSTEM command as required.



The PRMMAN subsystem is a mandatory component of the SPOOL configuration for SPOOL V3.0 and higher. SPOOL V3.0 and higher cannot run without PRMMAN.

Both subsystems are loaded into class 4 memory when activated. The activation of PRMMAN is linked in the declaration to activation of the SPOOL subsystem or to activation of PRMPRES. PRMPRES can be activated at any time.

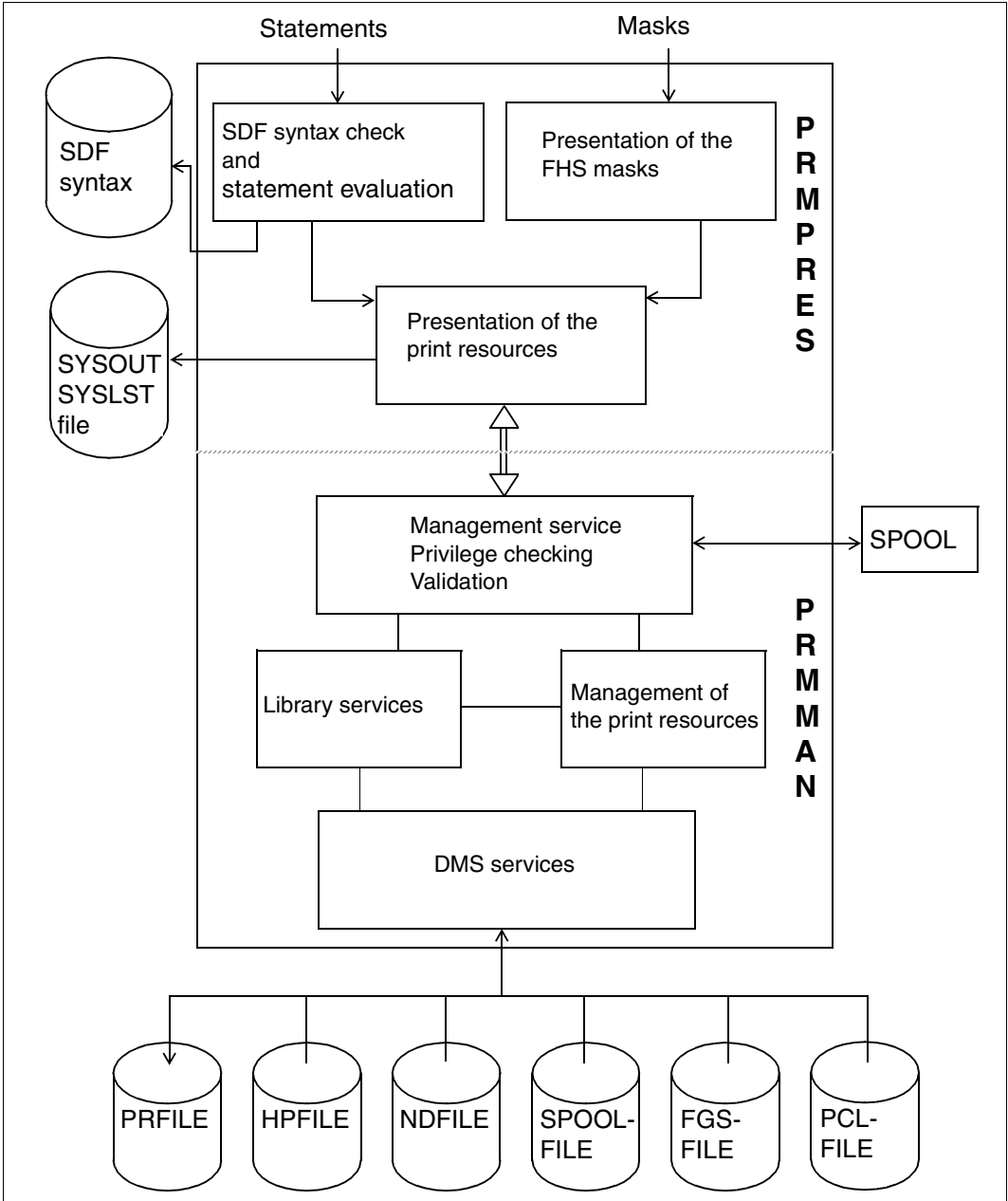
PRMPRES is responsible for:

- interpreting the SDF statements
- checking the syntax via the SDF syntax file
- presenting the FHS masks
- presenting the resources
- outputting the resource data to SYSLST / SYSOUT

PRMMAN is responsible for:

- managing accesses made by SPOOL
- checking the privileges
- managing the print resources
- managing access to the resource libraries
- communicating with DMS

The diagram below shows the relationship between the two PRM components PRMMAN and PRMPRES and the activities they perform:



Activities of the PRM components

3.2 Classification of the print resources

PRM manages the print resources as objects. Each time you access a print resource, the access must be defined accordingly on the user interface as an object access (e.g. in the PRM statements with OBJECT=<objectname>). The paragraph below gives an overview of the object types that can be accessed and the type of access, i.e. the possible actions that can be applied to the object.

3.2.1 Object types

An object is the individual, concrete print resource, which is distinguished by certain attributes (characteristics).

An object type is the generic term for all objects of the same type, which differ only in the values given to certain of their attributes (e.g. name).

PRM supports the following object types:

- Loop
- General Loop
- Font: HP font/ND font
- PCL font: font characteristics, font ID, sofffont object reference
- FOB
- PCL overlay: macro ID, macro object reference
- BAND-ID
- CHARACTER-IMAGE
- TRANSLATION-TABLE
- Preform record
- PCL sofffont
- PCL macro

The following tables list the object types supported by PRM and their attributes.

Objects of the type loop	
Attribute	Meaning
Name	Name of the loop (up to 3 characters)
Form length	Paper format on which the loop is to be used. Possible values: 1 - 31 5/6" for LP-PRINTER 3 - 14 5/6" for ND-PRINTER 3 - 17" for HP-PRINTER
Line descriptions:	
Number of lines	6 - 1024 for LP-PRINTER 18 - 388 for ND-PRINTER 18 - 408 for HP-PRINTER
Line density	Spacing between the current line and the preceding line; expressed in lpi. Possible values: 6;8 lpi for LP-PRINTER 6;8;12 lpi for ND-PRINTER 6;8;10;12;24 lpi for HP-PRINTER
Channel number	Number between 1 and 12 for paper feed control
Printer language	Defines the printer type for which the loop is valid: LP-PRINTER, HP-PRINTER or ND-PRINTER

Objects of the type general loop	
Attribute	Meaning
Name	Name of general loop (up to 8 characters)
Form length	Paper format, which can be divided into paragraphs. Possible values: 1 - 31 + 255/6"
Paragraph descriptions:	
Paragraph name	Name of the paragraph (up to 8 characters)
Number of lines	Lines with the same line density
Line density	Spacing between the current line and the preceding line; expressed in lpi. Possible values: 6;8;10;12;24 lpi
Tabulator name	Name of a tab that is linked to the paragraph name and controls the paper feed. Possible names: NO, C1,...C12

Objects of the type HP font / ND font	
Attribute	Meaning
Name	Name of the font (up to 3 characters)
Character height (line density)	Height of the individual characters of the font; expressed in fractions of an inch
“Placeholder”	Default character to be printed for all characters not coded in the character matrix
Underscore mode	Defines the type of underscore (e.g. dotted, continuous) to be used in the line-merge function for HP-PRINTER
Number of characters	Number of characters the font comprises; corresponds to the number of character codes occupied in the character matrix
Character descriptions:	
Character code	Code of the character in the matrix (X'00' to X'FF')
Frame size	Size of the frame enclosing each character defined by pixels (40 x 40 dots)
Line density	Height of the character; expressed in lpi
Character density	Width of the character; expressed in cpi or the number of dots
Line print axis	Imaginary line which is based on the character height and ensures an even print format
Character matrix	Matrix of the format 40 x 40 dots or 24 x 40 dots, in which the description of the character is stored as a bitmap

Objects of the type PCL font (font characteristics)	
Attribute	Meaning
Name	Name of the PCL font (up to 3 characters)
Printer type	PCL-PRINTER
Escape sequence	Up to 256 characters

Objects of the type PCL font (font ID)	
Attribute	Meaning
Name	Name of the PCL font (up to 3 characters)
Printer type	PCL-PRINTER
ID	Number between 0 and 32767

Objects of the type PCL font (softfont object reference)	
Attribute	Meaning
Name	Name of the PCL font (up to 3 characters)
Printer type	PCL-PRINTER
Reference	Up to 8 uppercase letters

Objects of the type FOB	
Attribute	Meaning
Name	Name of the FOB data overlay (up to 4 characters)
Printer type	HP-PRINTER
Size	Expressed in the number of sublines and Kbytes
Maximum width	In inches
Maximum length	In inches
Number of subFOBs	Lines which can be activated for specific copies of the page

Objects of the type PCL overlay (macro ID)	
Attribute	Meaning
Name	Name of the PCL overlay (up to 4 characters)
Printer type	PCL-PRINTER
Macro ID	Number between 0 and 32767

Objects of the type PCL overlay (macro object reference)	
Attribute	Meaning
Name	Name of the PCL overlay (up to 4 characters)
Printer type	PCL-PRINTER
Reference	Up to 8 uppercase letters

Objects of the type BAND-ID	
Attribute	Meaning
Name	Name of this code conversion table (up to 4 characters)
Control code	Represents the type band
Code table	Code table in the form of a matrix, which assigns a random character code (from X'00' to X'FF') to each character code in the print file

Objects of the type CHARACTER-IMAGE	
Attribute	Meaning
Name	Name of this code conversion table (up to 3 characters)
Code table	Code table in the form of a matrix, which assigns a random character code (from X'00' to X'FF') to each character code in the print file

Objects of the type TRANSLATION-TABLE	
Attribute	Meaning
Name	Name of this code conversion table (up to 8 characters)
Code table	Code table in the form of a matrix, which assigns a random character code (from X'00' to X'FF') to each character code in the print file

Objects of the type preform record	
Attribute	Meaning
Name	Name of the preform record (up to 4 characters)
Escape sequence	Control character sequence for controlling the printer of type LP-EMULATED-PRINTER

Objects of the type PCL softfont	
Attribute	Meaning
Name	Name of the softfont (up to 8 characters)
Size	In bytes
Data format	ASCII / EBCDIC
Bitmap	Character representation or screening of the characters

Objects of the type PCL macro	
Attribute	Meaning
Name	Name of the macro (up to 8 characters)
Size	In bytes
Data format	ASCII / EBCDIC
Bitmap	Raster lines of the image

3.2.2 Actions

The following table brings together all actions, their meanings and the object types to which they can be applied. The names of the actions correspond both to the names of the SDF statements (which are supplemented by the suffix “PRINT-RESOURCES”, e.g. “ADD-PRINT-RESOURCES”) and to the names of the actions in the pull-down menus.

Action	Meaning	Possible objects
ADD (SDF) / INSERT (FHS)	Create new print resource	BAND-ID, CHARACTER-IMAGE, TRANSLATION-TABLE, font, HP-font pool, loop, general loop, preform record
CONVERT	Convert print resource	Loop, general loop, ND font
COPY	Copy print resource	BAND-ID, CHARACTER-IMAGE, TRANSLATION-TABLE, PCL font, PCL overlay, HP-font pool, image, loop, general loop, preform record, PCL softfont, PCL macro
IMPORT	Import print resource from a print control file	BAND-ID, CHARACTER-IMAGE, TRANSLATION-TABLE, PCL font, PCL overlay, HP-font pool, image, loop, preform record, PCL softfont, PCL macro
MODIFY	Modify attributes of a print resource	BAND-ID, CHARACTER-IMAGE, TRANSLATION-TABLE, PCL font, PCL overlay, HP-font pool, image, loop, general loop, preform record
REMOVE (SDF) / DELETE (FHS)	Delete print resource	BAND-ID, CHARACTER-IMAGE, TRANSLATION-TABLE, PCL font, PCL overlay, HP-font pool, image, loop, general loop, preform record, PCL softfont, PCL macro
SHOW	Display attributes of a print resource	BAND-ID, CHARACTER-IMAGE, TRANSLATION-TABLE, PCL font, PCL overlay, HP-font pool, image, loop, general loop, preform record, PCL softfont, PCL macro

3.3 Resource library PRFILE

All print resources are stored in one central file, the resource library PRFILE, irrespective of their type or the device used.

Consequently, you do not need to know the assignment of print control files to known printer types in order to create or call the resources necessary for your printout:

Printer type	Resources	Print control files up to SPOOL V2.7B	Resource library as of SPOOL V3.0
HP	HP loop HP font HP-font pool FOB	HPFILE	
ND	ND loop ND font	NDFILE	
LP	LP loop CHAR-IMAGE BAND-ID TRANSL.-TAB Preform record	SPOOLFILE	
PCL	PCL font PCL softfont PCL overlay PCL macro	--	
All printer types	TRANSL.-TABLE	SPOOLFILE	

Standard PRFILE

A PRFILE containing the standard print resources for all users (the “system PRFILE”) is created under the user ID SYSSPOOL and is available to all users. The resources in this file are managed by the SPOOL operator or system operator, but nonprivileged users can display all information on these resources.

User-defined PROFILE

Users can also create their own PROFILE in which they can create and manage any resources. This file can be given any name as long as it complies with the DMS conventions. If the file is to be read by SPOOL (specified in the PRINT-DOCUMENT command), the file name must end with the suffix "PROFILE".

Examples:

```
$TEST.RESOURCES-FOR-LOOPS.PROFILE
$USER1.SPOOL-RESOURCES.LOOPS.AND.FONT.S.PROFILE
$USER2.RESOURCES.PROFILE
```

If you are using your own resources for the printout, you must specify the file name in the PRINT-DOCUMENT command without the suffix ".PROFILE", e.g.:
PRINT-DOCUMENT ..., USER-RESOURCES-FILE= \$USER2.RESOURCES.

If this operand is omitted or if the default operand value is used, the system PROFILE is accessed.

Any resources can be stored in a user PROFILE. When this file is used in the PRINT-DOCUMENT command, however, SPOOL only access resources for the printer type HP or ND.

3.4 Conversion of existing print control files

When you switch to PRM V1.0A and higher / SPOOL V3.0 and higher, it is important to realize that you can use your own existing print resources.

As PRM manages the print resources in an incompatible structure and data organization, the existing print resources in the print control files HPFILE, NDFILE and SPOOLFILE must be converted into the PRM format. PRM offers two convenient mechanisms for converting the print control files:

- implicit conversion of the entire print control file
- explicit conversion of all or selected print resources into the new format

Implicit conversion of the entire file

When you have called the PRM utility routine, you must specify the resource library to be edited - either using an SDF statement or via the menu system. If this is an NDFILE, HPFILE or SPOOLFILE, its entire contents are converted into the PRFILE structure. If no PRFILE exists at the time of conversion, one is generated according to the conversion rules described below. If a PRFILE already exists, it is extended. All print resources in the PRFILE which match the resources to be converted in name, type and printer type are then overwritten.

The protection attributes of the existing file, however, are not taken over; instead, PRM creates a converted file with the following attributes:

- USER-ACCESS=OWNER-ONLY
- ACCESS=WRITE

If these default settings do not meet your requirements, you can change them manually via the MODIFY-FILE-ATTRIBUTES command.

The conversion rules are as follows:

Old format (name of file)	New format (name of file)	Comment
\$uid.<image>.HPFILE	\$uid.<image>.PRFILE	If the names for <image> match, the PRFILE contains the entries of both files
\$uid.<image>.NDFILE	\$uid.<image>.PRFILE	
\$TSOS.HPFILE \$TSOS.NDFILE	\$SYSSPOOL.PRFILE	System PRFILE; for privileged users only
\$TSOS.SPOOLFILE	\$SYSSPOOL.PRFILE	System PRFILE; for privileged users only

In batch mode, conversion of the print control file is activated automatically.



A resource library resulting from implicit conversion \$TSOS.<image-name>.PRFILE (converted from \$TSOS.<image-name>.HPFILE/NDFILE) can only be used as a system PRFILE for all users if the search path for SPOOL is set to TSOS. By default, SPOOL searches for the resource files under the user ID SYSSPOOL. Users' procedures in which the user ID TSOS is explicitly addressed must be adjusted accordingly.

Explicit conversion of print resources

If a PRFILE has already been created, all or selected print resources of a print control file can be converted into the PRM format and transferred to the PRFILE. For this purpose, the print control file and the names of the print resources to be converted can be specified via a corresponding SDF statement (IMPORT-PRINT-RESOURCES) or by choosing the appropriate action in the menu system.

Once the resources have been converted, they are included in the PRFILE (system or user PRFILE) and can be used for the printout. Nonprivileged users can import print resources from their user HPFILE or NDFILE, while the SPOOL or system operator can import them from any print control file.

In addition to the attributes of the print resources stored in the PRFILE, you can also call the information specifying which SDF statements and operands have been or can be used to create the existing print resource. The SDF statements are then derived from the attributes of the resource.

You can make use of this functionality for converting existing procedures by creating the statement description for an object, storing it in a file and modifying it for the creation of further objects. See also section 4.1.2, "Statement generator", on page 54.

3.5 Print resources in the TRANS format

PRM enables you to import print resources that were created in the TRANS format with OPS (Océ Printing Systems) tools such as FGL-FOB, FGL-PCL and OPS Font Manager into an OSD print resource library PRFILE. Print resources in the TRANS format have the following advantages:

- Print resources can be created easily using convenient Windows-based tools. Modern print systems offer a wide range of application options. For this reason, the primary focus of printing has shifted from the generation of data to the production of layouts. Most layouts are now produced on Windows platforms, since Windows offers a much wider range of options (e.g. WYSIWYG) than a BS2000 system.
- Print resources can be transferred easily and more securely from Windows to BS2000/OSD without any risk of losing data. The TRANS format provides a more reliable and standardized method to transfer print resources that were created on a PC to the host system and also solves the problem of losing the internal structure, coding and information in the print resources.
- It is easy to import print resources in the TRANS format to a PRFILE. User-specific print resources created with Windows tools can thus be made available to BS2000/OSD print applications.

The following sections provide an overview of the Windows tools with which you can create print resources in the TRANS format and also describe the aspects to be noted when importing these resources with PRM.

3.5.1 Windows tools for creating print resources

Powerful OPS printers are for everything that is needed to quickly create documents in large numbers and high quality in the fastest possible time.

They are used, among other things, to print bank statements or invoices from power companies and other utilities. Such print jobs usually consist of variable data and fixed parts. The variable data includes customer addresses and the amounts to be paid, and the fixed parts (or resources) comprise the various fonts and forms of the company logo, which may also be highlighted in colors.

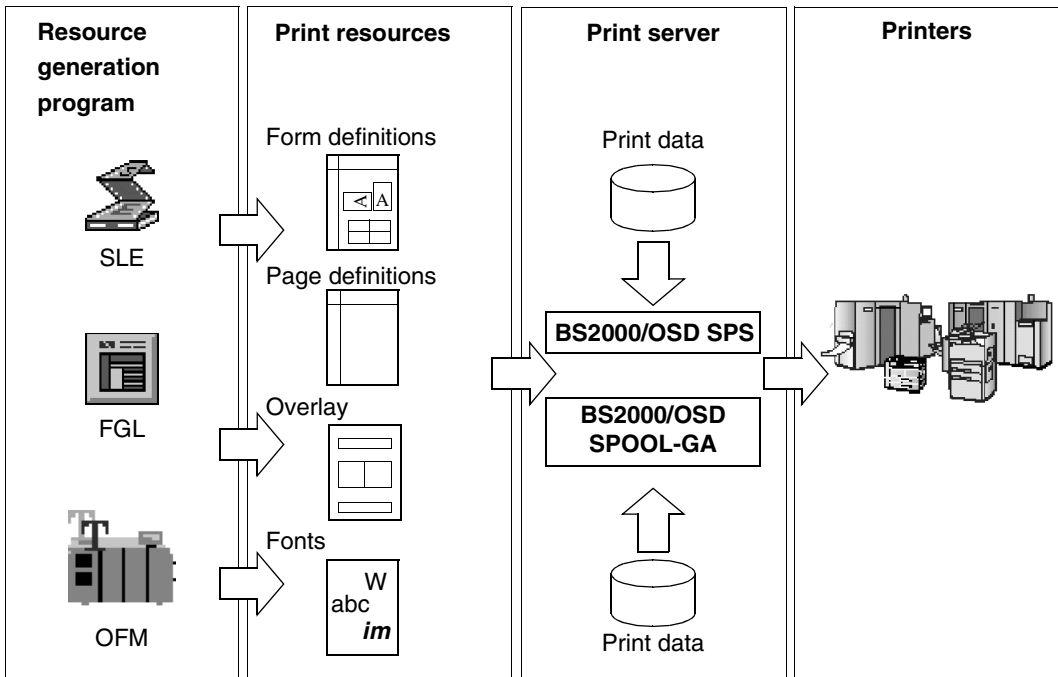
The layout also constitutes a fixed component. It determines which data is to be printed, how this data is arranged, and which forms are used.

A number of special OPS programs called resource generation programs are available to users of powerful OPS printers for:

- designing layouts,
- creating forms and
- generating fonts.

These programs are Windows-based applications with:

- a graphical user interface,
- menu-driven functions and
- an integrated Help system.



The graphical user interface (GUI) depicts the mask for the technical details when creating the resource. This allows you to concentrate fully on the creation and design aspects. Functions such as page view layouts and print previews simplify the process of evaluating the new resources.

The programs for creating print resources have been precisely customized for the functions and features of OPS print servers and powerful printers. The resource generation programs and print servers have the same source.

- The SLE program (Smart Layout Editor) is used to create layouts. The user defines which data is to appear on a page and where it is to be displayed. This process can be simplified even further by using form templates generated with FGL. The SLE program is mentioned here only to complete the overview; it is not dealt with in further detail in this manual.
- The FGL program (Forms Generation Language) is used to create forms for documents. FGL is a WYSIWYG tool, which means that the forms are displayed on the screen exactly as in the printed output. A number of different drivers are available to create resources that are not restricted to a specific printer language or resolution.

The system also includes additional utilities with which forms of other formats can be imported and converted into the FGL format (FGL conversion program) or scanned and digitized as form templates in the FGL format (FGL scan program).

- The OFM program (OPS Font Manager) generates printer fonts based on the installed Windows fonts or the files for TrueType fonts. The generated fonts can be used for printing with standard resolutions on different print systems and in various formats.

3.5.1.1 FGL (Forms Generation Language)

Creating professional forms of high quality

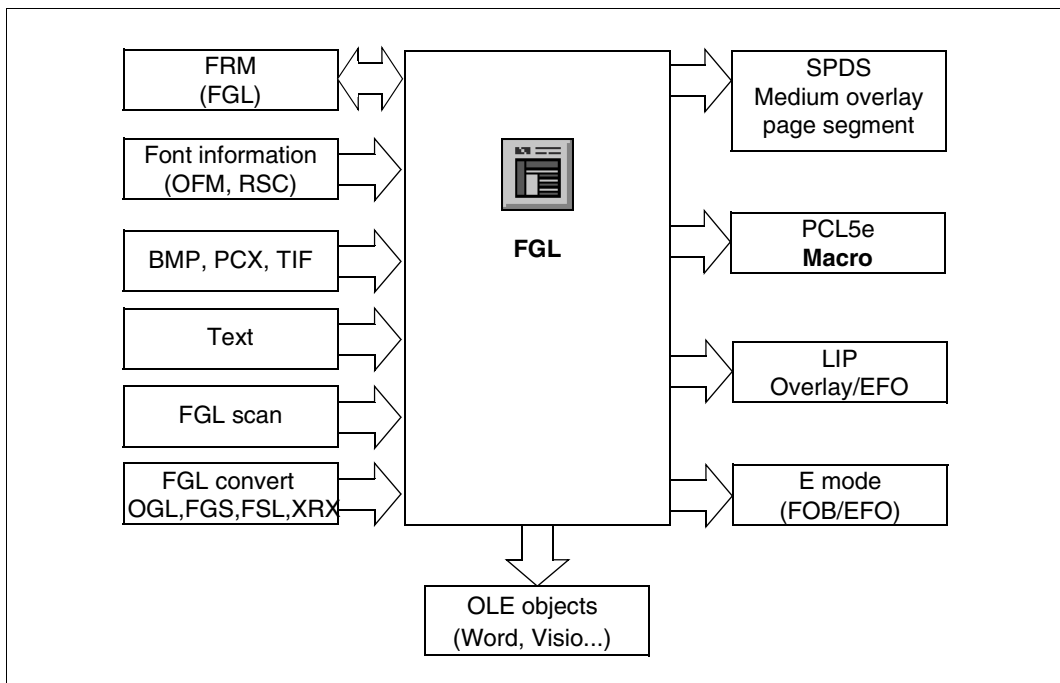
Even complex documents can be easily structured using well-designed forms. This enables the reader to quickly find the most important information and to immediately see how the data is inter-related. A properly designed form can also help to improve the external appearance of a document. Colors can be used to highlight graphical elements and thus attract the attention of the user.

Printed forms are expensive to produce and usually involve a relatively high overhead in terms of the workflow. Electronically created forms that are printed together with variable data provide more flexibility in creating documents and reduce costs.

FGL, the forms editor for powerful OPS print systems, is a powerful and user-friendly tool for creating high-quality electronic forms with all the characteristics of any professionally designed document.

Since FGL is a Windows-based program, it offers the benefits of Point&Click functionality and a WYSIWYG interface, so even users who are not yet familiar with the program can easily create forms within a short time. FGL offers enhanced graphics functions for highly precise designs.

Design elements can also be imported from other Windows applications (such as Word, for example). You can also integrate objects from text, TIFF, bitmap and Paintbrush files. Furthermore, original forms printed on paper can be read in with a scanner and used as a template to design new forms on the screen.



A sample printout of the forms can be printed on all printers supported by Windows. FGL offers the following functions for creating forms:

- graphical elements (line, rectangle, rounded rectangle, circle, ellipse)
- editor for lines and fill patterns
- support for highlight colors (SPDS, PCL5)
- text formatting functions, paragraph formatting, text inversion, insertions.

Working with FGL is facilitated by

- the following processing functions: Undo, Copy, Cut, Paste, Delete Selection, Clone (duplicate), Reproduce (n-times) and Horizontal and Vertical alignment
- the Grid function, cross-hairs and rulers for positioning
- functions such as Zoom, Resize, Normal and Page views
- the Trial Print function
- the “Attributes” dialog box for user comments.

In addition, FGL offers functions for

- directly importing from Windows applications
- importing bitmap, TIF, PCX and text files
- exporting WMF and EMF form files (in portrait and landscape formats).

3.5.1.2 OFM (OPS Font Manager)

Creating appropriate fonts and character sets

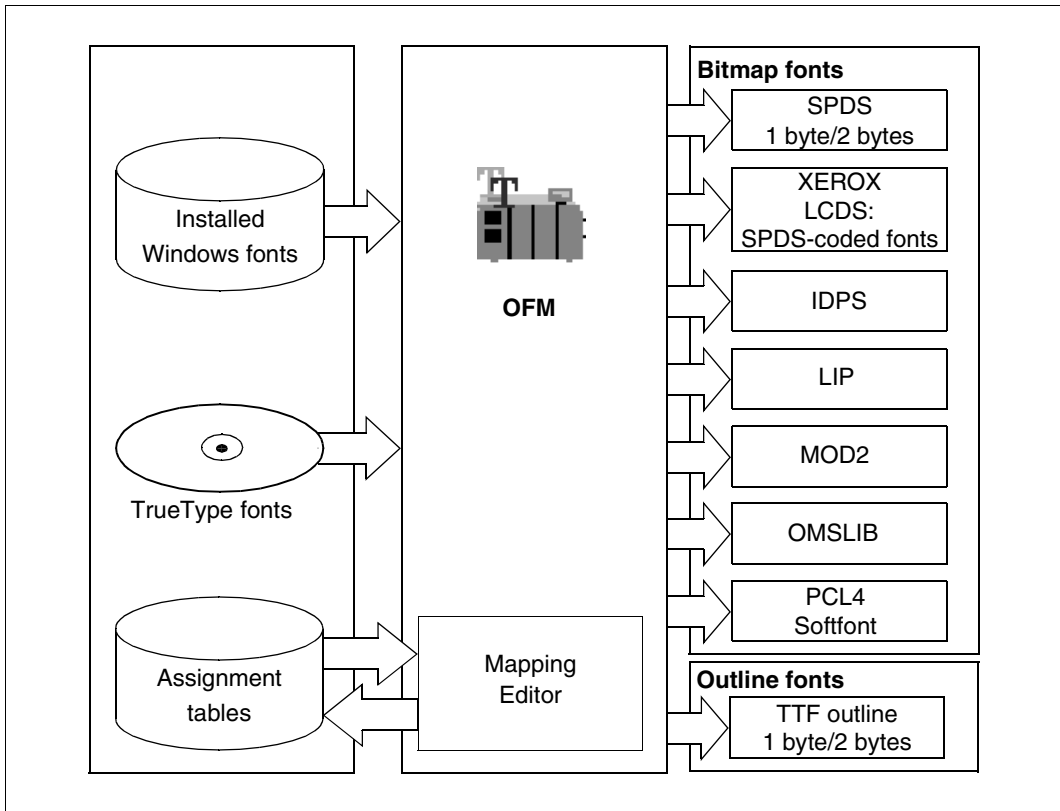
The first impression on any reader of a document is the font used in the text. The features of the font or character set represent not only the content of the text, but also its importance. Apart from the content of the text itself, fonts can be used in documents to

- highlight the importance of certain information
- show how the information is related
- organize the information in a hierarchy.

OFM, the font creation program for powerful OPS print systems, enables you to create high-quality fonts from a large selection of font images and to thus enhance the appearance of your documents.

The fonts are created with the aid of TrueType fonts from TTF files, but you can also use any of the installed Windows fonts as a starting point.

A large selection of TrueType fonts is offered on a CD-ROM supplied with OFM. This includes the usual text fonts, highlighting fonts for titles and elegant fonts for scripts.



Different print systems require different font formats. A single font can be used as a starting point to create character sets in multiple formats for different printers with varying resolution characteristics and specific environments.

The OFM program can be used to produce fonts and thus create sophisticated documents on powerful OPS print systems. You can create fonts from those installed under Windows or the TrueType font outlines in TTF files. This enables you to create both single-byte (for European languages) and double-byte fonts (for languages of the Far East).

The Mapping Editor of OFM can be used to

- edit assignment tables and
- for bitmap fonts, collect up to three different fonts in one character set.

Using the character sets, you can then print in the various formats required for the individual print systems.

Outline fonts

You can create character sets from the fonts installed under Windows as well as TTF files. A large selection of TrueType fonts is supplied on a CD-ROM together with OFM. Besides the usual text fonts, the CD-ROM also includes special fonts for titles and scripts as well as the font libraries Nimbus Sans and Nimbus Roman, which are normally used on powerful OPS print systems.

Assignment tables

An assignment table defines the code under which a particular character can be found by the print system.

The system normally uses standard assignment tables for specific system environments and languages (i.e. the characters required by that language). Over a hundred assignment tables for different operating conditions are included with the OFM software package.

You can use the Mapping Editor to edit these assignment tables to suit your requirements. The assignments can be easily modified using the Drag&Drop technique.

The individual characters can be selected from up to three different outline fonts.

Output formats

You can use the system to create character sets for the following print formats:

- SPDS (single and double-byte, relative and fixed dimensions), including XRX triplets (via SPDS-coded fonts) for PRISMA and LCDS
- IPDS for SRA controllers
- LIP
- MOD2 (E-MODE)
- OMSLIB
- PCL4
- Xerox fonts
- TTF outline (single-byte and double-byte)

3.5.3 Importing print resources in the TRANS format

The following print resources created in the TRANS format can be imported into a PRFILE: HP fonts, PCL soffonts, HP FOBs, PCL macros.

Print resources in the TRANS format can be created under Windows with the resource generation programs OFM and FGL. These files can be copied to BS2000 in character mode with any data transfer program without any risk of destroying the binary data of the print resource or damaging its logical structure.

The print resource then be imported with PRM into a PRFILE print resource library by one of the following methods:

- by using the PRM statement `IMPORT-PRINT-RESOURCES` with the operands `OBJECT` (type of print resource and name to be assigned in the PRFILE) and `FROM-PRINTER-FILE` (type of printer control file and name of the TRANSFILE)
- via the “Edit” pull-down menu, i.e. by filling the input fields *Object type* (type of print resource), *Object name* (name to be assigned to the print resource in the PRFILE), *Printer control file type* (the type of the printer control file is TRANSFILE) and *Printer control file name* (name of the TRANSFILE).

HP fonts

HP fonts must be created with OFM in the OMSLIB format with the output attribute TRANS. Two files are generated; one contains a CTB (code table) record, and the other contains a list of MXMs (character matrixes or bitmaps).

Only the MXM file is significant for PRM when importing an HP font. This file can be imported into a PRFILE as a print resource of type HPFONT after being transferred to BS2000.

Please note that HP fonts in the TRANS format can only be imported individually into a PRFILE. In other words, a file name must be specified for the FONT-NAME operand; the value *ALL is not accepted.

PCL soffont

PCL soffonts must be created with OFM in the soffont format with the output attribute TRANS. One file is generated. This file can be imported into a PRFILE as a print resource of type PCL soffont after being transferred to BS2000.

PRM automatically generates a PCL font and assigns it a name consisting of the first three characters of the PCL soffont. If a PCL font of the same name already exists, the existing font will be overwritten in accordance with the value of the WRITE-MODE operand in the IMPORT statement.

Note that the PCL font created by this method is a reference to the soffont object (soffont object reference).

HP FOBs

HP FOBs must be created with FGL or SIEFORMS in the OMSLIB format with the output attribute TRANS. One file is generated. This file can be imported into a PRFILE as a print resource of type FOB after being transferred to BS2000.

Please note that HP FOBs in the TRANS format can only be imported individually into a PRFILE. In other words, a file name must be specified for the BUFFER-NAME operand; the value *ALL is not accepted.

PCL macro

PCL macros must be created with FGL in the macro format with the output attribute TRANS. One file is generated. This file can be imported into a PRFILE as a print resource of type PCL macro after being transferred to BS2000.

PRM automatically generates a PCL overlay and assigns it a name consisting of the first four characters of the PCL macro. If a PCL overlay of the same name already exists, the existing overlay will be overwritten in accordance with the value of the WRITE-MODE operand in the IMPORT statement.

Note that the PCL overlay created by this method is a reference to the PCL macro (macro object reference).

Examples on creating and importing print resources in the TRANS format can be found in section 8.9, "Importing print resources in the TRANS format into a PRFILE", on page 385.

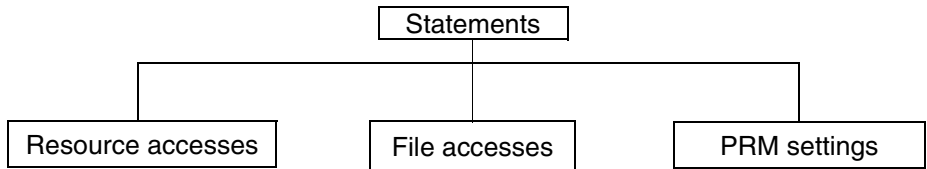
4 Overview of the PRM interfaces

PRM offers a statement interface and a menu interface.

4.1 PRM statements

4.1.1 Overview and structure

The PRM statements can be distinguished according to their functionality:



Statements for resource accesses

This group of statements allows the individual print resources to be directly “manipulated”, i.e. created, deleted, modified etc.

Some statements for resource accesses are subdivided into main statements and substatements. For the sake of clarity, certain subareas have been spun off into separate statements for the definition of complex print resources. The function of these substatements, however, always depends on the corresponding main statement:

- the main statement must be entered first, followed by the substatement
- the substatement is not edited until the main statement has been executed successfully.

The statements for resource accesses are summarized in the table below. They are ordered alphabetically by main statement, each one followed by any substatements assigned to it.

The ADD-PRINT-RESOURCES and MODIFY-PRINT-RESOURCES statements are both assigned the same substatements. When these substatements are called, no distinction is made between creation and modification of an object; the functions of the substatements are identical in both cases. This is indicated in the table.

Name of main statement	Assigned substatement	Meaning
ADD-PRINT-RESOURCES		Create a new print resource
ADD-PRINT-RESOURCES OBJECT=*FONT(HP-FONT)	ADD-HP-CHARACTER	Enter a new character in the character code table
	CANCEL-HP-FONT	Cancel creation of an HP font
	CHANGE-HP-CHARACTER-ALIGNMENT	Align a character in the character matrix
	CHANGE-HP-CHARACTER-BOX-SIZE	Change the size of the character frame
	CHANGE-HP-CHARACTER-SHAPE	Change the shape of a character
	CLOSE-HP-FONT	Finish creation of an HP font
	IMPORT-HP-CHARACTER	Import a character from the HP font into the current character code table
	MODIFY-HP-CHARACTER	Change the code of a character in the character code table
	REMOVE-HP-CHARACTER	Delete a character code from code table
SHOW-HP-CHARACTER	Display the attributes and shape of a character	

Statements for resource accesses (part 1 of 2)

Name of main statement	Assigned substatement	Meaning
ADD-PRINT-RESOURCES OBJECT=*GENERAL-LOOP	ADD-PARAGRAPH	Create a paragraph of a general loop
	CANCEL-GENERAL-LOOP	Cancel creation of a general loop
	CLOSE-GENERAL-LOOP	Finish creation of a general loop
	MODIFY-PARAGRAPH	Change a paragraph of a general loop
	REMOVE-PARAGRAPH	Delete a paragraph of a general loop
	SHOW-PARAGRAPH	Query attributes of general loop paragraphs
ADD-PRINT-RESOURCES - OBJECT=*LOOP (HP-LOOP/ LP-LOOP)	CANCEL-LOOP	Cancel creation of a loop
	CLOSE-LOOP	Finish creation of a loop
	MODIFY-LINE-DESCRIPTOR	Change the feed and density of a loop line
	SHOW-LINE-DESCRIPTOR	Display attributes of a loop line
CONVERT-PRINT-RESOURCES		Convert object types
COPY-PRINT-RESOURCES		Copy elements of a PRFILE
IMPORT-PRINT-RESOURCES		Import resources from a random print control file
MODIFY-PRINT-RESOURCES		Change attributes of print resources
MODIFY-PRINT-RESOURCES - OBJECT=*FONT(HP-FONT)	See ADD-PRINT-RESOURCES	
MODIFY-PRINT-RESOURCES OBJECT=*GENERAL-LOOP	See ADD-PRINT-RESOURCES	
MODIFY-PRINT-RESOURCES - OBJECT=*LOOP	See ADD-PRINT-RESOURCES	
REMOVE-PRINT-RESOURCES		Delete elements of a PRFILE
SHOW-PRINT-RESOURCES		Display elements of a PRFILE

Statements for resource accesses (part 2 of 2)

Statements for file accesses

This group of statements permits accesses to the resource libraries or the print control files. The statements are summarized in the table below.

Name of statement	Meaning
CLOSE-PR-FILE	Close current resource library
OPEN-PR-FILE	Open resource library
SHOW-PR-FILE-ATTRIBUTES	Query attributes of current PRFILE

Statements for file accesses

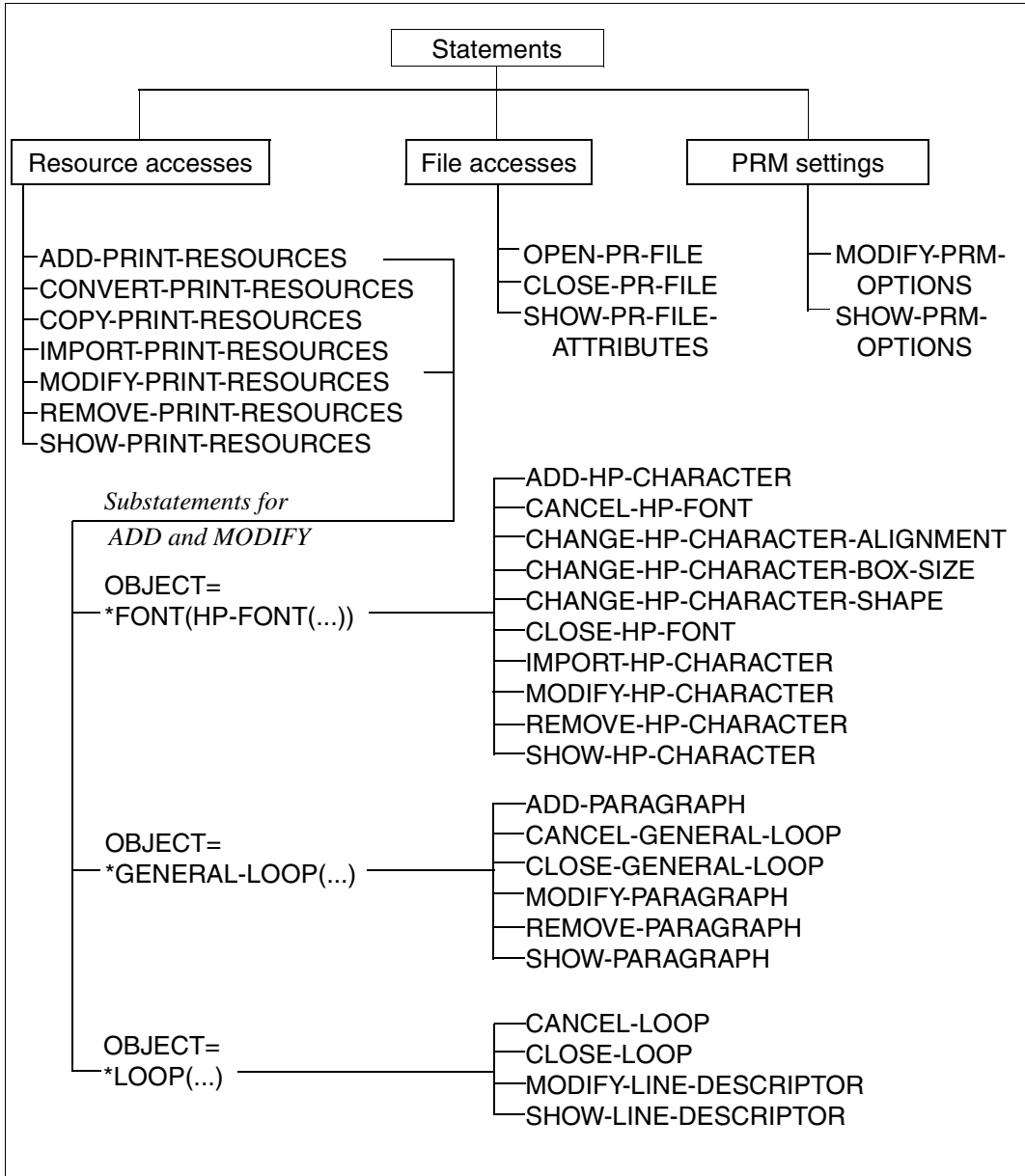
Statements for PRM settings

This group of statements is used to define or query the default values for the program run. These settings apply to various default values of the operands in the statements for resource accesses.

Name of statement	Meaning
MODIFY-PRM-OPTIONS	Set default values for program run
SHOW-PRM-OPTIONS	Query default values for program run

Statements for PRM settings

The diagram below shows an overview of all PRM statements, subdivided into functional areas and into main statements and substatements.



Overview of PRM statements

4.1.2 Statement generator

To simplify the adaptation of existing procedures to PRM statements in particular, PRM offers the “statement generator” function.

From the attributes of the print resources stored in the PRFILE, this function derives the SDF statements and operands which were or can be used to create the resources. The SHOW-PRINT-RESOURCES statement allows you to request this information selectively and use it to create or modify other resources.

Example:

The print resource TABTEST, a code conversion table of type TRANSLATION-TABLE, is to be used as a reference for creating a further code conversion table.

Step 1

Output the attributes of TABTEST and the statements used to a file:

```
/MODIFY-JOB-SWITCH ON=1

/START-PRM

//OPEN-PR-FILE FILE-NAME=RESOURCES.PRFILE

//SHOW-PRINT-RESOURCES OBJECT=*TRANSLATION-TABLE(... -
                    TRANSLATION-TAB-NAME=TABTEST), -
                    IMPLEMENTATION-INFO=*YES, -
                    OUTPUT=*FILE(FILE-NAME=REFERENCE.TAB)

//END
```

Step 2

Read the created file "REFERENCE.TAB" into EDT and view it:

```
1.00 //ADD-PRINT-RESOURCES OBJECT=*TRANSLATION-TAB( -
2.00 // TRANSLATION-TAB-NAME=TABTEST, -
3.00 // DEFAULTS=*PARAMETERS( -
4.00 // CONVERSION-TABLE=*PARAMETERS( -
5.00 // FROM=X'00', TO=X'01'), -
6.00 // *PARAMETERS( -
7.00 // FROM=X'02', TO=X'03'), -
8.00 // *PARAMETERS( -
9.00 // FROM=X'FF', TO=X'00'))), -
10.00 // COMMENTS=*NONE, -
11.00 // WRITE-MODE=*CREATE
12.00 //STEP
13.00
14.00
15.00
16.00
17.00
18.00
19.00
20.00
21.00
22.00
23.00
```

Step 3

Edit the created file using EDT and create a procedure file “PROC.PRM” to generate a new print resource of the same type with the name “TABNEW”:

- insert the PRM call and library name
- change the required attributes

```
1.00 /BEGIN-PROCEDURE
2.00 /START-PRM
3.00 /OPEN-PR-FILE FILE-NAME=TABS.PRFILE, MODE=*UPDATE
4.00 //ADD-PRINT-RESOURCES OBJECT=*TRANSLATION-TAB( -
5.00 // TRANSLATION-TAB-NAME=TABNEU, -
6.00 // DEFAULTS=*PARAMETERS( -
7.00 // CONVERSION-TABLE=*PARAMETERS( -
8.00 // FROM=X'01', TO=X'02'), -
9.00 // *PARAMETERS( -
10.00 // FROM=X'DA', TO=X'DB'), -
11.00 // *PARAMETERS( -
12.00 // FROM=X'F1', TO=X'F0')), -
13.00 // COMMENTS=*NONE, -
14.00 // WRITE-MODE=*CREATE
15.00 //STEP
16.00 //END
17.00 /END-PROCEDURE
18.00
19.00
20.00
21.00
22.00
23.00
w'PROC.PRM';o
```

Step 4

Call the created procedure:

```
/CALL-PROCEDURE NAME=PROC.PRM
```


4.1.3 SDF standard statements

The input of all PRM program statements in interactive mode, from procedures and in batch mode is supported by the command and statement language SDF.

The format and syntax of the statements entered are checked by the SDF command processor, and if a format error occurs you are requested to correct it. During the program run you can use, in addition to the PRM statements, the SDF standard statements, which function independently of the program-specific statements. These default statements serve to standardize the user interface and offer functions which are generally considered useful in the program.

The names and meanings of these standard statements are shown in the table below:

Statement	Meaning
END	Terminates input to the utility routine PRM; the statement has no operands and is executed immediately.
EXECUTE-SYSTEM-CMD	Executes the system command.
HOLD-PROGRAM	Interrupts a program waiting for input and allows the entry of commands.
MODIFY-SDF-OPTIONS	Activates or deactivates user syntax files and modifies SDF settings (e.g. interactive mode) during the program run.
REMARK	Marks as a comment a text to be specified; only of significance for the documentation of the job run or procedure run.
RESTORE-SDF-INPUT	Redisplays the last accepted statement on the screen.
SHOW-INPUT-HISTORY	Outputs the contents of the input buffer to SYSOUT.
SHOW-SDF-OPTIONS	Displays current information on all activated syntax files and SDF settings.
STEP	Indicates a paragraph of program statements within a command file.
WRITE-TEXT	Outputs a text to be specified to SYSOUT.

SDF standard statements

A detailed description of these standard statements as well as an introduction to the SDF command language can be found in the manual "Introductory Guide to the SDF Dialog Interface".

4.2 Menu system

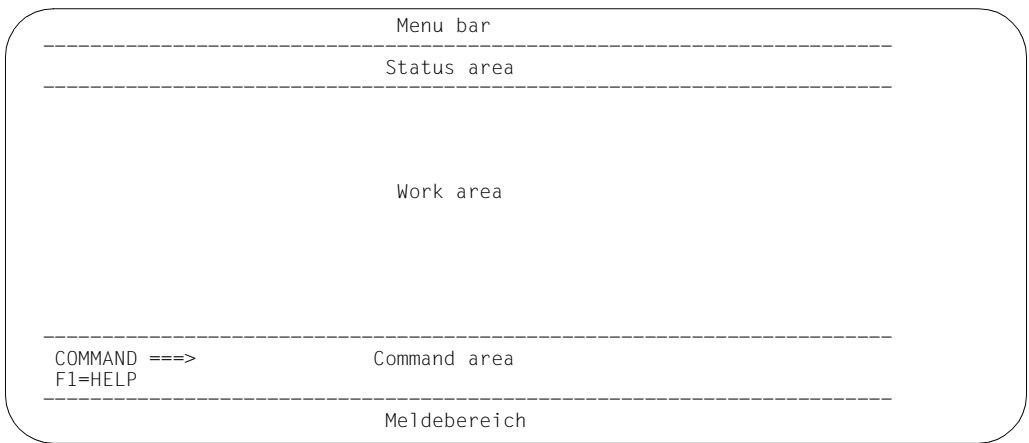
In addition to the SDF statements, PRM provides a second interactive interface in the form of a screen-oriented user interface. By way of masks, this interface offers the entire screen for inputs and outputs.

The interface is based on the software product FHS V8.1, and contains a range of standardized operating elements which simplify the selection of functions and the input of statements, regardless of which program is called.

This section describes the general structure of the masks and how they are used. A detailed description of all FHS functions can be found in the "FHS" manual.

4.2.1 General structure of the masks

A mask generally comprises four areas and has the following layout:



Menu bar

At the top of the screen, the menu bar is an area consisting of one line, with a line drawn beneath it to separate it from the rest of the screen. The menu bar contains menu titles. Each menu title stands for a group of selection options which are displayed in a pull-down menu below the title.

Status area

The status area contains (centered) the title of the format. At the beginning of the line the format name is also displayed.

Work area

The work area is the actual action area of the terminal user and contains text fields and variable fields.

Command area

The command area contains the command line and the display of the function key assignment (one or two lines long). The command line comprises a text field (in the example “COMMAND ==>”) and an input field for commands, called the *command field*. The desired function can be triggered by means of the function key or by specifying the function name (“command”).

4.2.2 Dialog boxes

The basic format can be overlaid with dialog boxes which allow an intermediate dialog. The intermediate dialogs can be multi-level, i.e. several boxes can overlap on the screen.

A dialog box is a frame in the form of a “screen within a screen”. This frame in turn contains a format which does not cover the whole screen.

A box can contain the following:

- a format with input, output and selection fields
- messages
- help texts

Some boxes only provide information and do not require input, e.g. certain help or message boxes. These are called *non-modal* boxes. Entries can still be made in the screen areas underneath.

Modal boxes are those which require input. When a modal box is displayed, no entries can be made anywhere else on the screen.

4.2.3 Menu bar and pull-down menus

The formats contain a one-line menu bar which displays the PRM menu titles. The cursor must be positioned on a menu title before it can be selected.

File	Edit	View	Options

PRINT RESOURCES MANAGEMENT			

PRfile : :1SBZ:\$SYSSPOOL.PRFILE		Lines	1 thru 14 of 229 Mode : UPDATE More : +
Name	Type	Model	Last access
#CF	FONT	HP	1996-05-02
#SG	FONT	HP	1996-05-02
#SN	FONT	HP	1996-05-02
#6A	FONT	HP	1996-05-02
#8C	FONT	HP	1996-05-02
#8F	FONT	HP	1996-12-05
C06	LOOP	HP	1996-05-02
C08	LOOP	HP	1996-12-05
C1	LOOP	LP	1996-12-05
C10	LOOP	HP	1996-05-02
C12	LOOP	HP	1996-05-02
C24	LOOP	HP	1996-05-02
D1D0	PREFORM	LP	1996-12-05
D1LO	PREFORM	LP	1996-05-02

Command ==>			
F1=Help F3=Exit F4=Comments F5=All F7=- F8+= F10=Actions F12=Cancel			

Positioning the cursor in the menu bar

One way of moving the cursor to the menu bar is to press the F10 key. This key causes FHS to position the cursor. The current position of the cursor is saved and the cursor is positioned on the first character of the first menu title in the menu bar. The next time you press the F10 key, the cursor is returned to its original position. This type of positioning requires data transfer to the host.

You can also move the cursor using the arrow keys. As this function is implemented via the hardware, the cursor position cannot be saved by FHS with this method.

Selecting a menu title

Within the menu bar you select a menu title by positioning the cursor on a character in the desired menu title and pressing the ENTER or DUE key. You will then see a pull-down menu for this title containing the available selection options. While the pull-down menu is displayed, nothing can be entered in the fields in the underlying mask, and the cursor appears in the first selection input field of the menu.

Markings or inputs in a menu title are ignored - they do not cause a pull-down menu to be selected.

Within the menu bar the cursor can be positioned using the tab key. This causes the cursor to jump from one title to the next.

Displaying a different pull-down menu

You can change to a different pull-down menu by selecting a different menu title with the arrow keys.

When a pull-down menu is displayed, you can also return to the menu bar by pressing the F12 key. This deletes the pull-down menu, and any selection previously made in it is ignored. The cursor is positioned on the first menu title and you can then select a different title.

Canceling a pull-down menu and exiting the menu bar

If you used the F10 key to position the cursor in the menu bar, you can cancel the display of a pull-down menu by pressing the F12 key. The pull-down menu is deleted and the cursor is returned to the saved position in the work area. Any selection that was made in the pull-down menu is ignored.

Activating a selection in a pull-down menu

The pull-down menu contains a single-choice selection field. You activate the selection by entering your choice in the selection input field, or using the predefined value and pressing the ENTER or DUE key while the cursor is positioned in the pull-down menu.

If a selection option is blocked, you will normally see an asterisk (*) instead of the number.

4.2.4 Message boxes

A message box is an implicit box generated by FHS. Its height depends on the length of the message text. If the predefined maximum size of the box (six lines of 56 characters each) is exceeded during editing, the message text is taken over into the message box unedited.

```

.....
: Message code           : Message ID           :
: Message text          :                      :
:                       :                      :
:                       : Message text        :
:                       :                      :
: Message text          :                      :
: ==>                  : Command line        :
: F3=exit F12=cancel   : Key assignment display :
.....

```

The text of the message is highlighted, e.g. displayed in reverse video or in color, depending on the terminal and the message type. The other areas of the box appear at low intensity.

The size of the message box is determined by FHS itself from the size of the message to be displayed. The position of the help or message box is also determined by FHS. In the case of a field-related help or message box, the box is positioned near the field for which it is activated. Depending on the amount of space available, the box is displayed above, below or next to the field, but if possible not covering it.

4.2.5 Help boxes

A help box is a non-modal box.

```

.....
:                Help                : Header line
:                .                    :
:                .                    :
:                .                    : Help text
:                .                    :
:                .                    :
: ==>                                : Command line
: F3=exit  F12=cancel                : Key assignment display:
.....

```

The size of the help boxes usually depends on the context. Subject-related help boxes can cover the entire screen. Field-related help boxes are generally smaller and are displayed below the field if possible. If the field concerned is not covered, you can read the help text and also make entries in the field.

If a help text does not fit in a box, paging information is provided, e.g. “more: +”. The rest of the text can then be viewed using the “+” command.

4.2.6 Selection fields

A selection field provides a quick and easy way of selecting from more than one option. There are two types of selection field:

- Single-choice selection field: here you can select only *one* of several options.
- Multiple-choice selection field: here you can select *more than one* option.

A selection field is part of the work area of a format and usually comprises more than one line. It consists of a title, a list of entries and one or more selection input fields.

Single-choice selection field

A single-choice selection field always has *one* input field in which you enter the characters for selection. The input field can be one or two bytes long. Numbers are used for selecting: for up to 9 selection options, one digit is entered (see below), and from 10 onward, two digits are entered.

Below is an example of a single-choice selection field.

```

Na : ..... Choose a conversion method ..... +
#C : ..... :
#S : ..... :
#S : Conversion type : _ 1.General loop --> loop :
#6 : 2.Loop --> general loop :
#8 : 3.Nd font --> hp font :
#8 : ..... :
C0 : ..... :
C0 : ..... :
C1 : ..... :
C1 : Command ==> :
C1 : F1=Help F3=Exit F12=Cancel :
C2 : ..... :

```

In the example the selection options are numbered from 1 to 3, and you must enter the corresponding number in the input field. The input field is here indicated by an underscore (_).

If a selection option is blocked, you will normally see an asterisk (*) instead of the number.

Multiple-choice selection field

A multiple-choice selection field contains an input field for each selection option. You select an option by marking the corresponding input field.

You select the options you require by marking them with “/”, “X” or “x”.

In the preselection, the flag (/ or x) appears on the screen. You can overwrite this character with a null character or a blank. A blocked option is displayed with the exclusion character (default: “*”).

5 Statements

5.1 Starting and terminating PRM

The **PRM** utility routine is started by means of the **/START-PRM** command:

START-PRM
MONJV = *NONE / <filename 1..54 without-gen-vers> ,CPU-LIMIT = *JOB-REST / <integer 1..32767>

Operands:

MONJV = *NONE / <filename 1..54 without-gen-vers>

Name of the job variable that is to monitor the job.

During the program run, the system then sets the job variable to the appropriate values:

- \$R. the program is running
- \$T. the program has terminated normally
- \$A. the program has terminated abnormally

This operand is only available to users who have the software product JV (see the “Job Variables” manual).

CPU-LIMIT = *JOB-REST / <integer 1..32767>

Maximum CPU time in seconds which the program may take to execute.

If the job was started without a time limit (CPU-LIMIT=*NO), the program likewise runs without a time limit (i.e. any specified limit is ignored).

If the program exceeds the specified time during execution, it is interrupted in interactive mode and message EXC0075 is issued. The user can request a dump, abort the program or continue the program run. If an STXIT routine has been defined in the program for the reaching of the CPU limit, this exit is taken and the program is terminated.

In batch mode the program is terminated.

CPU-LIMIT = *JOB-REST

Default value:

If the job was started with a time limit, the value defined at system generation is used as the time limit for the program. Otherwise the program runs without a time limit.

Using the statements in interactive mode

In order to use the PRM statements, user switch “1” must be set before calling the program, e.g. with MODIFY-JOB-SWITCH ON=1. If this user switch is not set in interactive mode, the user is offered the PRM menu system.

In batch mode or SDF procedure mode, the user switch need not be set.

PRM has an SDF interface. If you enter a question mark, all possible inputs on the relevant level are displayed on the screen. SDF is described in the manual “Introductory Guide to the SDF Dialog Interface”.

PRM is terminated by entering **END**.

5.2 Overview of PRM statements

All PRM statements are described below in alphabetical order. The “Type” column indicates which are main statements (M) and which are substatements (S).

Statement name	Meaning	Type	Page
ADD-HP-CHARACTER	Enter new character in character code table	S	69
ADD-PARAGRAPH	Create paragraph of general loop	S	72
ADD-PRINT-RESOURCES	Create new print resource	M	75
CANCEL-GENERAL-LOOP	Cancel creation of general loop	S	92
CANCEL-HP-FONT	Cancel creation of HP font	S	93
CANCEL-LOOP	Cancel creation of loop	S	94
CHANGE-HP-CHARACTER-ALIGNMENT	Align character in character matrix	S	95
CHANGE-HP-CHARACTER-BOX-SIZE	Change size of character frame	S	101
CHANGE-HP-CHARACTER-SHAPE	Change shape of character	S	104
CLOSE-GENERAL-LOOP	Conclude creation of general loop	S	110
CLOSE-HP-FONT	Conclude creation of HP font	S	111
CLOSE-LOOP	Conclude creation of loop	S	113
CLOSE-PR-FILE	Close current resource library	M	114
CONVERT-PRINT-RESOURCES	Convert object types	M	116
COPY-PRINT-RESOURCES	Copy elements of PRFILE	M	121
IMPORT-HP-CHARACTER	Import characters from HP font into current character code table	S	135
IMPORT-PRINT-RESOURCES	Import resources from freely selectable print control file	M	138
MODIFY-HP-CHARACTER	Change code of character in character code table	S	151
MODIFY-LINE-DESCRIPTOR	Change feed and density of loop line	S	152
MODIFY-PARAGRAPH	Change paragraph of general loop	S	155
MODIFY-PRINT-RESOURCES	Change attributes of print resources	M	159
MODIFY-PRM-OPTIONS	Set default values for program run	M	173
OPEN-PR-FILE	Open resource library	M	178

List of PRM statements (part 1 of 2)

Statement name	Meaning	Type	Page
REMOVE-HP-CHARACTER	Delete character code from code table	S	181
REMOVE-PARAGRAPH	Delete paragraph of general loop	S	182
REMOVE-PRINT-RESOURCES	Delete elements of PRFILE	M	183
SHOW-HP-CHARACTER	Display attributes and shape of character	S	191
SHOW-LINE-DESCRIPTOR	Display attributes of loop line	S	194
SHOW-PARAGRAPH	Query attributes of general loop paragraphs	S	195
SHOW-PR-FILE-ATTRIBUTES	Query attributes of current PRFILE	M	196
SHOW-PRINT-RESOURCES	Display elements of PRFILE	M	197
SHOW-PRM-OPTIONS	Query default values for program run	M	209

List of PRM statements (part 2 of 2)

For a summary of the statement structure and the corresponding dependencies, see chapter 4, “Overview of the PRM interfaces”, on page 49.

ADD-HP-CHARACTER

Enter new character in character code table

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*FONT(*HP-FONT)

Function

This statement enters a new character in the character code table of the currently selected font. The font is selected in the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*FONT(*HP-FONT(HP-FONT-NAME=...)).

The height of a new character (line density) is implicitly defined by the selected font: a font is a matching set of print characters of the same size, typeface and style. This statement allows you to define the code of the character and the character width (print density). A bitmap which represents the binary-coded description of this character is automatically constructed from the specifications made here (character width) or from the definitions of the font (character height, typeface etc.).

Format

ADD-HP-CHARACTER
CHARACTER-CODE = <x-string 1..2> HORIZONTAL-DENSITY = *INCHES(...) / *COLUMNS(...) *INCHES(...) | INCREMENT = <u>6</u> / 10 / 12 / 15 / 20 *COLUMNS(...) | NUMBER = <integer 2..40>

Operands

CHARACTER-CODE = <x-string 1..2>

Hexadecimal code of the new character from the range {00,...FF}, which is to be entered in the character code table of the HP font with the attributes to be specified.

HORIZONTAL-DENSITY =

Specifies the unit of measurement in which the width (density) of the character is to be defined. The width can be specified in fractions of an inch (operand value *INCHES) or in dots (operand value *COLUMNS).

HORIZONTAL-DENSITY = *INCHES(...)

The width of the new character is specified in inches.

INCREMENT = 6 / 10 / 12 / 15 / 20

The width of the character is specified in fractions of an inch.

For example, INCREMENT = 15 defines the following character width:

$$1/15 \text{ inch} \approx 2.54/15 \text{ cm} \approx 0.17 \text{ cm}$$

HORIZONTAL-DENSITY = *COLUMNS(...)

The width of the new character is specified in dots (pixels). Each character of an HP font is enclosed in a character matrix or frame, which is a box, 40 x 40 dots in size. Within this character matrix, which thus predefines the maximum size of an individual character, the width of the character can be defined. This width is used for checking the column range in the CHANGE-HP-CHARACTER-SHAPE statement. When this value is observed, the image of the character cannot exceed a specific column range.

NUMBER = <integer 2..40>

Width of the character, specified in the number of dots it is to occupy within the character matrix. This individual specification of the character density can be used for constructing a proportional-spaced font.

The value range $2 < \text{number of dots} < 12$ can only be specified for characters of a font which is to be processed on special printers. These printers (types NDX, NDW, APA1 and APA2) are capable of printing even the smallest characters.

For the value range $12 < \text{number of dots} < 40$, the relationship between the number of dots and the character width in inches is as follows:

Width in dots	12	16	20	24	40
Width in inches	1/20	1/15	1/12	1/10	1/6

Conversion - dots / inches

The close relationship between the character density (in cpi) and the number of columns in the character matrix (number of dots) may also be presented in such a way that a character in the character matrix must not exceed a specified number of columns, depending on the character density. The following table shows the possible column range for each character density:

Character density	Column range
6 cpi	1 - 40
10 cpi	1 - 24
12 cpi	1 - 20
15 cpi	1 - 16
20 cpi	1 - 12

Conversion - character density / column range

ADD-PARAGRAPH

Create paragraph of general loop

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*GENERAL-LOOP

Function

This statement defines a paragraph for a general loop or for a group of lines which are linked via the same channel number and whose attributes match.

The print resource general loop comprises a series of paragraphs which are identified by their names and which each describe a part of a form or paper format.

The ADD-PARAGRAPH statement is used to define an additional paragraph for a general loop which was previously selected or created via the statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*GENERAL-LOOP(GENERAL-LOOP-NAME=..).

If the length of all paragraphs exceeds the maximum length of the general loop as defined in the main statement, any attempt to create an additional paragraph will be rejected.

Format

ADD-PARAGRAPH
<p>PARAGRAPH-NAME = <alphanum-name 1..8></p> <p>,LOCATION = <u>*INCHES</u>(...)</p> <p>*INCHES(...)</p> <p style="padding-left: 2em;">| POSITION = <u>*NEXT</u> / *PARAMETERS(...)</p> <p style="padding-left: 4em;">| *PARAMETERS(...)</p> <p style="padding-left: 6em;">| INTEGER-PART = <integer 0..31></p> <p style="padding-left: 6em;">| ,DECIMAL-PART = <u>*NONE</u> / *PARAMETERS(...)</p> <p style="padding-left: 8em;">| *PARAMETERS(...)</p> <p style="padding-left: 10em;">| NUMERATOR = <u>1</u> / <integer 1..255></p> <p style="padding-left: 10em;">| ,DENOMINATOR = <u>6</u> / 8 / 10 / 12 / 24</p> <p>,NUMBER-OF-LINES = <integer 1..1024></p> <p>,CHANNEL-NUMBER = <u>*NONE</u> / <integer 1..12></p> <p>,VERTICAL-DENSITY = <u>6</u> / 8 / 10 / 12 / 24</p>

Operands

PARAGRAPH-NAME = <alphanum-name 1..8>

Name of the paragraph to which the following definitions apply. If changes are to be made, this part of the form can then be referred to by this name.

LOCATION = *INCHES(...)

Defines the position of the paragraph in the form. The point of reference is the top left-hand corner of the form.

POSITION =

The position of the paragraph can be specified relatively (to the previous paragraph) or absolutely (in inches).

POSITION = *NEXT

The relative position of the paragraph is specified. The point of reference is the end of the last paragraph or, if you are defining the first paragraph, the top left-hand corner of the paper format.

POSITION = *PARAMETERS(...)

The absolute position of the paragraph is specified in inches. The point of reference for the values is that of the paper format (top left-hand corner). The definition comprises an integer (for full inches) and a fraction for possible decimal places.

INTEGER-PART = <integer 0..31>

Integer value in inches.

DECIMAL-PART =

Specifies whether there is a fractional value for the exact position of the paragraph in addition to the integer value.

DECIMAL-PART = *NONE

There is no additional fraction.

DECIMAL-PART = *PARAMETERS(...)

An additional fraction is to be specified.

NUMERATOR = 1 / <integer 1..255>

Numerator of the fraction to be defined in addition to the integer value (in inches) for the position of the paragraph.

DENOMINATOR = 6 / 8 / 10 / 12 / 24

Denominator of the fraction to be defined in addition to the integer value (in inches) for the position of the paragraph.

Example:

The specification INTEGER-PART= 6, DECIMAL-PART=*PARAMETERS (-NUMERATOR = 7, DENOMINATOR = 8) defines the position of the paragraph as 6 + 7/8 inch from the selected point of reference.

NUMBER-OF-LINES = <integer 1..1024>

Number of lines of the same line density to be combined to make up this paragraph

CHANNEL-NUMMER =

Indicates whether a vertical tab is to be defined for the positioning of text in the line specified via the channel number.

CHANNEL-NUMMER = *NONE

No vertical tab is to be defined.

CHANNEL-NUMMER = <integer 1..12>

Channel number from 1 to 12 which represents a vertical tab for the positioning of text in the selected line.

VERTICAL-DENSITY = 6 / 8 / 10 / 12 / 24

Line density in lpi for the lines in this paragraph.

ADD-PRINT-RESOURCES

Create new print resource

Statement group: Resource accesses

Statement type: Main statement

Function

This statement creates a new print resource and enters it in the current PRFILE. The current PRFILE is always the last resource library opened by means of the OPEN-PR-FILE statement.

The type of print resource to be created is selected via the OBJECT operand. Print resources of types BAND-ID, CHARACTER-IMAGE, TRANSLATION-TABLE, HP-font pool and preform record can be described in full with this statement.

ADD-PRINT-RESOURCES allows the global default values to be defined for print resources of types HP font, loop and general loop. The detailed attributes of the individual print resources can then be specified via substatements. The dependent substatements for these print resources are mentioned in the respective operand descriptions.

Format

(part 1 of 4)

ADD-PRINT-RESOURCES

OBJECT = ***BAND-ID**(...)/ ***CHARACTER-IMAGE**(...)/ ***TRANSLATION-TAB**(...)/ ***FONT**(...)/
 ***HP-FONT-POOL**(...)/ ***GENERAL-LOOP**(...)/ ***LOOP**(...)/ ***PREFORM**(...)

***BAND-ID**(...)

BAND-ID-NAME = <alphanum-name 1..4>

,**DEFAULTS** = ***PARAMETERS** (...)/ ***BY-BAND-ID**(...)

***PARAMETERS**(...)

CONTROL-CODE = ***NONE** / <x-string 1..2>

,**CONVERSION-TABLE** = ***DEFAULT** / list-poss(256): ***PARAMETERS**(...)

***PARAMETERS**(...)

POSITION = <x-string 1..2> / <integer 0..255>

,**VALUE** = <x-string 1..2>

***BY-BAND-ID**(...)

BAND-ID-NAME = <alphanum-name 1..4>

***CHARACTER-IMAGE**(...)

CHARACTER-IMAGE-NAME = <alphanum-name 1..3>

,**DEFAULTS** = ***PARAMETERS** (...)/ ***BY-CHARACTER-IMAGE**(...)

***PARAMETERS**(...)

CONVERSION-TABLE = ***DEFAULT** / list-poss(256): ***PARAMETERS**(...)

***PARAMETERS**(...)

POSITION = <x-string 1..2> / <integer 0..255>

,**VALUE** = <x-string 1..2>

***BY-CHARACTER-IMAGE**(...)

CHARACTER-IMAGE-NAME = <alphanum-name 1..3>

continued ➔

***TRANSLATION-TAB(...)**

TRANSLATION-TAB-NAME = <alphanum-name 1..8>

,**DEFAULTS** = ***PARAMETERS** (...) / ***BY-TRANSLATION-TABLE**(...)

***PARAMETERS(...)**

CONVERSION-TABLE = ***DEFAULT** / list-poss(256): ***PARAMETERS**(...)

***PARAMETERS(...)**

POSITION = <x-string 1..2> / <integer 0..255>

,**VALUE** = <x-string 1..2>

***BY-TRANSLATION-TABLE(...)**

TRANSLATION-TAB-NAME = <alphanum-name 1..8>

***FONT(...)**

FONT = ***HP-FONT** (...)

***HP-FONT(...)**

HP-FONT-NAME = <alphanum-name 1..3>

,**DEFAULTS** = ***PARAMETERS** (...) / ***BY-HP-FONT**(...)

***PARAMETERS(...)**

SPACE-CODE = **X '40'** / <x-string 1..2>

,**UNDERSCORE-CODE** = **X '6D'** / <x-string 1..2> / ***NONE**

,**VERTICAL-DENSITY** = **6 / 8 / 10 / 12 / 24**

***BY-HP-FONT(...)**

HP-FONT-NAME = <alphanum-name 1..3>

***HP-FONT-POOL(...)**

HP-FONT-POOL-NAME = <alphanum-name 1..4>

,**HP-FONT-LIST** = ***BY-HP-FONT-POOL** (...) / list-poss(64): <alphanum-name 1..3>

***BY-HP-FONT-POOL(...)**

HP-FONT-POOL-NAME = <alphanum-name 1..4>

continued ➔

```

*GENERAL-LOOP(...)
  GENERAL-LOOP-NAME = <alphanum-name 1..8>
  ,DEFAULT-LENGTH = *INCHES(...) / *BY-GENERAL-LOOP(...)
    *INCHES(...)
      INTEGER-PART = <integer 1..31>
      ,DECIMAL-PART = *NONE / *PARAMETERS(...)
        *PARAMETERS(...)
          NUMERATOR = 1 / <integer 1..255>
          ,DENOMINATOR = 6 / 8 / 10 / 12 / 24
        *BY-GENERAL-LOOP(...)
          GENERAL-LOOP-NAME = <alphanum-name 1..8>
*LOOP(...)
  LOOP = *HP-LOOP(...) / *LP-LOOP(...)
    *HP-LOOP(...)
      HP-LOOP-NAME = <alphanum-name 1..3>
      ,DEFAULTS = *PARAMETERS (...) / *BY-LOOP(...)
        *PARAMETERS(...)
          VERTICAL-DENSITY = 6 / 8 / 10 / 12 / 24
          ,LOOP-LENGTH = *INCHES(...)
            *INCHES(...)
              INTEGER-PART = <integer 3..17>
              DECIMAL-PART = *NONE / <integer 1..5>
          *BY-LOOP(...)
            LOOP-NAME = <alphanum-name 1..3>

```

continued ➔

```

*LP-LOOP(...)
  LP-LOOP-NAME = <alphanum-name 1..3>
  ,DEFAULTS = *PARAMETERS (...) / *BY-LOOP(...)
    *PARAMETERS(...)
      VERTICAL-DENSITY = 6 / 8
      ,LOOP-LENGTH = *INCHES(...) / *LINES(...)
        *INCHES(...)
          INTEGER-PART = <integer 1..31>
          DECIMAL-PART = *NONE / <integer 1..5>
        *LINES(...)
          NUMBER-OF-LINES = <integer 2..1024>
      *BY-LOOP(...)
        LOOP-NAME = <alphanum-name 1..3>
    *PREFORM(...)
      PREFORM-NAME = <alphanum-name 1..4>
      ,ESCAPE-CHARACTERS = *BY-PREFORM(...) / <c-string 1..768 with-low>
        *BY-PREFORM(...)
          PREFORM-NAME = <alphanum-name 1..4>
  ,COMMENTS = *NONE / <c-string 1..200 with-low>
  ,WRITE-MODE = *STD / *CREATE / *REPLACE

```

Operands

OBJECT =

Type of print resource being created and whose attributes are to be defined in the corresponding substructures.

OBJECT = *BAND-ID(...)

A print resource of the type BAND-ID, a code conversion table for band printers, is to be created.

BAND-ID-NAME = <alphanum-name 1..4>

Name under which the print resource is to be stored in the current PRFILE.

DEFAULTS =

Defines whether the attributes of the resource are defined explicitly in the following, or whether they are to be taken over from another resource of the same type which acts as a reference model.

DEFAULTS = *PARAMETERS(...)

The attributes of the print resource are explicitly defined in the following substructure.

CONTROL-CODE =

Specifies whether a control code is to be defined which is linked to the name of the BAND-ID and serves as identification when this resource is accessed. For LP-PRINTERS of types 3337, 3338 and 3339, a control code is mandatory.

CONTROL-CODE = *NONE

No control code is linked to the name of the BAND-ID. This operand value is only permissible for printer types other than 3337, 3338 or 3339.

CONTROL-CODE = <x-string 1..2>

Control code in the form of a 1-byte hexadecimal code which is linked to the name of the BAND-ID.

CONVERSION-TABLE =

Specifies whether a default code table is to be created or whether a code table for the conversion of specific character codes will be explicitly defined.

CONVERSION-TABLE = *DEFAULT

A default code table is specified, which is used to initialize all 256 possible codes (from X'00' to X'FF') with the value X'80'. This value represents a non-printable character.

CONVERSION-TABLE = list-poss(256): *PARAMETERS(...)

A code table for the conversion of specific character codes is explicitly defined. A maximum of 256 code pairs, i.e. all assignments in the code table, can be defined.

POSITION = <x-string 1..2> / <integer 0..255>

Position of the character code to be converted within the code matrix. It can be specified as a hexadecimal value from X'00' to X'FF' or as an integer from 0 to 255. The position within the character code matrix represents the hexadecimal character code in the print file, which is to be converted into some other character code. Its value can be defined with the following operand VALUE.

VALUE = <x-string 1..2>

Character code into which the character code whose position within the code matrix is specified by the POSITION operand is to be converted.

Example:

The specification **CONVERSION-TABLE = *PARAMETERS(POSITION= X'06', VALUE = X'D1')** defines that a character code X'06' in the print file is to be converted into the value X'D1'.

DEFAULTS = *BY-BAND-ID(...)

The attributes of the print resource to be created are taken over from a different resource of the same type, which acts as a reference model.

BAND-ID-NAME = <alphanum-name 1..4>

Name of the BAND-ID whose attributes are to be taken over. This BAND-ID must be stored in the current PROFILE.

OBJECT = *CHARACTER-IMAGE(...)

A print resource of the type CHARACTER-IMAGE, a code conversion table for line printers, is to be created.

CHARACTER-IMAGE-NAME = <alphanum-name 1..3>

Name under which the print resource is to be stored in the current PROFILE.

DEFAULTS =

Specifies whether the attributes of the resource are defined explicitly in the following, or whether they are to be taken over from another resource of the same type which acts as a reference model.

DEFAULTS = *PARAMETERS(...)

The attributes of the print resource are explicitly defined in the following substructure.

CONVERSION-TABLE =

Specifies whether a default code table is to be created or whether a code table for the conversion of specific character codes is to be explicitly defined.

CONVERSION-TABLE = *DEFAULT

A default code table is created, which is used to initialize all 256 possible codes (from X'00' to X'FF') with the value X'80'. This value represents a non-printable character.

CONVERSION-TABLE = list-poss(256): *PARAMETERS(...)

A code table for the conversion of specific character codes is explicitly defined. A maximum of 256 code pairs, i.e. all assignments in the code table, can be defined.

POSITION = <x-string 1..2> / <integer 0..255>

Position of the character code to be converted within the code matrix. This can be a hexadecimal value from X'00' to X'FF' or an integer from 0 to 255. The position within the character code matrix represents the hexadecimal character code in the print file which is to be converted into some other character code. Its value can be defined with the following VALUE operand.

VALUE = <x-string 1..2>

Character code into which the character code whose position within the code matrix is specified by the POSITION operand is to be converted.

Example:

The specification CONVERSION-TABLE = *PARAMETERS(POSITION= X'06', VALUE = X'D1') defines that a character code X'06' in the print file is to be converted into the value X'D1'.

DEFAULTS = *BY-CHARACTER-IMAGE(...)

The attributes of the print resource to be created are taken over from a different resource of the same type, which acts as a reference model.

CHARACTER-IMAGE-NAME = <alphanum-name 1..3>

Name of the CHARACTER-IMAGE table whose attributes are to be taken over. This table must be stored in the current PRFILE.

OBJECT = *TRANSLATION-TAB(...)

A print resource of the type TRANSLATION-TABLE, a code conversion table for all printers, is to be created.

TRANSLATION-TAB-NAME = <alphanum-name 1..8>

Name under which the print resource is to be stored in the current PRFILE.

DEFAULTS =

Specifies whether the attributes of the resource are defined explicitly in the following, or whether they are to be taken over from another resource of the same type which acts as a reference model.

DEFAULTS = *PARAMETERS(...)

The attributes of the print resource are explicitly defined in the following substructure.

CONVERSION-TABLE =

Specifies whether a default code table is to be created or whether a code table for the conversion of specific character codes is to be explicitly defined.

CONVERSION-TABLE = *DEFAULT

A default code table is created, which is used to initialize all 256 possible codes (from X'00' to X'FF') with the value X'80'.

CONVERSION-TABLE = list-poss(256): *PARAMETERS(...)

A code table for the conversion of specific character codes is explicitly defined. A maximum of 256 code pairs, i.e. all assignments in the code table, can be defined.

POSITION = <x-string 1..2> / <integer 0..255>

Position of the character code to be converted within the code matrix. This can be a hexadecimal value from X'00' to X'FF' or an integer from 0 to 255. The position within the character code matrix represents the hexadecimal character code in the print file which is to be converted into some other character code. Its value can be defined with the following operand VALUE.

VALUE = <x-string 1..2>

Character code into which the character code whose position within the code matrix is specified by the POSITION operand is to be converted.

Example:

The specification CONVERSION-TABLE = *PARAMETERS(POSITION= X'06', VALUE = X'D1') defines that a character code X'06' in the print file is to be converted into the value X'D1'.

DEFAULTS = *BY-TRANSLATION-TAB(...)

The attributes of the print resource to be created are taken over from a different resource of the same type, which acts as a reference model.

TRANSLATION-TAB-NAME = <alphanum-name 1..8>

Name of the TRANSLATION-TABLE whose attributes are to be taken over. This table must be stored in the current PRFILE.

OBJECT = *FONT(...)

A print resource of the object class font, which contains the object types HP font and ND font, is to be created. A font is a matching set of print characters of the same size, typeface and style (previously called a "character set" in SPOOL).

FONT = *HP-FONT(...)

Specifies the type of print resource and thus the type of printer for which a font is to be created. The only possible specification is the printer type HP.

HP-FONT-NAME = <alphanum-name 1..3>

Name under which the print resource HP font is to be stored in the current PRFILE. The individual characters of this font can be entered in the font by means of the substatement ADD-HP-CHARACTER (see page 69).

DEFAULTS =

Specifies whether the attributes of the resource are defined explicitly in the following, or whether they are to be taken over from another resource of the same type which acts as a reference model.

DEFAULTS = *PARAMETERS(...)

The attributes of the print resource are explicitly defined in the following substructure.

SPACE-CODE =

Defines the code for the space character (blank). The CHARACTER-SETS operand in the PRINT-DOCUMENT command allows up to 16 fonts to be loaded for the print file. A blank must be defined at the beginning of the first specified font.

SPACE-CODE = X'40'

The default value is the EBCDIC code for the space character (blank).

SPACE-CODE = <x-string 1..2>

Hexadecimal code of the space character (blank).

UNDERScore-CODE =

Defines an EBCDIC character which, in conjunction with the LINEMERGE function, produces an underscore.

UNDERScore-CODE = X'6D'

The default value is the code X'6D' (see EBCDIC table).

UNDERScore-CODE = <x-string 1..2>

Hexadecimal code of the underscore character.

UNDERScore-CODE = *NONE

An EBCDIC character code is defined for the LINEMERGE function.

VERTICAL-DENSITY = 6 / 8 / 10 / 12 / 24

Defines the default line density in lpi for the characters of the font and in particular for all new characters that are added to this font. The default value is 6 lpi. You can influence the default value for the line density by specifying the character height for individual characters or for all characters of the font in the CHANGE-HP-CHARACTER-BOX-SIZE statement (see page 101).

The value defined here is checked against the value defined via the CHANGE-HP-CHARACTER-SHAPE statement for the number of lines the individual character is to cover in the character matrix (see page 104).

Depending on the line density, the individual character can only be displayed within a specified line range of up to 40 lines of the character matrix. The following table shows the values for line density and line range:

Line density	Line range
6 lpi	1 - 40
8 lpi	7 - 36
10 lpi	11 - 34
12 lpi	13 - 32
24 lpi	21 - 30

DEFAULTS = *BY-HP-FONT(...)

The attributes of the print resource to be created are taken over from another resource of the same type, which acts as a reference model.

HP-FONT-NAME = <alphanum-name 1..3>

Name of the HP font whose attributes are to be taken over.

This font must be stored in the current PRFILE.

OBJECT = *HP-FONT-POOL(...)

A print resource of the type HP-font pool, a pool of existing character sets, is to be created.

HP-FONT-POOL-NAME = <alphanum-name 1..4>

Name of the font pool under which the print resource is to be stored in the current PRFILE.

HP-FONT-LIST =

Defines whether different fonts are to be combined to form a pool or whether an existing pool with the fonts entered in it is to serve as a reference model.

HP-FONT-LIST = *BY-HP-FONT-POOL(...)

The new pool is to comprise the entries (fonts) which are already defined in a pool.

HP-FONT-POOL-NAME = <alphanum-name 1..4>

Name of the HP-font pool whose fonts are to be stored under the new pool name.

HP-FONT-LIST = list-poss(64): <alphanum-name 1..3>

Up to 64 fonts which the pool is to comprise can be specified in a list. All specified fonts must be available in the current PRFILE.

For practical reasons the same code should be defined for the space character (blank) for all fonts in a font pool (see operand OBJECT=*FONT, page 84).

OBJECT = *GENERAL-LOOP(...)

A print resource of the type general loop - a loop record which can serve as a reference for the creation of individual loops - is to be created.

GENERAL-LOOP-NAME = <alphanum-name 1..8>

Name under which the print resource is to be stored in the current PRFILE.

DEFAULT-LENGTH =

Defines whether the most important attribute of this resource - the length of the general loop - is explicitly defined, or whether the attribute is to be taken over from another resource of the same type which acts as a reference model.

The length of the general loop correlates to the paper format on which derived loops are to be used.

The general loop can be divided into individual paragraphs, each with their own length specifications. Make sure that when you define the individual paragraphs the overall length specified here is not exceeded. The paragraphs are defined via the ADD-PARAGRAPH substatement (see page 72).

DEFAULTS-LENGTH = *INCHES(...)

The length of the general loop is explicitly defined in the following substructure. It is specified absolutely and in inches. The definition comprises an integer (for full inches) and a fraction for possible decimal places.

INTEGER-PART = <integer 1..31>

Integer value of the length of the general loop in inches.

DECIMAL-PART =

Specifies whether there is a fractional value for the exact length of the general loop in addition to the integer value.

DECIMAL-PART = *NONE

There is no additional fraction.

DECIMAL-PART = *PARAMETERS(...)

An additional fraction is to be specified.

NUMERATOR = <integer 1..255>

Numerator of the fraction to be defined in addition to the integer value (in inches) for the length of the general loop.

DENOMINATOR = 6 / 8 / 10 / 12 / 24

Denominator of the fraction to be defined in addition to the integer value (in inches) for the length of the general loop.

Example:

The specification INTEGER-PART= 12, DECIMAL-PART=*PARAMETERS(- NUMERATOR = 7, DENOMINATOR = 8) defines the length of the general loop as 12 + 7/8 inches in total.

DEFAULT-LENGTH = *BY-GENERAL-LOOP(...)

The length of the general loop to be created is taken over from another resource of the same type which acts as a reference model.

GENERAL-LOOP-NAME = <alphanum-name 1..8>

Name of the general loop whose length is to be taken over. This general loop must be stored in the current PROFILE.

OBJECT = *LOOP(...)

A print resource of the type loop - i.e. paper feed information - is to be created.

LOOP =

Specifies the printer type for which a loop record is to be created.

LOOP = *HP-LOOP(...)

A loop record for a printer of the type HP is to be created. The global settings for all lines of the loop are defined in the following substructure. The attributes for individual lines of the loop can be defined via the MODIFY-LINE-DESCRIPTOR statement (see page 152).

HP-LOOP-NAME = <alphanum-name 1..3>

Name under which the print resource is to be stored in the current PRFILE.

DEFAULTS =

Specifies whether the attributes of the resource are defined explicitly in the following, or whether they are to be taken over from another resource of the same type which acts as a reference model.

DEFAULTS = *PARAMETERS(...)

The attributes of the print resource are explicitly defined in the following substructure.

VERTICAL-DENSITY = 6 / 8 / 10 / 12 / 24

Line density in lpi for the lines of the loop record.

LOOP-LENGTH = *INCHES(...)

The length of the loop is explicitly defined in the following substructure. It is given absolutely and in inches. The definition comprises an integer (for full inches) and a fraction for possible decimal places.

When a file is printed, the length of the loop specified in the PRINT-DOCUMENT command is compared with the values that were defined when the corresponding form was created (SPSERVE statement ADD-SPOOL-FORM). A loop for the specified paper format is only accepted if the length is within the range expressed by the following formula:

$$\text{Length of loop} \times 10 < \text{Paperformat} \times 6 < (\text{Length of loop} + 1) \times 10$$
INTEGER-PART = <integer 3..17>

Integer value for the length of the loop in inches.

DECIMAL-PART =

Specifies whether a fractional value for the precise definition of the length of the loop is also to be specified.

DECIMAL-PART = *NONE

No fraction is specified.

DECIMAL-PART = <integer 1..5>

Fraction for the possible decimal places of the length of the loop. The value indicates how many sixths of an inch are added to the integer defined by INTEGER-PART.

DEFAULTS = *BY-LOOP(...)

The attributes of the print resource to be created are taken over from another resource of the same type which acts as a reference model.

LOOP-NAME = <alphanum-name 1..3>

Name of the HP loop whose attributes are to be taken over.

This HP loop must be stored in the current PROFILE.

LOOP = *LP-LOOP(...)

A loop record is to be created for a printer of the type LP. The global settings for all lines of the loop are defined in the following substructure. The attributes for individual lines of the loop can be defined via the MODIFY-LINE-DESCRIPTOR statement. But note that the line density for all lines of the LP-loop record must be either 6 or 8 lpi (see page 152).

LP-LOOP-NAME = <alphanum-name 1..3>

Name under which the print resource is to be stored in the current PROFILE.

DEFAULTS =

Specifies whether the attributes of the resource are defined explicitly in the following, or whether they are to be taken over from another resource of the same type which acts as a reference model.

DEFAULTS = *PARAMETERS(...)

The attributes of the print resource are explicitly defined in the following substructure.

VERTICAL-DENSITY = 6 / 8

Line density in lpi for the lines of the loop record.

LOOP-LENGTH =

The length of the loop can be specified in inches (explicitly) or in the number of lines (implicitly).

LOOP-LENGTH = *INCHES(...)

The length of the loop is explicitly defined in the following substructure.

It is given absolutely and in inches. The definition comprises an integer (for full inches) and a fraction for possible decimal places.

When a file is printed, the length of the loop specified in the PRINT-DOCUMENT command is compared with the values that were defined when the corresponding form was created (SPSERVE statement ADD-SPOOL-FORM). A loop for the specified paper format is only accepted if the difference in length between loop and form is no more than 1/6 inch.

INTEGER-PART = <integer 1..31>

Integer value for the length of the loop in inches.

DECIMAL-PART =

Specifies whether a fractional value for the precise definition of the length of the loop is also to be specified.

DECIMAL-PART = *NONE

No fraction is specified.

DECIMAL-PART = <integer 1..5>

Fraction for the possible decimal places of the length of the loop.

The value indicates how many sixths of an inch are added to the integer defined with INTEGER-PART. If the preset line density for this loop is 6 lpi, values from the entire range, i.e. 1 to 5, can be defined. If the preset line density is 8 lpi, only the value 3 (or the operand value *NO) can be defined.

LOOP-LENGTH = *LINES(...)

The length of the LP loop is implicitly defined in the number of lines. The length of the loop comes from the rounded-off result of the division of the value for the line density (VERTICAL-DENSITY operand) by the number of lines specified here.

Example:

An LP loop with 54 lines and a line density of 6 lpi results in a length of 9 inches. The validity of the specifications is not checked and the print resource is stored even if the calculated length of the loop does not lie within the permitted value range for the length of an LP loop (1 to 31 5/6 inch).

NUMBER-OF-LINES = <integer 2..1024>

Number of lines for calculating the length of the LP loop.

DEFAULTS = *BY-LOOP(...)

The attributes of the print resource to be created are taken over from another resource of the same type which acts as a reference model.

LOOP-NAME = <alphanum-name 1..3>

Name of the LP loop whose attributes are to be taken over.

This LP loop must be stored in the current PRFILE.

OBJECT = *PREFORM(...)

A print resource of the type preform record - printer-specific control characters for printers of the type LP-EMULATED-PRINTER - is to be created.

PREFORM-NAME = <alphanum-name 1..4>

Name under which the print resource is to be stored in the current PRFILE.

ESCAPE-CHARACTERS =

Specifies whether the control characters are defined explicitly in the following, or whether they are taken over from another resource of the same type which acts as a reference model.

ESCAPE-CHARACTERS = *BY-PREFORM(...)

The control characters are to be taken over from a print resource of the same type which acts as a reference model.

PREFORM-NAME = <alphanum-name 1..4>

Name of the preform record whose control characters are to be taken over.

This preform record must be stored in the current PRFILE.

ESCAPE-CHARACTERS = <c-string 1..768 with-low>

The control characters are specified explicitly.

The data can be specified in mixed hexadecimal and EBCDIC format. Data in EBCDIC format must be enclosed in parentheses; if the "(" character is also part of the data, it must be specified twice.

After hexadecimal conversion, a preform record can consist of up to 256 characters.

The record can extend over more than one line, with each line except for the last one ending with the continuation character "-".

A sequence of EBCDIC characters within the record cannot, however, extend over two consecutive lines of preform data. In other words: the "(" character which opens a sequence of EBCDIC characters must be in the same line as the ")" character which closes it. This ensures that if the "-" character is part of the data in the EBCDIC sequence it is not misinterpreted as a continuation character.

COMMENTS =

Specifies whether any freely definable user comments on the created print resource are also to be stored.

COMMENTS = *NONE

No user comments are to be stored.

COMMENTS = <c-string 1..200 with-low>

Freely definable user comments on the created print resource.

WRITE-MODE =

Specifies whether an existing object of the same name can be overwritten when the print resource is created.

Whether a print resource may be included in the current PRFILE at all depends on how the file was opened and is defined via the OPEN-PR-FILE statement (see page 178).

WRITE-MODE = *STD

The setting is taken from the default value specified in the MODIFY-PRM-OPTIONS statement (see page 173).

WRITE-MODE = *CREATE

The print resource to be created must not yet exist in the current PRFILE. The attributes defined will only be stored in the PRFILE as long as no print resource of the same name and type already exists.

WRITE-MODE = *REPLACE

An existing object of the same name may be overwritten.

CANCEL-GENERAL-LOOP

Cancel creation of general loop

Statement group: Resource accesses
Statement type: Substatement
Assigned main statements: ADD- / MODIFY-PRINT-RESOURCES -
OBJECT=*GENERAL-LOOP

Function

This statement cancels a print resource of the type general loop which is currently being created or updated. All specifications so far made for this print resource are therefore no longer available and, if necessary, must be initiated and repeated via the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*GENERAL-LOOP(GENERAL-LOOP-NAME=..).

Format

CANCEL-GENERAL-LOOP

CANCEL-HP-FONT

Cancel creation of HP font

Statement group: Resource accesses
Statement type: Substatement
Assigned main statements: ADD- / MODIFY-PRINT-RESOURCES -
OBJECT=*FONT(*HP-FONT)

Function

This statement cancels a print resource of the type HP font which is currently being created or updated. All specifications so far made for this print resource are therefore no longer available and, if necessary, must be initiated and repeated via the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*FONT(*HP-FONT(HP-FONT-NAME=..)).

Format

CANCEL-HP-FONT

CANCEL-LOOP

Cancel creation of loop

Statement group: Resource accesses
Statement type: Substatement
Assigned main statements: ADD- / MODIFY-PRINT-RESOURCES -
OBJECT=*LOOP

Function

This statement cancels a print resource of the type loop which is currently being created or updated. All specifications so far made for this print resource are therefore no longer available and, if necessary, must be initiated and repeated via the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*LOOP(LOOP=..).

Format

CANCEL-LOOP

CHANGE-HP-CHARACTER-ALIGNMENT

Align character in character matrix

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*FONT(*HP-FONT)

Function

This statement changes the alignment of a character within the character matrix. The character concerned must come from the character code table of the currently selected font. The font is selected in the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*FONT(*HP-FONT(HP-FONT-NAME=...)).

Each character of an HP font is enclosed in a character matrix or box. Depending on the width of the characters in the font (character density), the matrix size is 40 x 40 dots (at 6 cpi) or 24 x 40 dots (at 10, 12, 15 or 20 cpi). Within this character frame, the character can be shifted. The CHANGE-HP-CHARACTER-ALIGNMENT statement is used to specify that the character is to be centered along a horizontal or vertical axis, or shifted dot by dot in a certain direction.

Note, however, that any parts of a character that extend beyond the frame as a result of a shift cannot be reconstructed (e.g. by shifting them back in the opposite direction). A detailed example can be found below the description of the operands.

Format

CHANGE-HP-CHARACTER-ALIGNMENT
<p>CHARACTER-CODE = *ALL / <x-string 1..2></p> <p>,ALIGNMENT = *CENTER(...) / *UP(...) / *DOWN(...) / *LEFT(...) / *RIGHT(...)</p> <p>*CENTER(...)</p> <p> | HORIZONTAL = *STD / <integer 1..40></p> <p> | ,VERTICAL = *STD / <integer 1..40></p> <p>*UP(...)</p> <p> | NUMBER = <integer 1..39></p> <p>*DOWN(...)</p> <p> | NUMBER = <integer 1..39></p> <p>*LEFT(...)</p> <p> | NUMBER = <integer 1..39></p> <p>*RIGHT(...)</p> <p> | NUMBER = <integer 1..39></p>

Operands

CHARACTER-CODE =

Hexadecimal code of the character whose alignment is to be changed. One specific character or all characters from the current character code table of the HP font can be selected.

CHARACTER-CODE = *ALL

The desired alignment is to affect all characters from the current character code table of the HP font.

CHARACTER-CODE = <x-string 1..2>

Hexadecimal code of the individual character whose alignment is to be changed.

ALIGNMENT =

Specifies whether the character is to be centered along a horizontal or vertical axis, or shifted in a certain direction.

ALIGNMENT = *CENTER(...)

The selected character is to be horizontally and/or vertically centered.

HORIZONTAL =

The selected character is to be horizontally centered.

For the axis along which the character is to be aligned, you can specify either the axis of symmetry of the character frame or any line number. The character frame is formed by a box, whose size is 40 x 40 dots. This frame can be interpreted as a matrix with 40 lines and 40 columns, so that the number of lines or columns corresponds to the number of dots by which the character is to be shifted.

HORIZONTAL = *STD

The selected character is to be centered along the horizontal axis of symmetry of the character frame.

HORIZONTAL = <integer 1..40>

The selected character is to be centered along a horizontal axis represented by the line number specified here.

VERTICAL =

The selected character is to be vertically centered.

For the axis along which the character is to be aligned, you can specify either the axis of symmetry of the character frame or any column number.

VERTICAL = *STD

The selected character is to be centered along the vertical axis of symmetry of the character frame.

VERTICAL = <integer 1..40>

The selected character is to be centered along the vertical axis represented by the column number specified here.

ALIGNMENT = *UP(...)

The selected character is to be shifted upward by a given number of lines within the character frame.

NUMBER = <integer 1..39>

Number of lines (dots of the character frame) by which the selected character is to be shifted up.

ALIGNMENT = *DOWN(...)

The selected character is to be shifted downward by a given number of lines within the character frame.

NUMBER = <integer 1..39>

Number of lines (dots of the character frame) by which the selected character is to be shifted down.

ALIGNMENT = *LEFT(...)

The selected character is to be shifted a given number of columns to the left within the character frame.

NUMBER = <integer 1..39>

Number of columns (dots of the character frame) by which the selected character is to be shifted to the left.

ALIGNMENT = *RIGHT(...)

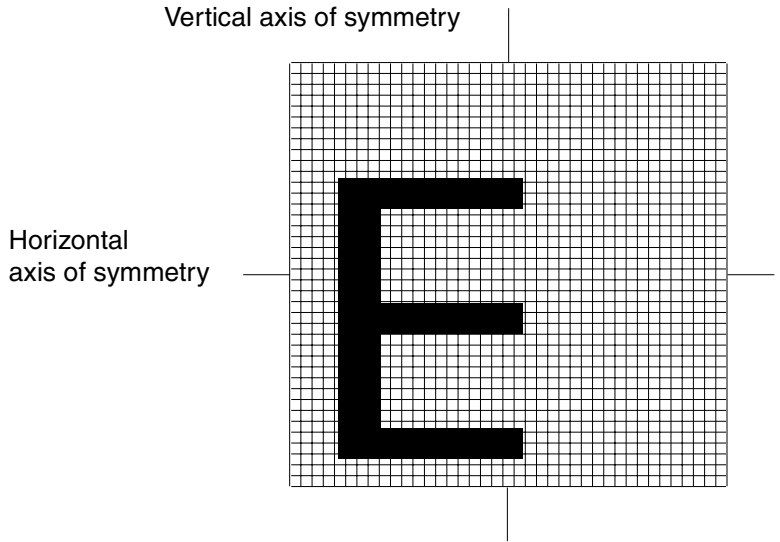
The selected character is to be shifted a given number of columns to the right within the character frame.

NUMBER = <integer 1..39>

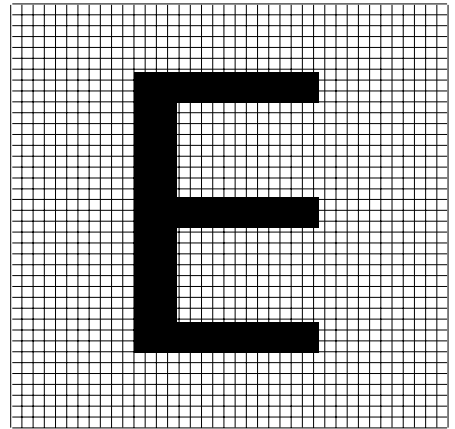
Number of columns (dots of the character frame) by which the selected character is to be shifted to the right.

Example

Original position:
 character with the
 code X'C5' in a
 40x40-dot character
 frame.
 Orientation:
 imaginary axes of
 symmetry



Step 1:
 The character is to be vertically and horizon-
 tally centered along the axes of symmetry
 within the frame.
 The statement
 CHANGE-HP-CHARACTER-ALIGNMENT
 CHARACTER-CODE=X'C5', -
 ALIGNMENT=*CENTER
 produces the following result:



Step 2:

Starting from the vertical and horizontal centering, the character is to be shifted 7 lines (dots) down.

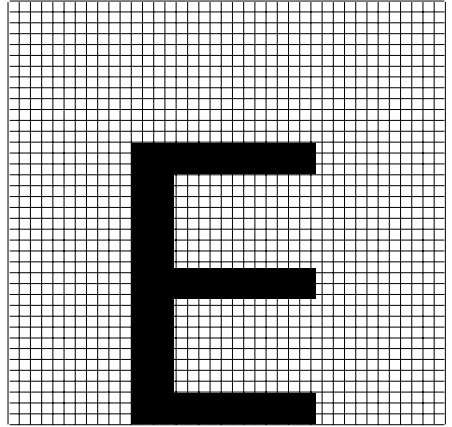
The statement

```
CHANGE-HP-CHARACTER-ALIGNMENT
```

```
  CHARACTER-CODE=X'C5', -
```

```
  ALIGNMENT=*DOWN(NUMBER=7)
```

produces the following result:



Step 3:

Starting from the vertical and horizontal centering, the character is to be shifted 20 lines (dots) to the right.

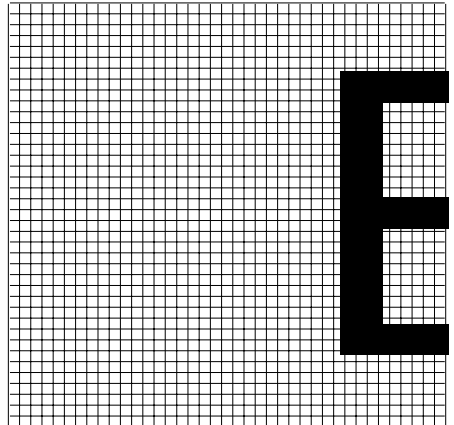
The statement

```
CHANGE-HP-CHARACTER-ALIGNMENT
```

```
  CHARACTER-CODE=X'C5', -
```

```
  ALIGNMENT=*RIGHT(NUMBER=20)
```

produces the following result, where the part of the character that has extended beyond the frame can no longer be reconstructed:



CHANGE-HP-CHARACTER-BOX-SIZE

Change size of character frame

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*FONT(*HP-FONT)

Function

This statement changes the size of the character frame. The character frame is a box with a maximum size of 40 x 40 dots, which encloses each character of an HP font. The font is selected via the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*FONT(*HP-FONT(HP-FONT-NAME=...)).

The size of the character frame is the yardstick for the width (character density) and size (line density) of each individual character. If the frame is defined as the same size for all characters of the font, each character occupies the same amount of space in the printout ("monospaced" font). If, on the other hand, a different size is defined for each frame, each character can occupy as much space as it is wide ("proportional" font).

The CHANGE-HP-CHARACTER-BOX-SIZE statement allows you to vary both the height of the character frame (and thus the line density of the font) and also the width of the character frame (and thus the character density). You can also specify that the character itself which is enclosed by the frame is also to be increased or reduced in size according to how you wish to modify it.

Note that the character density that can be set via this substatement is only used for executing various check routines when the CHANGE-HP-CHARACTER-SHAPE statement is called. These check routines are based on the possible line range a character may occupy within the character matrix, depending on the character density. If the CHANGE-HP-CHARACTER-BOX-SIZE statement specifies that the character density is only to be changed for one character, this modified character density forms the basis for the check routines. For all other characters of the font, the basis for the check routines remains the character density that was set in the ADD- or MODIFY-PRINT-RESOURCES main statement for all the font characters.

Format

CHANGE-HP-CHARACTER-BOX-SIZE
<p>CHARACTER-CODE = <u>*ALL</u> / <x-string 1..2></p> <p>,VERTICAL-DENSITY = <u>*UNCHANGED</u> / 6 / 8 / 10 / 12 / 24</p> <p>,HORIZONTAL-DENSITY = <u>*UNCHANGED</u> / *COLUMNS(...) / *INCHES(...)</p> <p> *COLUMNS(...)</p> <p> | NUMBERS = <integer 2..40></p> <p> *INCHES(...)</p> <p> | INCREMENT = 6 / 10 / 12 / 15 / 20</p> <p>,CONTENT = <u>*YES</u> / *NO</p>

Operands

CHARACTER-CODE =

Hexadecimal code of the character whose frame is to be changed. Either one specific character or all characters from the current character code table of the HP font can be selected.

CHARACTER-CODE = *ALL

The desired modification of the character frame is to affect all characters from the current character code table of the HP font.

CHARACTER-CODE = <x-string 1..2>

Hexadecimal code of the individual character whose frame is to be changed.

VERTICAL-DENSITY = *UNCHANGED / 6 / 8 / 10 / 12 / 24

Specifies the height of the character frame and thus the line density in lpi for the selected character of the HP font. The default value *UNCHANGED means that the current value is retained.

HORIZONTAL-DENSITY =

Determines the unit of measurement in which the width of the character frame and thus the character density for the selected character of the HP font is to be specified. This can be the number of dots (operand value *COLUMNS) or fractions of an inch (operand value *INCHES).

HORIZONTAL-DENSITY = *UNCHANGED

Default: the current setting is to be retained.

HORIZONTAL-DENSITY = *COLUMNS(...)

The width of the character frame is specified in dots (pixels).

NUMBERS = <integer 2..40>

The width, in dots, of the character frame that is to enclose the selected character.

The value range $1 < \text{number of dots} < 12$ can only be specified for characters of a font which is to be processed on special printers. These printers (types NDX, NDW, APA1 and APA2) are capable of printing even the smallest characters.

For the value range $11 < \text{number of dots} < 41$, the relationship between the number of dots and the width of the character frame in inches is as follows:

Width in dots	12	16	20	24	40
Width in inches	1/20	1/15	1/12	1/10	1/6

HORIZONTAL-DENSITY = *INCHES(...)

The width of the character frame is specified in inches.

INCREMENT = 6 / 10 / 12 / 15 / 20

The width of the character frame is specified in fractions of an inch (1 inch \approx 2.54 cm).

For example, INCREMENT = 15 produces the following width for the character frame:

$$1/5 \text{ inch} \approx 2.54/5 \text{ cm} \approx 0.17 \text{ cm}$$

CONTENT =

Specifies whether the character itself which is enclosed in the frame is to be increased or reduced in size according to how you wish to modify it.

CONTENT = *YES

Default: the size of the character itself is to be changed.

CONTENT = *NO

The size of the character itself is not to be changed.

CHANGE-HP-CHARACTER-SHAPE

Change shape of character

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*FONT(*HP-FONT)

Function

This statement changes the shape of a character of an HP font. The font is selected in the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*FONT(*HP-FONT(HP-FONT-NAME=...)).

Each individual character of a font is stored in the form of a bitmap within a 40 x 40-dot character matrix. The bitmap contains the binary-coded description of the character. The CHANGE-HP-CHARACTER-SHAPE statement allows you to change the allocation of the individual dots in the character matrix, thus altering the appearance of the character. Each individual dot in the matrix can be set (i.e. "blacked out") or reset (cleared). When the character is viewed using the SHOW-HP-CHARACTER statement, dots which have been set are represented by the character "o", while those which have not been set appear as periods (.).

The shape of one or all characters of the font can also be modified via the following statement options:

- rotate a character clockwise
- display a character in reverse video
- overlay a character with a different character from the same font or with a template from a different font
- enlarge or reduce a character

Format

CHANGE-HP-CHARACTER-SHAPE

```

CHARACTER-CODE = *ALL / <x-string 1..2>
,ROTATION = 0 / 90 / 180 / 270
,DRAW = *NO / *PARAMETERS(...) / list-poss(40): *BY-LINES(...)
  *PARAMETERS(...)
    |
    | LINE-RANGE = *PARAMETERS(...)
    |   *PARAMETERS(...)
    |     |
    |     | FROM = <integer 1..40>
    |     | ,TO = *SAME / <integer 1..40>
    |   ,COLUMN-RANGE = *PARAMETERS(...)
    |     *PARAMETERS(...)
    |       |
    |       | FROM = <integer 1..40>
    |       | ,TO = *SAME / <integer 1..40>
    |   ,MODE = *SET / *RESET
  *BY-LINES(...)
    |
    | LINE = <integer 1..40>
    | ,CONTENT = <c-string 1..40>
,REVERSE-MODE = *NO / *YES
,OVERLAY = *NO / *BY-CHARACTER(...) / *BY-HP-FONT(...)
  *BY-CHARACTER(...)
    |
    | CHARACTER-CODE = <x-string 1..2>
  *BY-HP-FONT(...)
    |
    | HP-FONT-NAME = <alphanum-name 1..3>
    | ,CHARACTER-CODE = <x-string 1..2>
,ZOOM = *NO / *PARAMETERS(...)
  *PARAMETERS(...)
    |
    | LINES = *SAME / 125 / 135 / 150 / 200 / 80 / 75 / 65 / 50
    | ,COLUMNS = *SAME / 125 / 135 / 150 / 200 / 80 / 75 / 65 / 50

```

Operands

CHARACTER-CODE =

Hexadecimal code of the character whose shape is to be changed. Either one specific character or all characters from the current character code table of the HP font can be selected.

CHARACTER-CODE = *ALL

The desired change in the shape is to affect all characters from the current character code table of the HP font.

CHARACTER-CODE = <x-string 1..2>

Hexadecimal code of the individual character whose shape is to be changed.

ROTATION =

Defines the degree by which the selected character is to be rotated clockwise.

ROTATION = 0

Default: the selected character is not to be rotated.

ROTATION = 90 / 180 / 270

The selected character is to be rotated clockwise by the specified number of degrees. The axis of rotation runs through the imaginary line and column number 20.5 of the character matrix.

DRAW =

Defines whether individual dots in the character matrix are to be set or reset.

DRAW = *NO

Default: individual dots in the character matrix are not to be set or reset.

DRAW = *PARAMETERS(...)

Individual dots in the character matrix are to be set or reset. The exact position of the dot to be changed is found via the specification of line and column, by which every dot within the character matrix can be identified. Within a given (2,2) matrix A, a random element (a random dot) a_{ij} is addressed by i = line 1..40 of the matrix and j = column 1..40 of the matrix.

LINE-RANGE = *PARAMETERS(...)

Definition of the line or the line range within the character matrix.

FROM = <integer 1..40>

Integer value for the line of the character matrix as of which dots are to be set or reset.

TO =

Integer value for the line of the character matrix up to which dots are to be set or reset.

TO = *SAME

The value specified via the FROM operand is taken over, i.e. a specific line rather than a line range is defined.

TO = <integer 1..40>

Integer value for the line of the character matrix up to which the dots are to be set or reset. If this value differs from that specified for FROM, a line range is defined within which changes are to be made.

COLUMN-RANGE = *PARAMETERS(...)

Specifies the column or the column range within the character matrix.

FROM = <integer 1..40>

Integer value for the column of the character matrix as of which dots are to be set or reset.

TO =

Integer value for the column of the character matrix up to which dots are to be set or reset.

TO = *SAME

The value specified via the FROM operand is taken over, i.e. a specific column rather than a column range is defined.

TO = <integer 1..40>

Integer value for the column of the character matrix up to which dots are to be set or reset. If this value differs from that specified for FROM, a column range is defined within which changes are to be made.

MODE =

Defines whether the dots within the delimited range or the individual dot are/is to be set (i.e. blacked out) or reset (i.e. cleared).

MODE = *SET

Default: the dots within the delimited range or the individual dot are/is to be set.

MODE = *RESET

The dots within the delimited range or the individual dot are/is to be reset.

DRAW = list-poss(40): *BY-LINES(...)

Individual lines in the specified character matrix are to be set or reset. This allows a new character matrix and the shape of the character to be constructed. If you use this operand, you must make sure that the lines which are not explicitly specified and defined are automatically reset with a series of blanks.

LINE = <integer 1..40>

Line of the character matrix which is to be replaced.

CONTENT = <c-string 1..40>

Specifies a character string up to 40 characters long, depending on the character width, which is to replace the line identified by LINE in the matrix. To reset (clear) a dot, you can use the character “ ” (blank) or “.” (period). All other characters are interpreted such that a dot is placed in the relevant position.

If the specified line (measured in characters) is longer than the width of the relevant character in columns, the end of the line is truncated.

Example

The specification LINE = 12, CONTENT='xx bb.....AAA' is interpreted as follows: in line 12 of the character matrix the first two columns are set, the next four are not set, the next two are set, the next six are not, and the next three are.

REVERSE-MODE =

Specifies whether the shape of the individual character or of all characters of the font is to be modified through reverse video.

REVERSE-MODE = *NO

Default: the character(s) is/are not to be displayed in reverse video.

REVERSE-MODE = *YES

The character(s) is/are to be displayed in reverse video.

OVERLAY =

Specifies whether the shape of the individual character or of all characters of the font is to be modified through overlaying with a character from the same font or from a different HP font. This option is useful if you want to construct a complete set of letters from a character set consisting only of “individual parts” of letters (e.g. only vertical and horizontal lines) by combining and overlaying.

OVERLAY = *NO

Default: the character(s) is/are not to be overlaid with another character.

OVERLAY = *BY-CHARACTER(...)

The character(s) is/are to be overlaid with another character from the current font.

CHARACTER-CODE = <x-string 1..2>

Hexadecimal code of the character from the current font which is to overlay the selected character(s).

OVERLAY = *BY-HP-FONT(...)

The character(s) is/are to be overlaid with a character from a different HP font.

HP-FONT-NAME = <alphanum-name 1..3>

Name of the HP font containing the character which is to overlay the selected character(s).

CHARACTER-CODE = <x-string 1..2>

Hexadecimal code of the character from the specified HP font which is to overlay the selected character(s).

ZOOM =

Defines whether the shape of an individual character or all characters of the font is to be modified via reduction or enlargement. The change in size need not be proportional, i.e. different percentage changes can be specified for character height (line density) and character width (character density).

You should note that the shape of the character may differ from the desired result on account of unavoidable rounding discrepancies. For the same reason, the original shape of the character cannot be guaranteed if you reduce the size of a character by a given percentage and then enlarge it by the same amount. The only element to be retained regardless of the operation is the centering of the character at a particular position. The default values for line spacing and character density for the font or the character are retained; this means that any characters which, when enlarged, extend beyond the character frame predefined by the line spacing and character density are truncated in the printout.

ZOOM = *NO

Default: the character(s) is/are not to be enlarged or reduced.

ZOOM = *PARAMETERS(...)

The character(s) is/are to be enlarged or reduced. The exact percentage changes can be defined separately for the height and width of the character.

LINES =

Defines how the height of the character is to be changed.

LINES = *SAME

Default: the height of the character remains unchanged.

LINES = 125 / 135 / 150 / 200 / 80 / 75 / 65 / 50

Relative to the original size, the height of the selected character is increased by 125%, 135%, 150% or 200%, or reduced by 80%, 75%, 65% or 50%.

COLUMNS =

Defines how the width of the character is to be changed.

COLUMNS = *SAME

Default: the width of the character remains unchanged.

COLUMNS = 125 / 135 / 150 / 200 / 80 / 75 / 65 / 50

Relative to the original size, the width of the selected character is increased by 125%, 135%, 150% or 200%, or reduced by 80%, 75%, 65% or 50%.

CLOSE-GENERAL-LOOP

Conclude creation of general loop

Statement group: Resource accesses
Statement type: Substatement
Assigned main statements: ADD- / MODIFY-PRINT-RESOURCES -
OBJECT=*GENERAL-LOOP

Function

This statement concludes the current creation or updating of a print resource of the type general loop, which was initiated by the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*GENERAL-LOOP(GENERAL-LOOP-NAME=..) and completed with a number of ADD-PARAGRAPH or MODIFY-PARAGRAPH substatements.

Format

CLOSE-GENERAL-LOOP

CLOSE-HP-FONT

Conclude creation of HP font

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*FONT(*HP-FONT)

Function

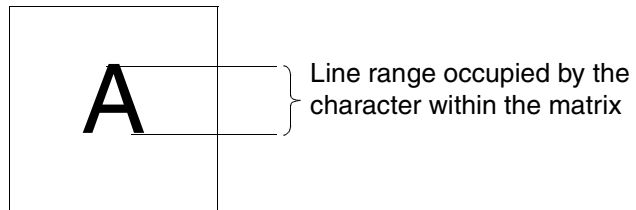
This statement concludes the current creation or updating of a print resource of the type HP font, which was initiated by the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*FONT(HP-FONT(HP-FONT-NAME=..)).

Format

CLOSE-HP-FONT

Once the statement has been executed, the created or modified HP font is stored in the current PRFILE. The character density of the font is calculated automatically beforehand. The algorithm for calculating the character density is as follows:

- for each character of the font, the first line containing a dot and the last line containing a dot are searched for within the character matrix:



- the character density is determined from the line range occupied by the character in accordance with a conversion value from the following table:

Line range	Line density
1 - 40	6 lpi
7 - 36	8 lpi
11 - 34	10 lpi
13 - 32	12 lpi
21 - 30	24 lpi

- once the character density has been established for each character of the font, the largest of these densities is assigned to the font.

CLOSE-LOOP

Conclude creation of loop

Statement group: Resource accesses
Statement type: Substatement
Assigned main statements: ADD- / MODIFY-PRINT-RESOURCES -
OBJECT=*LOOP

Function

This statement concludes the current creation or updating of a print resource of the type loop, which was initiated by the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*LOOP(LOOP=..) and completed with a number of MODIFY-LINE-DESCRIPTOR substatements.

Format

CLOSE-LOOP

CLOSE-PR-FILE

Close current resource library

Statement group: File accesses
Statement type: Main statement

Function

This statement closes the current resource library, which was previously opened via the OPEN-PR-FILE statement. This statement has no operands. A file name does not need to be specified, as the statement always refers to the last library opened.

Format

CLOSE-PR-FILE

Example:

```
//OPEN-PR-FILE FILE-NAME=MY.PRFILE, MODE=UPDATE           (1)
//ADD-PRINT-RESOURCES OBJECT=*LOOP( -                     (2)
//      LOOP=*HP-LOOP(HP-LOOP-NAME=A4, -
//      DEFAULTS=*PARAMETERS(-
//      LOOP-LENGTH=*INCHES(11,4), -
//      VERTICAL-DENSITY=6)))
//MODIFY-LINE-DESCRIPTOR LINE-RANGE=*PARAMETERS( -
//      FROM=3, TO=*SAME), CHANNEL-NUMBER=1, -
//      VERTICAL-DENSITY=8
//CLOSE-LOOP                                               (3)
//SHOW-PRINT-RESOURCES OBJECT=*LOOP( -                     (4)
//      LOOP=*HP-LOOP(HP-LOOP-NAME=A4))
//CLOSE-PR-FILE                                           (5)
```

- (1) The resource library "MY.PRFILE" is opened.
- (2) A resource of the type loop is to be created.
- (3) Creation of the print resource is concluded.
- (4) The created resource is checked to see that it is complete.
- (5) The resource library "MY.PRFILE" is closed again.

CONVERT-PRINT-RESOURCES

Convert object types

Statement group:	Resource accesses
Object types:	General loop, loop, HP font, ND font
Statement type:	Main statement

Function

This statement triggers the conversion of specific object types into other object types. The object types which can be converted are general loops, loops, HP fonts and ND fonts. The following conversion types can be selected:

Loop → general loop

General loop → loop

ND font → HP font

Format

CONVERT-PRINT-RESOURCES

OBJECT = *GENERAL-LOOP(...) / *LOOP(...) / *FONT(...)

***GENERAL-LOOP(...)**

GENERAL-LOOP-NAME = <alphanum-name 1..8>

,TO-OBJECT-TYPE = *LOOP (...)

***LOOP(...)**

LOOP-NAME = <alphanum-name 1..3>

,PRINTER-MODEL = *HP / *LP / list-poss(2): *HP / *LP

,CONVERSION-RULE = *FULL-FIT / *BEST-FIT

***LOOP(...)**

LOOP-NAME = <alphanum-name 1..3>

,PRINTER-MODEL = *HP / *LP / *ND

,TO-GENERAL-LOOP = <alphanum-name 1..8>

***FONT(...)**

FONT = *ND-FONT (...)

***ND-FONT(...)**

ND-FONT-NAME = <alphanum-name 1..3>

,TO-FONT = *HP-FONT (...)

***HP-FONT(...)**

HP-FONT-NAME = *SAME / <alphanum-name 1..3>

,UNDERScore-CODE = *STD / <x-string 1..2>

,GRAPHIC-CHARACTERS = *NONE / *PARAMETERS(...)

***PARAMETERS(...)**

VERTICAL-DENSITY = 6 / 8 / 12

GRAPHIC-CHAR-CODES = list-poss(256): <x-string 1..2>

,WRITE-MODE = *STD / *CREATE / *REPLACE

Operands

OBJECT =

Type of print resource to be converted.

OBJECT = *GENERAL-LOOP(...)

A print resource of the type general loop (a loop record that can serve as a reference for the creation of individual loops) is to be converted into a loop.

GENERAL-LOOP-NAME = <alphanum-name 1..8>

Name under which the print resource is to be stored in the current PRFILE.

TO-OBJECT-TYPE = *LOOP(...)

The specified print resource of the type general loop is to be converted into a print resource of the type loop.

When a general loop is created, not all line ranges, and therefore not all the complete feed information for a page, need to be defined (see the ADD-PARAGRAPH statement, page 72).

Furthermore, every creation of a general loop is device-independent, which means that the general loop may have attributes that are not supported by the printer type into whose loop it is to be converted.

The statement therefore supports two conversion strategies:

FULL-FIT strategy: an attempt is made to convert the definitions of the general loop into the device-specific loop on a 1:1 basis, and in particular to retain the precise line density; if the attempt fails, no conversion takes place.

BEST-FIT strategy: an attempt is made to find the best possible fit between the line density for the loop and the number and density of the lines defined in the general loop paragraphs, in order to cover all gaps in the loop.

LOOP-NAME = <alphanum-name 1..3>

Name of the print resource loop which is to be created from the conversion of the general loop.

PRINTER-MODEL = *HP / *LP / list-poss(2): *HP / *LP

Printer type for which the loop is to be created. If various printer types are specified in a list and the conversion of the first element in the list is not successful, the statement is canceled.

CONVERSION-RULE =

Specifies the conversion strategy to be used.

CONVERSION-RULE = *FULL-FIT

Default: the FULL-FIT strategy is to be used, i.e. a 1:1 conversion of general loop into loop.

CONVERSION-RULE = BEST-FIT

The BEST-FIT strategy is to be used, i.e. as good a conversion as possible of general loop into loop.

OBJECT = *LOOP(...)

A print resource of the type loop is to be converted into a general loop.

LOOP-NAME = <alphanum-name 1..3>

Name under which the print resource is to be stored in the current PRFILE.

PRINTER-MODEL = *HP / *LP / *ND

Printer type for which the loop was created.

TO-GENERAL-LOOP = <alphanum-name 1..8>

The specified print resource of the type loop is to be converted into a print resource of the type general loop under the name specified here.

OBJECT = *FONT(...)

A print resource of the object class font, which includes the object types HP font, ND font and HP-font pool, is to be converted. Only a print resource of the type ND font (a matching set of print characters of the same size, typeface and style created for a printer of the type ND) can be converted into a font for a printer of the type HP.

FONT = *ND-FONT(...)

Object type and therefore type of printer for which the font was originally created: ND.

ND-FONT-NAME = <alphanum-name 1..3>

Name under which the print resource ND font is stored in the current PRFILE.

TO-FONT = *HP-FONT(...)

Specifies the printer type for which the converted font is to be created: HP.

HP-FONT-NAME =

Defines the name the HP font is to receive after conversion.

HP-FONT-NAME = *SAME

Default: the converted HP font is to receive the same name as the ND font to be converted.

HP-FONT-NAME = <alphanum-name 1..3>

Name the HP font is to receive after conversion.

UNDERSCORE-CODE =

Defines whether the ND font to be converted contains a special EBCDIC character which, after conversion into the HP font, is to be used as a code. In conjunction with the HP function LINEMERGE, this code produces an underscore.

UNDERSCORE-CODE = *STD

Default: the EBCDIC character used for the underscore function is the value X'6D', provided this code is included in the ND font. If it is not, no special EBCDIC character is used for the underscore function on HP printers.

UNDERSCORE-CODE = <x-string 1..2>

Hexadecimal code of the character in the ND font which will trigger the underscore function in the HP font.

GRAPHIC-CHARACTERS =

Defines whether the ND font contains special graphics characters which may have to be subjected to a special conversion routine during conversion into the HP font.

GRAPHIC-CHARACTERS = *NONE

Default: the ND font does not contain special graphics characters.

GRAPHIC-CHARACTERS = *PARAMETERS(...)

The ND font contains special graphics characters which must be subjected to a special conversion routine during conversion into the HP font.

VERTICAL-DENSITY = 6 / 8 / 12

Defines the line density in lpi to be used for the converted graphics characters of the HP font.

GRAPHIC-CHAR-CODES = list-poss(256): <x-string 1..2>

Hexadecimal code of the graphics characters to be converted.

WRITE-MODE =

Defines whether an existing object of the same name may be overwritten when a print resource is converted.

Whether a print resource may be included in the current PRFILE at all depends on how the file was opened and is defined via the OPEN-PR-FILE statement (see page 178).

WRITE-MODE = *STD

The setting is taken from the default value set via the MODIFY-PRM-OPTIONS statement (see page 173).

WRITE-MODE = *CREATE

The converted print resource is not permitted in the current PRFILE. The specified attributes will only be stored in the PRFILE if it does not already contain a print resource of the same name and type.

WRITE-MODE = *REPLACE

An existing object of the same name may be overwritten.

COPY-PRINT-RESOURCES

Copy elements of PRFILE

Statement group: Resource accesses

Statement type: Main statement

Function

This statement copies individual elements or all elements of a PRFILE, the resource library. The following options may be used:

- copy a single resource or a number of resources of the same type within the same library
- copy a single resource or a number of resources of the same type from a source library into a target library
- copy all the elements from a source library into a target library.

The source and the target libraries must both be of the PRFILE type. Elements from other resource libraries can be imported via the IMPORT-PRINT-RESOURCES statement.

Format

(part 1 of 3)

COPY-PRINT-RESOURCES

OBJECT = ***ALL** / ***BAND-ID(...)** / ***CHARACTER-IMAGE(...)** / ***TRANSLATION-TAB(...)** / ***FONT(...)** /
***HP-FONT-POOL(...)** / ***IMAGE(...)** / ***GENERAL-LOOP(...)** / ***LOOP(...)** / ***PREFORM(...)** /
***SOFT-FONT(...)** / ***MACRO(...)**

***BAND-ID(...)**

BAND-ID-NAME = ***ALL** / <alphanum-name 1..4>

,**NEW-NAME** = ***SAME** / <alphanum-name 1..4>

***CHARACTER-IMAGE(...)**

CHARACTER-IMAGE-NAME = ***ALL** / <alphanum-name 1..3>

,**NEW-NAME** = ***SAME** / <alphanum-name 1..3>

***TRANSLATION-TAB(...)**

TRANSLATION-TAB-NAME = ***ALL** / <alphanum-name 1..8>

,**NEW-NAME** = ***SAME** / <alphanum-name 1..8>

***FONT(...)**

FONT = ***ALL** / ***HP-FONT(...)** / ***ND-FONT(...)** / ***PCL-FONT(...)**

***HP-FONT(...)**

HP-FONT-NAME = ***ALL** / <alphanum-name 1..3>

,**NEW-NAME** = ***SAME** / <alphanum-name 1..3>

***ND-FONT(...)**

ND-FONT-NAME = ***ALL** / <alphanum-name 1..3>

,**NEW-NAME** = ***SAME** / <alphanum-name 1..3>

***PCL-FONT(...)**

PCL-FONT-NAME = ***ALL** / <alphanum-name 1..3>

,**NEW-NAME** = ***SAME** / <alphanum-name 1..3>

***HP-FONT-POOL(...)**

HP-FONT-POOL-NAME = ***ALL** / <alphanum-name 1..4>

,**NEW-NAME** = ***SAME** / <alphanum-name 1..4>

continued ➡

```

*IMAGE(...)
  |
  | IMAGE = *ALL / *FORMS-OVERLAY-BUFFER(...) / *OVERLAY(...)
  |   *FORMS-OVERLAY-BUFFER(...)
  |     |
  |     | BUFFER-NAME = *ALL / <alphanum-name 1..4>
  |     | ,NEW-NAME = *SAME / <alphanum-name 1..4>
  |   *OVERLAY(...)
  |     |
  |     | OVERLAY-NAME = *ALL / <alphanum-name 1..4>
  |     | ,NEW-NAME = *SAME / <alphanum-name 1..4>
  |
  |
*GENERAL-LOOP(...)
  |
  | GENERAL-LOOP-NAME = *ALL / <alphanum-name 1..8>
  | ,NEW-NAME = *SAME / <alphanum-name 1..8>
  |
*LOOP(...)
  |
  | LOOP = *ALL / *HP-LOOP(...) / *ND-LOOP(...) / *LP-LOOP(...)
  |   *HP-LOOP(...)
  |     |
  |     | HP-LOOP-NAME = *ALL / <alphanum-name 1..3>
  |     | ,NEW-NAME = *SAME / <alphanum-name 1..3>
  |   *ND-LOOP(...)
  |     |
  |     | ND-LOOP-NAME = *ALL / <alphanum-name 1..3>
  |     | ,NEW-NAME = *SAME / <alphanum-name 1..3>
  |   *LP-LOOP(...)
  |     |
  |     | LP-LOOP-NAME = *ALL / <alphanum-name 1..3>
  |     | ,NEW-NAME = *SAME / <alphanum-name 1..3>
  |
  |
*PREFORM(...)
  |
  | PREFORM-NAME = *ALL / <alphanum-name 1..4>
  | ,NEW-NAME = *SAME / <alphanum-name 1..4>
  |
*SOFT-FONT(...)
  |
  | SOFT-FONT-NAME = *ALL / <alphanum-name 1..8>
  | ,NEW-NAME = *SAME / <alphanum-name 1..8>

```

continued ➔

```

*MACRO(...)
  |
  |   MACRO-NAME = *ALL / <alphanum-name 1..8>
  |   ,NEW-NAME = *SAME / <alphanum-name 1..8>
  |
  | ,FROM-PR-FILE = *CURRENT / *STD / <filename 1..54>
  | ,TO-PR-FILE = *CURRENT / *STD / <filename 1..54>
  |
  | ,ATTACHED-OBJECT = *YES / *NO
  |
  | ,WRITE-MODE = *STD / *CREATE / *REPLACE
  |
  | ,DIALOG-CONTROL = *STD / *NO / *YES / *ERROR

```

Operands

OBJECT =

Type of print resources to be transferred from the source library (PRFILE) to a target library (PRFILE).

OBJECT = *ALL

Default: the entire contents of the source library with all print resource types are to be transferred to the target library.

OBJECT = *BAND-ID(...)

Print resources of the type BAND-ID are to be copied.

BAND-ID-NAME =

Specifies which print resources of the type BAND-ID are to be copied.

BAND-ID-NAME = *ALL

Default: all print resources of the type BAND-ID are to be copied from the source library into the target library.

BAND-ID-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type BAND-ID to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via BAND-ID-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in BAND-ID-NAME.

NEW-NAME = <alphanum-name 1..4>

Name to be given to the individual print resource in the target library.

OBJECT = *CHARACTER-IMAGE(...)

Print resources of the type CHARACTER-IMAGE are to be copied.

CHARACTER-IMAGE-NAME =

Specifies which print resources of the type CHARACTER-IMAGE are to be copied.

CHARACTER-IMAGE-NAME = *ALL

Default: all print resources of the type CHARACTER-IMAGE are to be copied from the source library to the target library.

CHARACTER-IMAGE-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type CHARACTER-IMAGE to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via CHARACTER-IMAGE-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in CHARACTER-IMAGE-NAME.

NEW-NAME = <alphanum-name 1..3>

Name to be given to the individual print resource in the target library.

OBJECT = *TRANSLATION-TAB(...)

Print resources of the type TRANSLATION-TABLE are to be copied.

TRANSLATION-TAB-NAME =

Specifies which print resources of the type TRANSLATION-TABLE are to be copied.

TRANSLATION-TAB-NAME = *ALL

Default: all print resources of the type TRANSLATION-TABLE are to be copied from the source library into the target library.

TRANSLATION-TAB-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type TRANSLATION-TABLE to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via TRANSLATION-TAB-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in TRANSLATION-TAB-NAME.

NEW-NAME = <alphanum-name 1..8>

Name to be given to the individual print resource in the target library.

OBJECT = *FONT(...)

Print resources of the object class font, which includes the object types HP font, ND font, PCL font and HP-font pool, are to be copied.

FONT =

Specifies which object types from the object class font are selected. The object types HP font, ND font and PCL font can be chosen. Print resources of the type HP-font pool can be selected via a separate operand.

FONT = *ALL

All print resources of types HP font, ND font and PCL font are to be copied from the source library to the target library.

FONT = *HP-FONT(...)

Only print resources of the type HP font are to be copied from the source library to the target library.

HP-FONT-NAME =

Specifies which print resources of the type HP font are to be copied.

HP-FONT-NAME = *ALL

Default: all print resources of the type HP font are to be copied from the source library to the target library.

HP-FONT-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type HP font to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via HP-FONT-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in HP-FONT-NAME.

NEW-NAME = <alphanum-name 1..3>

Name to be given to the individual print resource in the target library.

FONT = *ND-FONT(...)

Only print resources of the type ND font are to be copied from the source library into the target library.

ND-FONT-NAME =

Specifies which print resources of the type ND font are to be copied.

ND-FONT-NAME = *ALL

Default: all print resources of the type ND font are to be copied from the source library to the target library.

ND-FONT-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type ND font to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via ND-FONT-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in ND-FONT-NAME.

NEW-NAME = <alphanumeric 1..3>

Name to be given to the individual print resource in the target library.

FONT = *PCL-FONT(...)

Only print resources of the type PCL font are to be copied from the source library into the target library.

PCL-FONT-NAME =

Specifies which print resources of the type PCL font are to be copied.

PCL-FONT-NAME = *ALL

All print resources of the type PCL font are to be copied from the source library to the target library.

PCL-FONT-NAME = <alphanumeric 1..3>

Name of the individual print resource of the type PCL font to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via PCL-FONT-NAME once they have been copied into the target library.

NEW-NAME = *SAME

The names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been selected for PCL-FONT-NAME.

NEW-NAME = <alphanumeric 1..3>

Name to be given to the individual print resource in the target library.

OBJECT = *HP-FONT-POOL(...)

Print resources of the type HP-font pool are to be copied.

HP-FONT-POOL-NAME =

Specifies which print resources of the type HP-font pool are to be copied.

HP-FONT-POOL-NAME = *ALL

Default: all print resources of the type HP-font pool are to be copied from the source library to the target library.

HP-FONT-POOL-NAME = <alphanumeric 1..4>

Name of the individual print resource of the type HP-font pool to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via HP-FONT-POOL-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in HP-FONT-POOL-NAME.

NEW-NAME = <alphanum-name 1..8>

Name to be given to the individual print resource in the target library.

OBJECT = *IMAGE(...)

Print resources of the object class image, which incorporates the object types forms overlay buffer (FOB) and PCL overlay, are to be copied.

IMAGE =

Specifies which object types from the object class image are to be selected. The object types FOB and PCL overlay can be selected.

IMAGE = *ALL

All print resources of types FOB and PCL overlay are to be copied from the source library to the target library.

IMAGE = *FORMS-OVERLAY-BUFFER(...)

Print resources of the type FOB are to be copied from the source library to the target library.

BUFFER-NAME =

Specifies which print resources of the type FOB are to be copied.

BUFFER-NAME = *ALL

Default: all print resources of the type FOB are to be copied from the source library to the target library.

BUFFER-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type FOB which is to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via BUFFER-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in BUFFER-NAME.

NEW-NAME = <alphanum-name 1..4>

Name to be given to the individual print resource in the target library.

IMAGE = *OVERLAY(...)

Print resources of the type PCL overlay are to be copied from the source library to the target library.

OVERLAY-NAME =

Specifies which print resources of the type PCL overlay are to be copied.

OVERLAY-NAME = *ALL

All print resources of the type PCL overlay are to be copied from the source library to the target library.

OVERLAY-NAME = <alphanumeric 1..4>

Name of the individual print resource of the type PCL overlay to be copied.

NEW-NAME =

Specifies the name to be given to the print resources (of the source library) selected via OVERLAY-NAME once they have been copied (into the target library).

NEW-NAME = *SAME

The names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been selected for OVERLAY-NAME.

NEW-NAME = <alphanumeric 1..4>

Name to be given to the individual print resource in the target library.

OBJECT = *GENERAL-LOOP(...)

Print resources of the type general loop are to be copied.

GENERAL-LOOP-NAME =

Specifies which print resources of the type general loop are to be copied.

GENERAL-LOOP-NAME = *ALL

Default: all print resources of the type general loop are to be copied from the source library to the target library.

GENERAL-LOOP-NAME = <alphanumeric 1..8>

Name of the individual print resource of the type general loop which is to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via GENERAL-LOOP-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in GENERAL-LOOP-NAME.

NEW-NAME = <alphanumeric 1..8>

Name to be given to the individual print resource in the target library.

OBJECT = *LOOP(...)

Print resources of the type loop are to be copied.

LOOP =

Specifies the printer type whose loop records are to be copied. Loop records of the printer types HP, ND or LP can be selected.

LOOP = *ALL

Default: all print resources of the type loop are to be copied, irrespective of the printer type.

LOOP = *HP-LOOP(...)

Only print resources of the type HP loop are to be copied from the source library to the target library.

HP-LOOP-NAME =

Specifies which print resources of the type HP loop are to be copied.

HP-LOOP-NAME = *ALL

Default: all print resources of the type HP loop are to be copied from the source library to the target library.

HP-LOOP-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type HP loop to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via HP-LOOP-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in HP-LOOP-NAME.

NEW-NAME = <alphanum-name 1..3>

Name to be given to the individual print resource in the target library.

LOOP = *ND-LOOP(...)

Only print resources of the type ND loop are to be copied from the source library to the target library.

ND-LOOP-NAME =

Specifies which print resources of the type ND loop are to be copied.

ND-LOOP-NAME = *ALL

Default: all print resources of the type ND loop are to be copied from the source library to the target library.

ND-LOOP-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type ND loop which is to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via ND-LOOP-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in ND-LOOP-NAME.

NEW-NAME = <alphanumeric 1..3>

Name to be given to the individual print resource in the target library.

LOOP = *LP-LOOP(...)

Only print resources of the type LP loop are to be copied from the source library to the target library.

LP-LOOP-NAME =

Specifies which print resources of the type LP loop are to be copied.

LP-LOOP-NAME = *ALL

Default: all print resources of the type LP loop are to be copied from the source library to the target library.

LP-LOOP-NAME = <alphanumeric 1..3>

Name of the individual print resource of the type LP loop which is to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via LP-LOOP-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in LP-LOOP-NAME.

NEW-NAME = <alphanumeric 1..3>

Name to be given to the individual print resource in the target library.

OBJECT = *PREFORM(...)

Print resources of the type preform record are to be copied.

PREFORM-NAME =

Specifies which print resources of the type preform record are to be copied.

PREFORM-NAME = *ALL

Default: all print resources of the type preform record are to be copied from the source library to the target library.

PREFORM-NAME = <alphanumeric 1..4>

Name of the individual print resource of the type preform record to be copied.

NEW-NAME =

Specifies the name to be given to the print resources of the source library selected via PREFORM-NAME once they have been copied into the target library.

NEW-NAME = *SAME

Default: the names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been set in PREFORM-NAME.

NEW-NAME = <alphanum-name 1..4>

Name to be given to the individual print resource in the target library.

OBJECT = *SOFT-FONT(...)

Print resources of the type PCL softfont are to be copied.

SOFT-FONT-NAME =

Specifies which print resources of the type PCL softfont are to be copied.

SOFT-FONT-NAME = *ALL

All print resources of the type PCL softfont are to be copied from the source library to the target library.

SOFT-FONT-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type PCL softfont to be copied.

NEW-NAME =

Specifies the name to be given to the print resources (of the source library) selected via SOFT-FONT-NAME once they have been copied (into the target library).

NEW-NAME = *SAME

The names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been selected for SOFT-FONT-NAME.

NEW-NAME = <alphanum-name 1..8>

Name to be given to the individual print resource in the target library.

OBJECT = *MACRO(...)

Print resources of the type PCL macro are to be copied.

MACRO-NAME =

Specifies which print resources of the type PCL macro are to be copied.

MACRO-NAME = *ALL

All print resources of the type PCL macro are to be copied from the source library to the target library.

MACRO-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type PCL macro to be copied.

NEW-NAME =

Specifies the name to be given to the print resources (of the source library) selected via MACRO-NAME once they have been copied (into the target library).

NEW-NAME = *SAME

The names of the print resources are to be retained. This operand value is the only one permitted if the value *ALL has been selected for MACRO-NAME.

NEW-NAME = <alphanumeric 1..8>

Name to be given to the individual print resource in the target library.

FROM-PR-FILE =

Specifies the library (source library) containing the print resources to be copied.

FROM-PR-FILE = *CURRENT

The print resources are contained in the currently open resource library opened via OPEN-PR-FILE.

FROM-PR-FILE = *STD

The print resources are contained in the system PRFILE.

FROM-PR-FILE = <filename 1..54>

Fully qualified file name for the source library containing the print resources to be copied.

TO-PR-FILE =

Specifies the library (target library) into which the print resources are to be copied.

TO-PR-FILE = *CURRENT

The print resources are to be copied into the currently open resource library opened via OPEN-PR-FILE.

TO-PR-FILE = *STD

The print resources are to be copied into the system PRFILE (for information on naming conventions see chapter 9, "Installing PRM", on page 389). You must have the necessary privileges for write access to the system PRFILE.

TO-PR-FILE = <filename 1..54>

Fully qualified file name for the target library into which the print resources are to be copied.

ATTACHED-OBJECT =

Defines whether not only the specified print resource itself but also all the objects assigned to it are to be copied. This is necessary for print resources of the type HP-font pool, where various print resources of the type HP font are combined to form a pool. If the font pool is to be copied, this specification can control whether the individual elements are also to be copied recursively. The same applies to PCL fonts and PCL overlays if they reference PCL softfonts or PCL macros.

ATTACHED-OBJECT = *YES

Default: not only the specified print resource itself but also all objects assigned to it are to be copied.

ATTACHED-OBJECT = *NO

Only the specified print resource itself is to be copied. The objects assigned to it are not transferred.

WRITE-MODE =

Specifies whether an existing object of the same name can be overwritten when a print resource is copied.

Whether a print resource may be included in the current PRFILE at all depends on how the file was opened and is defined via the OPEN-PR-FILE statement.

WRITE-MODE = *STD

The setting is taken from the default value set via the MODIFY-PRM-OPTIONS statement (see page 173).

WRITE-MODE = *CREATE

The print resource to be created is not permitted in the current PRFILE. The specified attributes will only be stored in the PRFILE if it does not already contain a print resource of the same name and type.

WRITE-MODE = *REPLACE

An existing object of the same name may be overwritten.

DIALOG-CONTROL =

Specifies whether a dialog with the user is to be started to allow controlled execution of the statement.

DIALOG-CONTROL = *STD

The setting is taken from the default value set via the MODIFY-PRM-OPTIONS statement.

DIALOG-CONTROL = *NO

No dialog is to be started.

DIALOG-CONTROL = *YES

A dialog is to be started. This allows you to control the way the program handles each resource to be copied, i.e. whether it is to be copied or not, or whether the statement is to be canceled.

DIALOG-CONTROL = *ERROR

A conditional dialog is to be started. Only in the event of an error during processing can you control further operation: statement to be continued with next resource (response: "0") or canceled (response: "1").

IMPORT-HP-CHARACTER

Import characters from HP font into current character code table

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*FONT(*HP-FONT)

Function

This statement enters any character codes from an HP font into the character code table currently being edited. The current font and character code table are selected in the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*FONT(*HP-FONT(HP-FONT-NAME=...)).

Character codes which are already occupied in the current code table cannot be overwritten with this statement. If a character from any HP font is to be entered in the current code table, an unoccupied space in the table must be specified.

Format

IMPORT-HP-CHARACTER
<pre> CHARACTER-CODE = *RANGE(...) *RANGE(...) | | FROM = <x-string 1..2> | ,TO = *SAME / <x-string 1..2> ,NEW-START-CODE = *SAME / <x-string 1..2> ,FROM-HP-FONT = <alphanum-name 1..3> ,IMPORT-RULE = *WITH-GAP / *WITHOUT-GAP </pre>

Operands

CHARACTER-CODE = *RANGE(...)

The character codes to be imported from the HP font can be specified by means of a range.

FROM = <x-string 1..2>

Lower limit of the range. The first hexadecimal code to be entered in the current character code table from the range of characters to be imported.

TO =

Upper limit of the range.

TO = *SAME

Default value for the end of the range. This specifies that only one character code (the one specified by FROM) is to be entered in the character code table.

TO = <x-string 1..2>

Last hexadecimal code to be entered in the current character code table from the range of characters to be imported.

NEW-START-CODE =

Assigns a new code to the imported character from the HP font in the current character code table. If a range has been specified with FROM and TO, you must make sure that there is enough free space in the character code table above the start code specified here. The characters to be transferred are entered in the table in linear form, beginning with the start code.

NEW-START-CODE = *SAME

Default: each imported character from the HP font is to be entered in the character code table with its original code.

NEW-START-CODE = <x-string 1..2>

New character code to be given to the first character to be imported in the current character code table. If a range of characters has been selected in the HP font, the subsequent characters are entered in the table in ascending order of their codes.

FROM-HP-FONT = <alphanum-name 1..3>

Specifies the HP font from which the characters are to be taken.

IMPORT-RULE =

Defines how gaps in the character code sequence of the HP font are to be handled. The character code sequence to be imported from the HP font is selected via FROM and TO.

IMPORT-RULE = *WITH-GAP

Default: gaps in the character code sequence of the HP font are also incorporated in the current character code table.

IMPORT-RULE = *WITHOUT-GAP

Gaps in the character code sequence of the HP font are not taken over. The characters to be imported are entered in the table in ascending order of their codes.

IMPORT-PRINT-RESOURCES

Import resources from freely selectable print control file

Statement group: Resource accesses

Statement type: Main statement

Function

This statement imports individual resources or all resources from any print control file into the current PRFILE. The current PRFILE is the last resource library opened with OPEN-PR-FILE.

The following table shows the possible print control files and the resources that can be imported from them:

Print control file	Resources in this file
HPFILE	HP loop HP font HP-font pool FOB
NDFILE	ND loop ND font
SPOOLFILE	LP loop CHAR-IMAGE BAND-ID TRANSLATION-TABLE Preform record
FGSFILE	FOB
PCLFILE	PCL font PCL softfont PCL overlay PCL macro
TRANSFILE	HP font HP FOB PCL macro PCL softfont

Print control files and resources

Format

(part 1 of 2)

IMPORT-PRINT-RESOURCES

```

OBJECT = *ALL / *BAND-ID(...) / *CHARACTER-IMAGE(...) / *TRANSLATION-TAB(...) / *FONT(...) /
        *HP-FONT-POOL(...) / *IMAGE(...) / *LOOP(...) / *PREFORM(...) / *SOFT-FONT(...) / *MACRO(...)

*BAND-ID(...)
    | BAND-ID-NAME = *ALL / <alphanum-name 1..4>

*CHARACTER-IMAGE(...)
    | CHARACTER-IMAGE-NAME = *ALL / <alphanum-name 1..3>

*TRANSLATION-TAB(...)
    | TRANSLATION-TAB-NAME = *ALL / <alphanum-name 1..8>

*FONT(...)
    | FONT-NAME = *ALL / <alphanum-name 1..3>

*HP-FONT-POOL(...)
    | HP-FONT-POOL-NAME = *ALL / <alphanum-name 1..4>

*IMAGE(...)
    | IMAGE = *ALL / *FORMS-OVERLAY-BUFFER(...) / *OVERLAY(...)
        | *FORMS-OVERLAY-BUFFER(...)
            | BUFFER-NAME = *ALL / <alphanum-name 1..4>
        | *OVERLAY(...)
            | OVERLAY-NAME = <alphanum-name 1..4>

*LOOP(...)
    | LOOP-NAME = *ALL / <alphanum-name 1..3>

*PREFORM(...)
    | PREFORM-NAME = *ALL / <alphanum-name 1..4>

*SOFT-FONT(...)
    | SOFT-FONT-NAME = <alphanum-name 1..8>

*MACRO(...)
    | MACRO-NAME = <alphanum-name 1..8>

,FROM-PRINTER-FILE = *HPFILE(...) / *NDFILE(...) / *FGSFILE(...) / *SPOOLFILE(...) / *PCLFILE(...)
    / *TRANSFILE(...)

*HPFILE(...)
    | HP-FILE-NAME = <filename 1..54>

```

continued ➔

```

*NDFILE(...)
  | ND-FILE-NAME = <filename 1..54>
*FGSFILE(...)
  | FGS-FILE-NAME = <filename 1..54>
*SPOOLFILE(...)
  | SPOOL-FILE-NAME = <filename 1..54>
*PCLFILE(...)
  | PCL-FILE-NAME = <filename 1..54>
*TRANSFILE(...)
  | TRANS-FILE-NAME = <filename 1..54>
,ATTACHED-OBJECT = *YES / *NO
,WRITE-MODE = *STD / *CREATE / *REPLACE
,DIALOG-CONTROL = *STD / *NO / *YES / *ERROR

```

Operands

OBJECT =

Type of print resources to be transferred from the print control file to the current PRFILE. The type of the printer for which the resource was created is taken over during the import operation.

OBJECT = *ALL

Default: the entire contents of the print control file with all print resource types stored in it are to be transferred to the current PRFILE.

OBJECT = *BAND-ID(...)

Print resources of the type BAND-ID are to be imported from a print control file of the type SPOOLFILE.

BAND-ID-NAME =

Specifies which print resources of the type BAND-ID are to be imported.

BAND-ID-NAME = *ALL

Default: all print resources of the type BAND-ID are to be imported from the SPOOLFILE into the current PRFILE.

BAND-ID-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type BAND-ID to be imported.

OBJECT = *CHARACTER-IMAGE(...)

Print resources of the type CHARACTER-IMAGE are to be imported from a print control file of the type SPOOLFILE.

CHARACTER-IMAGE-NAME =

Specifies which print resources of the type CHARACTER-IMAGE are to be imported.

CHARACTER-IMAGE-NAME = *ALL

Default: all print resources of the type CHARACTER-IMAGE are to be imported from the SPOOLFILE into the current PRFILE.

CHARACTER-IMAGE-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type CHARACTER-IMAGE which is to be imported.

OBJECT = *TRANSLATION-TAB(...)

Print resources of the type TRANSLATION-TABLE are to be imported from a print control file of the type SPOOLFILE.

TRANSLATION-TAB-NAME =

Specifies which print resources of the type TRANSLATION-TABLE are to be imported.

TRANSLATION-TAB-NAME = *ALL

Default: all print resources of the type TRANSLATION-TABLE are to be imported from the SPOOLFILE into the current PRFILE.

TRANSLATION-TAB-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type TRANSLATION-TABLE which is to be imported.

OBJECT = *FONT(...)

Print resources of the object types HP font, ND font or PCL font (depending on the print control file to be specified) are to be imported into the current PRFILE.

FONT-NAME =

Specifies which print resources of the type HP font, ND font or PCL font are to be imported.

FONT-NAME = *ALL

All print resources of the type HP font or ND font are to be imported into the current PRFILE from the HPFILE or the NDFILE respectively.

Caution: Fonts from a PCLFILE or TRANSFILE can only be copied individually. If the value '*PCLFILE' or '*TRANSFILE' was set for FROM-PRINTER-FILE, the value *ALL cannot be specified for FONT-NAME.

FONT-NAME = <alphanum-name 1..3>

Name of the individual print resource which is to be imported. If a PCL font is to be imported from a *PCLFILE, the name of the print resource which is created in the PRFILE is specified here.

OBJECT = *HP-FONT-POOL(...)

Print resources of the type HP-font pool are to be imported from an HPFILE into the current PRFILE.

HP-FONT-POOL-NAME =

Specifies which print resources of the type HP-font pool are to be imported.

HP-FONT-POOL-NAME = *ALL

Default: all print resources of the type HP-font pool are to be imported from the HPFILE into the current PRFILE.

HP-FONT-POOL-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type HP-font pool to be imported.

OBJECT = *IMAGE(...)

Print resources of the object class image, containing the object types forms overlay buffer (FOB) and PCL overlay, are to be imported into the current PRFILE from an HPFILE, an FGSFILE or a PCLFILE.

IMAGE =

Specifies which object types from the object class image are to be selected. The object types FOB and PCL overlay can be selected.

IMAGE = *ALL

All print resources of type FOB are to be imported into the current PRFILE from an HPFILE. It is not possible to import from an FGSFILE, PCLFILE or TRANSFILE if IMAGE = *ALL has been specified.

IMAGE = *FORMS-OVERLAY-BUFFER(...)

Print resources of the type FOB are to be imported into the PRFILE from the print control file to be specified.

BUFFER-NAME =

Specifies which print resources of the type FOB are to be imported.

BUFFER-NAME = *ALL

Default: all print resources of type FOB are to be imported from the print control file into the current PRFILE.

Caution: Fonts from a PCLFILE or FGSFILE can only be imported individually. If the value '*TRANSFILE' or '*FGSFILE' was set for FROM-PRINTER-FILE, the value *ALL cannot be specified for BUFFER-NAME.

BUFFER-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type FOB which is to be imported from an HPFILE. If the import is from an FGSFILE or a TRANSFILE (these contain only one print resource), the name under which the print resource is created in the PRFILE is specified here.

IMAGE = *OVERLAY(...)

Print resources of the type PCL overlay are imported from the PCL library to the target library.

OVERLAY-NAME =

Specifies which print resources of the type PCL overlay are to be imported.

OVERLAY-NAME = <alphanumeric 1..4>

Name of the individual print resource of the type PCL overlay to be imported from a PCLFILE.

OBJECT = *LOOP(...)

Print resources of the type loop are to be copied from an HPFILE, an NDFILE or a SPOOLFILE into the current PRFILE.

LOOP-NAME =

Specifies which print resources of the type loop are to be imported.

LOOP-NAME = *ALL

Default: all print resources of the type loop are to be imported from the HPFILE, the NDFILE or the SPOOLFILE into the current PRFILE.

LOOP-NAME = <alphanumeric 1..4>

Name of the individual print resource of the type loop which is to be imported.

OBJECT = *PREFORM(...)

Print resources of the type preform record are to be imported from a SPOOLFILE into the current PRFILE.

PREFORM-NAME =

Specifies which print resources of the type preform record are to be imported.

PREFORM-NAME = *ALL

Default: all print resources of the type preform record are to be imported from the SPOOLFILE into the current PRFILE.

PREFORM-NAME = <alphanumeric 1..4>

Name of the individual print resource of the type preform record which is to be imported.

OBJECT = *SOFT-FONT(...)

Print resources of the type PCL softfont are to be imported (only possible from a PCLFILE or TRANSFILE).

SOFT-FONT-NAME =

Specifies which print resources of the type PCL softfont are to be imported.

SOFT-FONT-NAME = <alphanumeric 1..8>

Name of the individual print resource of type PCL softfont to be imported. The print resource is created under this name in the PRFILE.

OBJECT = *MACRO(...)

Print resources of the type PCL macro are to be imported (only possible from a PCLFILE or TRANSFILE).

MACRO-NAME =

Specifies which print resources of the type PCL macro are to be imported. The print resource is created under this name in the PRFILE.

MACRO-NAME = <alphanum-name 1..8>

Name of the individual print resource of type PCL macro to be imported.

FROM-PRINTER-FILE =

Specifies the print control file containing the print resources.

FROM-PRINTER-FILE = *HPFILE(...)

The print resources are contained in an HPFILE.

HP-FILE-NAME = <filename 1..54>

Fully qualified file name for the print control file of the type HPFILE containing the print resources to be imported.

FROM-PRINTER-FILE = *NDFILE

The print resources are contained in an NDFILE.

ND-FILE-NAME = <filename 1..54>

Fully qualified file name for the print control file of the type NDFILE containing the print resources to be imported.

FROM-PRINTER-FILE = *FGSFILE(...)

The print resources are contained in an FGSFILE.

FGS-FILE-NAME = <filename 1..54 without vers>

Fully qualified file name for the print control file of the type FSGFILE containing the print resources to be imported.

FROM-PRINTER-FILE = *SPOOLFILE

The print resources are contained in a SPOOLFILE.

SPOOL-FILE-NAME = <filename 1..54>

Fully qualified file name for the print control file of the type SPOOLFILE containing the print resources to be imported.

FROM-PRINTER-FILE = *PCLFILE

The print resources come from a SPOOLFILE.

PCL-FILE-NAME = <filename 1..54>

Fully qualified file name for the print control file of type PCLFILE from which the print resources are to be imported.

With PCL-FILE-NAME you specify a BS2000 file which defines the contents of the PCL object that is imported into the PRFILE. Note that PRM checks the CSSNAME parameter to establish whether the file is in ASCII or EBCDIC format. PRM stores the contents of each object in ASCII format, with the exception of objects of the type object reference (the information as to whether the data is in ASCII or EBCDIC format is always contained in the object metadata).

The contents of the file depend on the type of the object:

PCL font object of the type ‘font characteristics’:

This type of PCL font object activates a PCL font by way of its characteristics, which must be specified in the file in the form of the corresponding PCL escape sequence. No syntax check is performed. To inform PRM that the font object is of the type *font characteristics*, the letter ‘C’ must appear in column 1 (before the PCL escape sequence).

Example:

To activate as the primary font a fixed font *Courier* with *pitch=10*, *height=12*, *style=upright*, *stroke weight=medium* and *symbol set=roman-8* (the font must exist in the PCL printer), the file must contain the following information:

```
C\e(8U\e(sOp10.00h12.0v0s0b3T
```

When reading the file, (if necessary) PRM converts the PCL escape sequence into ASCII format and saves it as the contents of the PCL font object. The PCL font object type *font characteristics* is part of the object metadata. Note that ‘\e’ can be used to represent the ESC character (x‘1B’ in ASCII format). The escape sequence must not exceed 256 characters. Only the first data record is evaluated.

PCL font object of the type ‘font ID’:

This type of PCL font object activates a PCL font by way of its ID, which must be specified in the file (a number from 0...32767). To inform PRM that the font object is of the type *font ID*, the letter ‘I’ must appear in column 1 (before the ID number).

Example:

To activate the font with the ID 12 (a font with the ID 12 must exist in the PCL printer), the file must contain the following information:

```
I12
```

When reading the file, (if necessary) PRM converts the ID number into ASCII format and saves it as the contents of the PCL font object. The PCL font object type *font ID* is part of the object metadata. Only the first data record is evaluated.

PCL font object of the type 'softfont object reference':

This type of PCL font object refers to a PCL softfont object (which must be in the same PRFILE) whose name must be specified in the file (alphanumeric, 1..8 characters, uppercase). To inform PRM that the font object is of the type *softfont object reference*, the letter 'R' must appear in column 1 (before the name of the PCL softfont object).

Example:

To call a PCL softfont object with the name 'MYFONT12' (the PCL softfont object must be in the same PRFILE), the file must contain the following information:

```
RMYFONT12
```

When reading the file, (if necessary) PRM converts the name of the PCL softfont into EBCDIC format and saves it as the contents of the PCL font object. The PCL font object type *softfont object reference* is part of the object metadata. Only the first data record is evaluated.

PCL softfont object:

This object describes a PCL-coded softfont which must be in the file. The description **must not** contain any font ID assignments (SPOOL or the filter manage the allocation of font ID assignments during loading). When reading the file, (if necessary) PRM converts the PCL-coded softfont description into ASCII format and saves it as the contents of the PCL softfont object.

PCL overlay object of the type 'macro ID':

This type of PCL overlay refers to a PCL macro ID, which must be specified in the file (a number from 0..32767). To inform PRM that the font object is of the type *macro ID*, the letter 'I' must appear in column 1 (before the ID number).

Example:

To activate the macro with the ID 12 (a macro with the ID 12 must exist in the PCL printer) as an automatic PCL overlay, the file must contain the following information:

```
I12
```

When reading the file, (if necessary) PRM converts the ID number into ASCII format and stores it as the contents of the PCL overlay object. The PCL overlay object type *macro ID* is part of the object metadata. Only the first data record is evaluated.

PCL-OVERLAY object of the type ‘macro object reference’:

This type of PCL overlay refers to a PCL macro object (which must be in the same PRFILE). The name of this PCL macro object must be specified in the file (alphanumeric, 1..8 characters, uppercase). To inform PRM that the PCL overlay is of the type *macro object reference*, the letter ‘R’ must appear in column 1 (before the PCL macro object).

Example:

To call the PCL macro object ‘*SNILOGO*’ (the macro must be in the same PRFILE), the file must contain the following information:

```
RSNILOGO
```

When reading the file, (if necessary) PRM converts the name of the PCL macro object into EBCDIC format and saves it as the contents of the PCL overlay object. The PCL overlay object type *macro object reference* is part of the object metadata. Only the first data record is evaluated.

PCL macro object:

This object describes a PCL-coded macro (logo, text, picture), which must be in the file. The description **must not** contain any macro ID assignments or start/stop macro commands (SPOOL or the filter manage the allocation and activation of macro ID assignments during loading). When reading the file, (if necessary) PRM converts the PCL-coded macro description into ASCII format and saves it as the contents of the PCL macro object.

Note

If a PCL font (or PCL overlay) references a PCL softfont (or PCL macro), the PCL softfont (or PCL macro) must be imported first. The name of the PCL softfont (or PCL macro) must match the name of the assigned PCL font (or PCL overlay).

Example:

The PCL macro ‘*SNILOGO*’ must be imported into the PRFILE before the PCL overlay that references the ‘*SNILOGO*’ can be imported.

The following table shows the internal structure of the PCL object types in the PRFILE:

Object	Name	Contents	Metadata		
			Format	Size	Type
PCL font	Spool & Print character set name (1..3)	PCL escape sequence which defines the font characteristics	ASCII	Depends on contents	Font characteristics
	“	ID number (0..32767)	ASCII	“	Font ID
	“	Reference to a PCL softfont object	EBCDIC	“	PCL softfont object reference
PCL softfont	alphanumeric 1..8	PCL-coded softfont description (without ID assignment)	ASCII	“	not available
PCL overlay	overlay name (1..4)	ID number (0..32767)	ASCII	“	Macro ID
	“	Reference to a PCL macro object	EBCDIC	“	PCL macro object ref
PCL macro	alphanumeric 1..8	PCL-coded macro description (without ID assignment or start/stop macro commands)	ASCII	“	not available

Internal structure of the new object types in the PRFILE

FROM-PRINTER-FILE = *TRANSFILE

The print resources are contained in a TRANSFILE.

TRANS-FILE-NAME = <filename 1..54>

Fully qualified file name for the print control file of the type TRANSFILE containing the print resources to be imported.

The following print resources in the TRANS format can be imported to a PRFILE:

HP fonts, PCL softfonts, HP FOBs, PCL macros.

A detailed description of the TRANS format can be found in section 3.5.3, “Importing print resources in the TRANS format”, on page 46.

Please note that PRM does not check whether the content of the TRANSFILE matches the object to be imported. Consequently, if you want to import a softfont object from a TRANSFILE, for example, you will need to ensure that the content of the TRANSFILE is also a softfont object. This also applies to PCL macros, HP fonts and FOBs.

When importing a PCL macro, a reference to the PCL macro (macro object reference) is automatically generated via a PCL overlay, and when importing a PCL softfont, a reference to the PCL softfont (softfont object reference) is automatically generated via a PCL font. The PCL overlays or PCL fonts generated by this method receive the original name of the PCL macro or PCL softfont, but this name is truncated to four or three characters, respectively.

If two PCL macros with names that begin with identical characters, e.g. ABCD01 and ABCD02, are imported in succession, only the first PCL overlay with the name ABCD can be generated. The second PCL overlay cannot be created, since a PCL overlay with the name ABCD already exists. To avoid such problems, it is advisable to import only PCL macros with up to four characters in their names and PCL softfonts with names not exceeding three characters in length.

ATTACHED-OBJECT =

Defines whether, in addition to the specified print resource itself, all the objects assigned to it are also to be imported. This is necessary for print resources of the type HP-font pool, where various print resources of the type HP font are combined to form a pool. If the font pool is to be imported, this specification can control whether the individual elements are also to be imported recursively. The same applies to PCL fonts and PCL overlays if they reference PCL softfonts or PCL macros.

ATTACHED-OBJECT = *YES

Default: not only the specified print resource itself but also all objects assigned to it are to be imported.

ATTACHED-OBJECT =*NO

Only the specified print resource itself is to be imported. The objects assigned to it are not transferred.

WRITE-MODE =

Specifies whether an existing object of the same name can be overwritten when a print resource is imported.

Whether a print resource may be included in the current PRFILE at all depends on how the file was opened and is defined via the OPEN-PR-FILE statement.

WRITE-MODE = *STD

The setting is taken from the default value set via the MODIFY-PRM-OPTIONS statement.

WRITE-MODE = *CREATE

The print resource to be copied is not permitted in the current PRFILE. The specified attributes will only be stored in the PRFILE if it does not already contain a print resource of the same name and type.

WRITE-MODE = *REPLACE

An existing object of the same name may be overwritten.

DIALOG-CONTROL =

Specifies whether a dialog with the user is to be started to allow controlled execution of the statement.

DIALOG-CONTROL = *STD

The setting is taken from the default value set via the MODIFY-PRM-OPTIONS statement.

DIALOG-CONTROL = *NO

No dialog is to be started.

DIALOG-CONTROL = *YES

A dialog is to be started. This allows you to control the way the program handles each resource to be imported, i.e. whether it is to be imported or not, or whether the statement is to be canceled.

DIALOG-CONTROL = *ERROR

A conditional dialog is to be started. Only in the event of an error during import processing can you control further operation: statement to be continued with next resource (response: "0") or canceled (response: "1").

MODIFY-HP-CHARACTER

Change code of character in character code table

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*FONT(*HP-FONT)

Function

This statement modifies the code of any character in the character code table of the currently selected font.

The font can be selected in the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*FONT(*HP-FONT(HP-FONT-NAME=...)).

Changing the code also causes the order of the characters in the character code matrix to change, since each code is allocated exactly one position in the matrix. Each character within the matrix is represented by its hexadecimal code (1 byte): the left half-byte represents the column and the right half-byte represents the line of the matrix.

Format

MODIFY-HP-CHARACTER
CHARACTER-CODE = <x-string 1..2> , NEW-CODE = <x-string 1..2>

Operands

CHARACTER-CODE = <x-string 1..2>

Hexadecimal code of the character to which a new code, and therefore a new position in the character code matrix, must be allocated.

NEW-CODE = <x-string 1..2>

New hexadecimal code of the character.

MODIFY-LINE-DESCRIPTOR

Change feed and density of loop line

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*LOOP

Function

This statement assigns a new channel to a line of a loop and/or changes the line density. In combination with the statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*LOOP, this print resource can thus be completely redefined.

The definition of a loop record contains the form length as well as the density and the channel feeds for the individual lines of the loop.

The MODIFY-LINE-DESCRIPTOR statement selects the line(s) the changes refer to, and defines new channel numbers and the modified line density in lpi. A channel number can come from the range {1,...12} and each one represents the line as of which printing is to begin on the next page after a page feed. When a loop record is created, any line can be assigned a channel or channel number. Whenever the corresponding channel control character is specified in a print file, a feed occurs in this line.

Format

MODIFY-LINE-DESCRIPTOR
<pre> LINE-RANGE = *<u>PARAMETERS(...)</u> *<u>PARAMETERS(...)</u> | | FROM = <integer 1..1024> | | ,TO = *<u>SAME</u> / <integer 1..1024> ,CHANNEL-NUMMER = *<u>UNCHANGED</u> / *<u>NO</u> / <integer 1..12> ,VERTICAL-DENSITY = *<u>UNCHANGED</u> / 6 / 8 / 10 / 12 / 24 </pre>

Operands

LINE-RANGE = *PARAMETERS(...)

Specifies the individual line or the line range from lines 1 to 408 (printers of the type HP) or 1 to 1024 (printers of the type LP), for which a page feed and the line density are to be redefined.

FROM = <integer 1..1024>

Lower limit of the line range.

TO = *SAME / <integer 1..1024>

Upper limit of the line range. The default value *SAME refers to the lower limit, i.e. the definition only applies to one line.

CHANNEL-NUMMER =

Defines the channel numbers for the selected line range.

CHANNEL-NUMMER = *UNCHANGED

Default: the channel numbers remain unchanged.

CHANNEL-NUMMER = *NO

The assignment of channel numbers to the line or line range is canceled.

CHANNEL-NUMMER = <integer 1..12>

Specifies a new channel number from 1 to 12 for the selected line or line range.

In the default loop, channel 1 is assigned to line 3 of the form, i.e. a feed to line 3 of a new page.

VERTICAL-DENSITY =

Specifies a line density in lpi for the selected line or line range.

Within a loop record for printers of the type LP, the line density must not change.

VERTICAL-DENSITY = *UNCHANGED

Default: the line density in lpi for the selected line or line range is not to be changed.

VERTICAL-DENSITY = 6 / 8 / 10 / 12 / 24

New line density in lpi for the selected line or line range.

Example:

```
//MODIFY-PRINT-RESOURCES OBJECT=*LOOP( -           (1)
//          LOOP=*HP-LOOP(LOOP-NAME=A4)
//MODIFY-LINE-DESCRIPTOR LINE-RANGE=*PARAMETERS( -   (2)
//          FROM=3, TO=*SAME), CHANNEL-NUMBER=5, -   (3)
//          VERTICAL-DENSITY=8                       (4)
//CLOSE-LOOP                                         (5)
```

- (1) The print resource of the type HP loop with the name "A4" is to be modified.
- (2) The feed and the line density for a line of the loop are modified.
- (3) The new channel number 5 is assigned to line 3 of the loop.
- (4) The line density is to be 8 lpi for line 3.
- (5) The redefinition of the loop record is concluded.

MODIFY-PARAGRAPH

Change paragraph of general loop

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*GENERAL-LOOP

Function

This statement changes the definition of a paragraph for a general loop or for a group of lines which are linked via the same channel number and whose attributes match.

The print resource general loop comprises a series of paragraphs which are identified by their names and which each describe a part of a form or paper format.

The MODIFY-PARAGRAPH statement changes an existing paragraph of a general loop which was previously selected via the statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*GENERAL-LOOP(GENERAL-LOOP-NAME=..)
If the length of all paragraphs exceeds the maximum length of the general loop as defined in the main statement, any attempt to modify the paragraph will be rejected.

Format

MODIFY-PARAGRAPH
<pre> PARAGRAPH-NAME = <alphanum-name 1..8> , NEW-NAME = <u>*SAME</u> / <alphanum-name 1..8> , LOCATION = <u>*UNCHANGED</u> / *INCHES(...) *INCHES(...) | | POSITION = *PARAMETERS(...) | | | | *PARAMETERS(...) | | | | | | INTEGER-PART = <integer 0..31> | | | , DECIMAL-PART = <u>*NONE</u> / *PARAMETERS(...) | | | | | | | | *PARAMETERS(...) | | | | | | | | | | NUMERATOR = <u>1</u> / <integer 1..255> | | | | | , DENOMINATOR = <u>6</u> / <u>8</u> / <u>10</u> / <u>12</u> / <u>24</u> , NUMBER-OF-LINES = <u>*UNCHANGED</u> / <integer 1..1024> , CHANNEL-NUMBER = <u>*UNCHANGED</u> / <u>*NONE</u> / <integer 1..12> , VERTICAL-DENSITY = <u>*UNCHANGED</u> / <u>6</u> / <u>8</u> / <u>10</u> / <u>12</u> / <u>24</u> </pre>

Operands

PARAGRAPH-NAME = <alphanum-name 1..8>

Name of the paragraph to which the following modifications refer.

NEW-NAME =

Specifies whether the name of the paragraph is also to be changed.

NEW-NAME = *SAME

Default: the name of the paragraph remains unchanged.

NEW-NAME = <alphanum-name 1..8>

New name of the paragraph.

LOCATION =

Specifies whether the position of the paragraph in the form is to be changed.

LOCATION = *UNCHANGED

The position of the paragraph on the form remains unchanged.

LOCATION = *INCHES(...)

Specifies a new position for the paragraph in the form. The point of reference is the top left-hand corner of the form.

POSITION = *PARAMETERS(...)

The new position of the paragraph is specified absolutely and in inches. The point of reference for the values is that of the paper format (top left-hand corner). The definition comprises an integer (for full inches) and a fraction for possible decimal places.

INTEGER-PART = <integer 0..31>

Integer value in inches.

DECIMAL-PART =

Specifies whether there is a fractional value for the exact position of the paragraph in addition to the integer value.

DECIMAL-PART = *NONE

There is no additional fraction.

DECIMAL-PART = *PARAMETERS(...)

An additional fraction is to be specified.

NUMERATOR = <integer 1..255>

Numerator of the fraction to be defined in addition to the integer value (in inches) for the position of the paragraph.

DENOMINATOR = 6 / 8 / 10 / 12 / 24

Denominator of the fraction to be defined in addition to the integer value (in inches) for the position of the paragraph.

Example:

The specification INTEGER-PART= 6, DECIMAL-PART=*PARAMETERS(- NUMERATOR = 7, DENOMINATOR = 8) defines the position of the paragraph as 6 + 7/8 inch from the selected point of reference.

NUMBER-OF-LINES =

Specifies whether the number of lines in this paragraph with the same line density is to be changed.

NUMBER-OF-LINES = *UNCHANGED

Number of lines remains unchanged.

NUMBER-OF-LINES = <integer 1..1024>

Modified number of lines with the same density which are included in this paragraph

CHANNEL-NUMBER =

Specifies whether a vertical tab is to be redefined for the positioning of text in the line specified by the channel number.

CHANNEL-NUMBER = *UNCHANGED

The definition of a vertical tabulator remains unchanged.

CHANNEL-NUMBER = *NONE

The definition of a vertical tab is canceled.

CHANNEL-NUMBER = <integer 1..12>

Channel number from 1 to 12 which represents a vertical tab for the positioning of text in the selected line.

VERTICAL-DENSITY =

Specifies whether the density of the lines is to be changed.

VERTICAL-DENSITY = *UNCHANGED

The line density remains unchanged.

VERTICAL-DENSITY = 6 / 8 / 10 / 12 / 24

Modified line density in lpi for the lines in this paragraph.

MODIFY-PRINT-RESOURCES

Change attributes of print resources

Statement group: Resource accesses

Statement type: Main statement

Function

This statement changes the attributes of print resources which are entered in the current PRFILE. The current PRFILE is always the last resource library opened with OPEN-PR-FILE.

The type of print resource to be modified is selected via the OBJECT= operand. Print resources of the types BAND-ID, CHARACTER-IMAGE, TRANSLATION-TABLE, HP-font pool and preform record can be completely redefined using this statement. For print resources of types HP font, loop and general loop, this statement can be used to redefine the respective global default values. The detailed attributes of the individual print resources can then be defined with the aid of substatements. The operand descriptions for these print resources refer to the respective dependent substatements.

Format

(part 1 of 3)

MODIFY-PRINT-RESOURCES

OBJECT = ***BAND-ID(...)** / ***CHARACTER-IMAGE(...)** / ***TRANSLATION-TAB(...)** / ***FONT(...)** /
 ***HP-FONT-POOL(...)** / ***IMAGE(...)** / ***GENERAL-LOOP(...)** / ***LOOP(...)** / ***PREFORM(...)**

***BAND-ID(...)**

BAND-ID-NAME = <alphanum-name 1..4>

,**NEW-NAME** = ***SAME** / <alphanum-name 1..4>

,**CONTROL-CODE** = ***UNCHANGED** / ***NONE** / <x-string 1..2>

,**CONVERSION-TABLE** = ***UNCHANGED** / ***DEFAULT** / list-poss(256): ***PARAMETERS(...)**

***PARAMETERS(...)**

POSITION = <x-string 1..2> / <integer 0..255>

,**VALUE** = <x-string 1..2>

***CHARACTER-IMAGE(...)**

CHARACTER-IMAGE-NAME = <alphanum-name 1..3>

,**NEW-NAME** = ***SAME** / <alphanum-name 1..3>

,**CONVERSION-TABLE** = ***UNCHANGED** / ***DEFAULT** / list-poss(256): ***PARAMETERS(...)**

***PARAMETERS(...)**

POSITION = <x-string 1..2> / <integer 0..255>

,**VALUE** = <x-string 1..2>

***TRANSLATION-TAB(...)**

TRANSLATION-TAB-NAME = <alphanum-name 1..8>

,**NEW-NAME** = ***SAME** / <alphanum-name 1..8>

,**CONVERSION-TABLE** = ***UNCHANGED** / ***DEFAULT** / list-poss(256): ***PARAMETERS(...)**

***PARAMETERS(...)**

POSITION = <x-string 1..2> / <integer 0..255>

,**VALUE** = <x-string 1..2>

continued ➔


```

*FONT(...)
  FONT = *HP-FONT(...)
    *HP-FONT(...)
      HP-FONT-NAME = <alphanum-name 1..3>
      ,NEW-NAME = *SAME / <alphanum-name 1..3>
      ,SPACE-CODE = *UNCHANGED / <x-string 1..2>
      ,UNDERScore-CODE = *UNCHANGED / <x-string 1..2> / *NONE
      ,VERTICAL-DENSITY = *UNCHANGED / 6 / 8 / 10 / 12 / 24

*HP-FONT-POOL(...)
  HP-FONT-POOL-NAME = <alphanum-name 1..4>
  ,NEW-NAME = *SAME / <alphanum-name 1..4>
  ,HP-FONT-LIST = *UNCHANGED / *REMOVE(...) / *REPLACE(...) / *ADD(...)
    *REMOVE(...)
      FONT-NAME = list-poss(64): <alphanum-name 1..3>
    *REPLACE(...)
      FONT-NAME = list-poss(64): *PARAMETERS(...)
        *PARAMETERS(...)
          FROM = <alphanum-name 1..3>
          ,TO = <alphanum-name 1..3>
    *ADD(...)
      FONT-NAME = list-poss(64): <alphanum-name 1..3>

*IMAGE(...)
  IMAGE = *FORMS-OVERLAY-BUFFER(...)
    *FORMS-OVERLAY-BUFFER(...)
      BUFFER-NAME = <alphanum-name 1..4>
      ,NEW-NAME = *SAME / <alphanum-name 1..4>

*GENERAL-LOOP(...)
  GENERAL-LOOP-NAME = <alphanum-name 1..8>
  ,NEW-NAME = *SAME / <alphanum-name 1..8>

```

continued ➔

```

*LOOP(...)
  |
  | LOOP = *HP-LOOP(...) / *LP-LOOP(...)
  |
  | *HP-LOOP(...)
  | |
  | | LOOP-NAME = <alphanum-name 1..3>
  | | ,NEW-NAME = *SAME / <alphanum-name 1..3>
  |
  | *LP-LOOP(...)
  | |
  | | LOOP-NAME = <alphanum-name 1..3>
  | | ,NEW-NAME = *SAME / <alphanum-name 1..3>
  |
*PREFORM(...)
  |
  | PREFORM-NAME = <alphanum-name 1..4>
  | ,NEW-NAME = *SAME / <alphanum-name 1..4>
  | ,ESCAPE-CHARACTERS = *UNCHANGED / *REMOVE(...) / *REPLACE(...) / *ADD(...)
  |
  | *REMOVE(...)
  | |
  | | CHARACTER-CODES = <c-string 1..768 with-low>
  |
  | *REPLACE(...)
  | |
  | | FROM-CHARACTER-CODES = <c-string 1..768 with-low>
  | | ,TO-CHARACTER-CODES = <c-string 1..768 with-low>
  |
  | *ADD(...)
  | |
  | | CHARACTER-CODES = <c-string 1..768 with-low>
  |
  | ,COMMENTS = *UNCHANGED / *NONE / <c-string 1..200 with-low>
  | ,WRITE-MODE = *STD / *CREATE / *REPLACE

```

Operands

OBJECT =

Type of print resource being changed and whose attributes are to be redefined in the corresponding substructures.

OBJECT = *BAND-ID(...)

The modification concerns a print resource of the type BAND-ID, a code conversion table for band printers.

BAND-ID-NAME = <alphanum-name 1..4>

Name under which the print resource to be modified is stored in the current PROFILE.

NEW-NAME =

Specifies whether the name of the print resource is also to be changed.

NEW-NAME = *SAME

Default: the name of the print resource remains unchanged.

NEW-NAME = <alphanum-name 1..4>

New name of the print resource.

CONTROL-CODE =

Specifies whether the modification affects the control code which is linked to the name of the BAND-ID and serves as identification when this resource is accessed. For LP-PRINTERS of types 3337, 3338 and 3339, a control code is mandatory.

CONTROL-CODE = *UNCHANGED

The control code is not affected by the modification; this attribute remains unchanged.

CONTROL-CODE = *NONE

A control code is not linked to the new name of the BAND-ID, or the existing assignment of a control code to the name of the print resource is canceled. This operand value is only permissible for printer types other than 3337, 3338 or 3339.

CONTROL-CODE = <x-string 1..2>

New control code in the form of a 1-byte hexadecimal code which is linked to the name of the BAND-ID.

CONVERSION-TABLE =

Specifies whether the modification affects the code table for conversion of specific character codes. If the code table is affected, either a default code table can be selected or a code table for the conversion of specific character codes can be defined.

CONVERSION-TABLE = *UNCHANGED

The code table is not affected by the modification; this attribute remains unchanged.

CONVERSION-TABLE = *DEFAULT

When the original attributes of the BAND-ID are modified, a default code table is created, which is used to initialize all 256 possible codes (from X'00' to X'FF') with the value X'80'. This value represents a non-printable character.

CONVERSION-TABLE = list-poss(256): *PARAMETERS(...)

When the original attributes of the BAND-ID are modified, a code table for the conversion of specific character codes is explicitly defined. A maximum of 256 code pairs, i.e. all assignments in the code table, can be defined.

POSITION = <x-string 1..2> / <integer 0..255>

Position of the character code to be converted within the code matrix. This can be a hexadecimal value from X'00' to X'FF' or an integer from 0 to 255. The position within the character code matrix represents the hexadecimal character code in the print file which is to be converted into some other character code. Its value can be defined with the following VALUE operand.

VALUE = <x-string 1..2>

Character code into which the character code whose position within the code matrix is specified by the POSITION operand is to be converted.

Example:

The specification CONVERSION-TABLE = *PARAMETERS(POSITION= X'06', VALUE = X'D1') defines that a character code X'06' in the print file is to be converted into the value X'D1'.

OBJECT = *CHARACTER-IMAGE(...)

The modification concerns a print resource of the type CHARACTER-IMAGE, a code conversion table for line printers.

CHARACTER-IMAGE-NAME = <alphanum-name 1..3>

Name under which the print resource to be modified is to be stored in the current PROFILE.

NEW-NAME =

Specifies whether the name of the print resource is also to be changed.

NEW-NAME = *SAME

Default: the name of the print resource remains unchanged.

NEW-NAME = <alphanum-name 1..3>

New name of the print resource.

CONVERSION-TABLE =

Specifies whether the modification affects the code table for the conversion of specific character codes. If the code table is affected, either a default code table can be selected or a code table for the conversion of specific character codes can be explicitly defined.

CONVERSION-TABLE = *UNCHANGED

The code table is not affected by the modification; this attribute remains unchanged.

CONVERSION-TABLE = *DEFAULT

When the original attributes of the CHARACTER-IMAGE are modified, a default code table is created, which is used to initialize all 256 possible codes (from X'00' to X'FF') with the value X'80'. This value represents a non-printable character

CONVERSION-TABLE = list-poss(256): *PARAMETERS(...)

When the original attributes of the CHARACTER-IMAGE are modified, a code table for the conversion of specific character codes is explicitly defined. A maximum of 256 code pairs, i.e. all assignments in the code table, can be defined.

POSITION = <x-string 1..2> / <integer 0..255>

Position of the character code to be converted within the code matrix. This can be a hexadecimal value from X'00' to X'FF' or an integer from 0 to 255. The position within the character code matrix represents the hexadecimal character code in the print file which is to be converted into some other character code. Its value can be defined with the following VALUE operand.

VALUE = <x-string 1..2>

Character code into which the character code whose position within the code matrix is specified by the POSITION operand is to be converted.

Example:

The specification CONVERSION-TABLE = *PARAMETERS(POSITION= X'06', VALUE = X'D1') defines that a character code X'06' in the print file is to be converted into the value X'D1'.

OBJECT = *TRANSLATION-TAB(...)

The modification concerns a print resource of the type TRANSLATION-TABLE, a code conversion table for all printers.

TRANSLATION-TAB-NAME = <alphanum-name 1..8>

Name under which the print resource to be modified is stored in the current PRFILE.

NEW-NAME =

Specifies whether the name of the print resource is also to be changed.

NEW-NAME = *SAME

Default: the name of the print resource remains unchanged.

NEW-NAME = <alphanum-name 1..8>

New name of the print resource.

CONVERSION-TABLE =

Specifies whether the modification affects the code table for the conversion of specific character codes. If the code table is affected, either a default code table can be selected or a code table for the conversion of specific character codes can be explicitly defined.

CONVERSION-TABLE = *UNCHANGED

The code table is not affected by the modification; this attribute remains unchanged.

CONVERSION-TABLE = *DEFAULT

When the original attributes of the TRANSLATION-TABLE are modified, a default code table is created in which all 256 possible codes are initialized with the values X'00' to X'FF'.

CONVERSION-TABLE = list-poss(256): *PARAMETERS(...)

When the original attributes of the TRANSLATION-TABLE are modified, a code table for the conversion of specific character codes is explicitly defined. A maximum of 256 code pairs, i.e. all assignments in the code table, can be defined.

POSITION = <x-string 1..2> / <integer 0..255>

Position of the character code to be converted within the code matrix. This can be a hexadecimal value from X'00' to X'FF' or an integer from 0 to 255. The position within the character code matrix represents the hexadecimal character code in the print file which is to be converted into some other character code. Its value can be defined with the following VALUE operand.

VALUE = <x-string 1..2>

Character code into which the character code is to be converted whose position within the code matrix is specified by the POSITION operand.

Example:

The specification **CONVERSION-TABLE = *PARAMETERS(POSITION= X'06', VALUE = X'D1')** defines that a character code X'06' in the print file is to be converted into the value X'D1'.

OBJECT = *FONT(...)

The modification concerns a print resource of the object class font, which includes the object types HP font and ND font. A font is a matching set of print characters of the same size, typeface and style (previously called a "character set" in SPOOL). If this statement has been concluded successfully, all substatements are automatically available for processing an HP font.

FONT = *HP-FONT(...)

Specifies the type of print resource, and thus the type of printer, for which a font is to be modified. The only possible specification is the printer type HP.

HP-FONT-NAME = <alphanum-name 1..3>

Name under which the print resource HP font is to be stored in the current PROFILE. The individual characters of this font can be modified by means of the substatement MODIFY-HP-CHARACTER (see page 151).

NEW-NAME =

Specifies whether the name of the print resource is also to be changed.

NEW-NAME = *SAME

Default: the name of the print resource remains unchanged.

NEW-NAME = <alphanum-name 1..3>

New name of the print resource.

SPACE-CODE =

Specifies whether the modification also affects the space character (blank). The CHARACTER-SETS operand in the PRINT-DOCUMENT command allows up to 16 fonts to be loaded for the print file. A blank must be defined at the beginning of the first specified font.

SPACE-CODE = *UNCHANGED

The code for the space character is not affected by the modification; this attribute remains unchanged.

SPACE-CODE = <x-string 1..2>

New hexadecimal code of the space character (blank).

UNDERSCORE-CODE =

Specifies whether the modification also affects the special EBCDIC character which, in conjunction with the LINEMERGE function, produces an underscore.

UNDERSCORE-CODE = *UNCHANGED

The code for the underscore character is not affected by the modification; this attribute remains unchanged.

UNDERSCORE-CODE = <x-string 1..2>

New hexadecimal code for the underscore character.

UNDERSCORE-CODE = *NONE

No code is defined for the underscore function on HP printers.

VERTICAL-DENSITY =

Defines whether the modification also affects the line density in lpi for the characters of the font.

VERTICAL-DENSITY = *UNCHANGED

The line density is not affected by the modification; this attribute remains unchanged.

VERTICAL-DENSITY = 6 / 8 / 10 / 12 / 24

When the original attributes are modified, this operand defines the default line density in lpi for the characters of the font. The default value when a font is created is 6 lpi. You can influence the default value for the line density by specifying the character height for individual characters or for all characters of the font in the CHANGE-HP-CHARACTER-BOX-SIZE statement (see page 101).

See also the description of the operands for the ADD-PRINT-RESOURCES statement on page 84.

OBJECT = *HP-FONT-POOL(...)

The modification concerns a print resource of the type HP-font pool, a pool of existing character sets.

HP-FONT-POOL-NAME = <alphanum-name 1..4>

Name under which this print resource is stored in the current PRFILE.

NEW-NAME =

Specifies whether the name of the print resource is also to be changed.

NEW-NAME = *SAME

Default: the name of the print resource remains unchanged.

NEW-NAME = <alphanum-name 1..4>

New name of the print resource.

HP-FONT-LIST =

Defines whether the modification affects the various fonts which comprise the pool. If the fonts are affected, individual fonts in the list can be deleted, replaced or added.

HP-FONT-LIST = *UNCHANGED

The modification does not affect the list of fonts; this attribute remains unchanged.

HP-FONT-LIST = *REMOVE(...)

Individual fonts are to be deleted from the original list of those which form a font pool.

FONT-NAME = list-poss(64): <alphanum-name 1..3>

A list containing up to 64 fonts which are no longer to be included in the pool.

HP-FONT-LIST = *REPLACE(...)

In the original list of fonts which form a font pool, individual fonts are to be replaced by others.

FONT-NAME = list-poss(64): *PARAMETERS(...)

A list containing up to 64 pairs of fonts. Within each pair, one font is to replace the other.

FROM = <alphanum-name 1..3>

Name of the font to be replaced.

TO = <alphanum-name 1..3>

Name of the font to replace the one specified with FROM.

HP-FONT-LIST = *ADD(...)

Individual fonts are to be added to the original list of fonts which form a font pool.

FONT-NAME = list-poss(64): <alphanum-name 1..3>

A maximum of 64 fonts to be added to the pool can be specified in a list.

For practical reasons, the same code should be defined for the space character for all fonts in a font pool (see the statement ADD-PRINT-RESOURCES, operand OBJECT=*FONT on page 84).

OBJECT = *IMAGE(...)

The modification affects a print resource of the object class image, which contains only the object type forms overlay buffer (FOB). Unlike the other resources, this print resource cannot be created via the ADD-PRINT-RESOURCES statement, but must be imported from a print control file using IMPORT-PRINT-RESOURCES. The only attribute that can be modified here for this print resource is its name (see page 138).

IMAGE = *FORMS-OVERLAY-BUFFER(...)

The resource to be modified is of the type FOB.

BUFFER-NAME = <alphanum-name 1..4>

Name under which the print resource FOB is stored in the current PRFILE.

NEW-NAME =

Defines whether the name of the print resource is to be modified.

NEW-NAME = *SAME

Default: the name of the print resource remains unchanged.

NEW-NAME = <alphanum-name 1..4>

New name of the print resource.

OBJECT = *GENERAL-LOOP(...)

The modification concerns a print resource of the type general loop, a loop record which can serve as a reference for the creation of individual loops. Once this operand has been processed correctly, PRM immediately offers the MODIFY-PARAGRAPH substatement, with which individual paragraphs of the general loop can be modified (see page 155).

GENERAL-LOOP-NAME = <alphanum-name 1..8>

Name under which the print resource is stored in the current PRFILE.

NEW-NAME =

Defines whether the name of the print resource is to be modified.

NEW-NAME = *SAME

Default: the name of the print resource remains unchanged.

NEW-NAME = <alphanum-name 1..8>

New name of the print resource.

OBJECT = *LOOP(...)

The modification concerns a print resource of the type loop, which contains paper feed information.

LOOP =

Specifies the printer type for which the loop record to be changed was created.

LOOP = *HP-LOOP(...)

The modification concerns a loop record for a printer of the type HP. Once this operand has been processed correctly, PRM immediately offers the MODIFY-LINE-DESCRIPTOR substatement, via which individual lines of the loop can be modified (see page 152).

LOOP-NAME = <alphanum-name 1..3>

Name under which the print resource is stored in the current PRFILE.

NEW-NAME =

Defines whether the name of the print resource is to be modified.

NEW-NAME = *SAME

Default: the name of the print resource remains unchanged.

NEW-NAME = <alphanum-name 1..3>

New name of the print resource.

LOOP = *LP-LOOP(...)

The modification concerns a loop record for a printer of the type LP.

LOOP-NAME = <alphanum-name 1..3>

Name under which the print resource is stored in the current PRFILE.

NEW-NAME =

Defines whether the name of the print resource is to be modified.

NEW-NAME = *SAME

Default: the name of the print resource remains unchanged.

NEW-NAME = <alphanum-name 1..3>

New name of the print resource.

OBJECT = *PREFORM(...)

The modification concerns a print resource of the type preform record, i.e. printer-specific control characters for printers of the type LP-EMULATED-PRINTER.

PREFORM-NAME = <alphanum-name 1..4>

Name under which the print resource is stored in the current PRFILE.

NEW-NAME =

Defines whether the name of the print resource is to be modified.

NEW-NAME = *SAME

Default: the name of the print resource remains unchanged.

NEW-NAME = <alphanum-name 1..4>

New name of the print resource.

ESCAPE-CHARACTERS =

Defines whether the modification affects the control characters. If so, they can be deleted, replaced or supplemented.

The data can be specified in mixed hexadecimal and EBCDIC format. Data in EBCDIC format must be enclosed in parentheses; if the "(" character is also part of the data, it must be specified twice.

After hexadecimal conversion, a preform record can consist of up to 256 characters. The record can extend over more than one line, each (except for the last one) ending with the continuation character "-". A sequence of EBCDIC characters within the record cannot, however, extend over two consecutive lines of preform data. In other words: the "(" character which opens a sequence of EBCDIC characters must be in the same line as the ")" character which closes it. This ensures that if the "-" character is part of the data in the EBCDIC sequence it is not misinterpreted as a continuation character.

ESCAPE-CHARACTERS = *UNCHANGED

The modification does not affect the control characters; this attribute of the print resource remains unchanged.

ESCAPE-CHARACTERS = *REMOVE(...)

Originally specified control characters are to be deleted.

CHARACTER-CODES = <c-string 1..768 with-low>

Control characters to be deleted.

ESCAPE-CHARACTERS = *REPLACE(...)

Originally specified control characters are to be replaced by other control characters.

FROM-CHARACTER-CODES = <c-string 1..768 with-low>

Control characters to be replaced.

TO-CHARACTER-CODES = <c-string 1..768 with-low>

Control characters which are to replace those specified by FROM.

ESCAPE-CHARACTERS = *ADD(...)

New control characters are to be added to those originally defined.

CHARACTER-CODES = <c-string 1..768 with-low>

Control characters to be added.

COMMENTS =

Defines whether the modification also affects the user comments on the created print resource which can also be stored.

COMMENTS = *UNCHANGED

The user comments are not affected by the modification; this attribute remains unchanged.

COMMENTS = *NONE

When the original attributes of the print resource are modified, no user comments are to be stored in addition, or the original user comments are to be deleted.

COMMENTS = <c-string 1..200 with-low>

Freely definable user comments on the modified print resource.

WRITE-MODE =

Specifies whether an existing object of the same name can be overwritten when the name of the print resource is changed.

Whether a print resource may be included in the current PRFILE at all depends on how the file was opened and is defined via the OPEN-PR-FILE statement.

WRITE-MODE = *STD

The setting is taken from the default value specified in the MODIFY-PRM-OPTIONS statement.

WRITE-MODE = *CREATE

The new print resource to be created by means of a name change must not yet exist in the current PRFILE. The attributes defined will only be stored in the PRFILE as long as no print resource of the same name and type already exists.

WRITE-MODE = *REPLACE

An existing object of the same name may be overwritten.

MODIFY-PRM-OPTIONS

Set default values for program run

Statement group: PRM options
Statement type: Main statement

Function

MODIFY-PRM-OPTIONS defines the global default values for the output medium, dialog control, scope of the information output, and mode of access to the opened resource library. These default values can be selected in the individual statements via the operand value *STD.

Any change in the default values which is initiated by this statement takes effect immediately and remains valid until the next, explicit modification via MODIFY-PRM-OPTIONS.

Format

MODIFY-PRM-OPTIONS
<pre> OUTPUT = *<u>UNCHANGED</u> / *SYSOUT / *SYSLST(...) / *FILE(...) *SYSLST(...) | SYSLST-NUMBER = *<u>STD</u> / <integer 1..99> *FILE(...) | FILE-NAME = *<u>STD</u> / <filename 1..54> ,LINES-PER-PAGE = *<u>UNCHANGED</u> / <integer 3..9999> ,EXTRA-FORM-FEED = *<u>UNCHANGED</u> / *YES / *NO ,HEADER-LINES = *<u>UNCHANGED</u> / *YES / *NO ,RESOURCE-ATTRIBUTES = *<u>UNCHANGED</u> / *PARAMETERS(...) *PARAMETERS(...) | INFORMATION = *<u>UNCHANGED</u> / *SUMMARY / *ALL | ,WRITE-MODE = *<u>UNCHANGED</u> / *CREATE / *REPLACE ,DIALOG-CONTROL = *<u>UNCHANGED</u> / *NO / *YES / *ERROR </pre>

Operands

OUTPUT =

Defines the output medium for the logging data of PRM and the print resource information requested via the SHOW statements. The data can be output on the screen (SYSOUT) or written to a file (logical system file SYSLST or cataloged file).

OUTPUT = *UNCHANGED

The last value specified for the output medium remains valid.

OUTPUT = *SYSOUT

Data is output to the logical system file SYSOUT, i.e. in interactive mode usually on the screen.

OUTPUT = *SYSLST(...)

The logging data and the information are to be output to the logical system file SYSLST.

SYSLST-NUMBER =

Specifies whether the logical system file SYSLST is to receive a number, and, if so, which number.

SYSLST-NUMBER = *STD

The logical system file SYSLST does not receive a number.

SYSLST-NUMBER = <integer 1..99>

Number of the logical system file SYSLST.

OUTPUT = *FILE(...)

The logging data and the information are to be output to a file.

FILE-NAME =

Name of the file to which the information is to be output.

FILE-NAME = *STD

A default output file "S.PRM.nnnn.yyyy-mm-dd.ttttt" with the following conventions is to be created:

<nnnn>: TSN of the job.

<yyyy-mm-dd.ttttt>: year-month-day.time of the call.

FILE-NAME = <filename 1..54>

Name of the file to which the information is to be output. This can even be a temporary file. If a file of the same name already exists, the value of the WRITE-MODE operand determines whether this file can be overwritten.

LINES-PER-PAGE =

Defines the number of lines each page is to have if output to a file.

LINES-PER-PAGE = *UNCHANGED

The last value specified for the number of pages remains valid.

LINES-PER-PAGE = <integer 3..9999>

Number of lines per page. The minimum number of three lines per page includes the two header lines per page which can be set via the HEADER-LINES operand.

EXTRA-FORM-FEED =

Defines whether the information on resources requested via SHOW statements is prepared such that an extra page feed occurs after each block of related information.

EXTRA-FORM-FEED = *UNCHANGED

The last value set for the extra page feed remains valid.

EXTRA-FORM-FEED = *YES

There is to be an extra page feed after each block of related information on a print resource.

EXTRA-FORM-FEED = *NO

There is to be no extra page feed after each block of related information on a print resource. All requested information is output sequentially; page feeds are based solely on the number of lines (LINES-PER-PAGE operand).

HEADER-LINES =

Specifies whether two header lines per page are output in the printout.

HEADER-LINES = *UNCHANGED

The last value specified for the header lines remains valid.

HEADER-LINES = *YES

Two header lines per page are also to be output.

HEADER-LINES = *NO

Two header lines per page are not to be output.

RESOURCE-ATTRIBUTES =

Defines the default values for the scope of information, dialog control and the write mode for the output file.

RESOURCE-ATTRIBUTES = *UNCHANGED

The last settings made for the specified default values remain valid.

RESOURCE-ATTRIBUTES = *PARAMETERS(...)

The default values for the scope of information, dialog control and the write mode for the output file are to be redefined.

INFORMATION =

Specifies the scope of the information to be output about a print resource.

INFORMATION = *UNCHANGED

The last value set for the scope of the information remains valid.

INFORMATION = *SUMMARY

The information should be output in summary form. Special attributes of the print resource are not output.

INFORMATION = *ALL

The output is to contain all available information on the desired print resource.

WRITE-MODE =

Specifies whether an existing object of the same name can be overwritten when a print resource is renamed or a new one is created.

WRITE-MODE = *UNCHANGED

The last value set for the write mode remains valid.

WRITE-MODE = *CREATE

A print resource that is to be created must not yet exist in the current PRFILE. The attributes defined will only be stored in the PRFILE as long as no print resource of the same name and type already exists.

WRITE-MODE = *REPLACE

An existing object of the same name may be overwritten.

DIALOG-CONTROL =

Specifies whether a dialog with the user is to be started during processing to allow controlled execution of the statement.

DIALOG-CONTROL = *UNCHANGED

The last value set for the dialog control remains valid.

DIALOG-CONTROL = *NO

No dialog is to be started.

DIALOG-CONTROL = *YES

A dialog is to be started.

DIALOG-CONTROL = *ERROR

A conditional dialog is to be started. Only in the event of an error during import processing can you control further operation: statement to be continued with next resource (response: "0") or canceled (response: "1").

OPEN-PR-FILE

Open resource library

Statement group: File accesses
Statement type: Main statement

Function

This statement opens a resource library to which all subsequent statements are to refer. This library is available as a current library until it is explicitly closed by means of CLOSE-PR-FILE, or until a new file is opened by means of OPEN-PR-FILE. In the latter case, an implicit CLOSE is applied to the previously opened library.

OPEN-PR-FILE opens not only a PRFILE but also print control files of types HPFILE, NDFILE and SPOOLFILE. Their entire contents are converted into the PRFILE structure and the individual resources are thus available for PRM (see also page 35).

Format

OPEN-PR-FILE
<pre> FILE-NAME = <filename 1..54> / *LINK(...) / *STD *LINK(...) | LINK-NAME = <alphanum-name 1..8> ,PROTECTION = *NONE / *PARAMETERS(...) *PARAMETERS(...) | PASSWORD = <c-string 1..4> / <x-string 1..8> / <integer -2147483648..2147483647> / *SECRET ,MODE = *READ / *UPDATE / *CREATE ,COMMENTS = *NONE / <c-string 1..200 with-low> </pre>

Operands

FILE-NAME =

Defines the name of the resource library to be opened.

The WRITE-MODE=*CREATE setting also allows you to specify a resource library which does not yet exist. In this case, PRM creates this file.

FILE-NAME = <filename 1..54 without-vers>

Fully qualified name of the resource library to be opened.

FILE-NAME = *LINK(...)

The file name is specified indirectly via a link name. This link name must already have been associated with the name of the file using the SET-FILE-LINK command.

LINK-NAME = <alphanum-name 1..8>

File link name.

FILE-NAME = *STD

The system PRFILE with the default name \$SYSSPOOL.PRFILE is to be opened.

PROTECTION =

Specifies whether special protection attributes for the file are to be observed or whether such attributes are to be assigned to the new file.

PROTECTION = *NONE

Default: no protection attributes are to be observed or assigned.

PROTECTION = *PARAMETERS(...)

Defines in the following substructure the protection mechanisms to be observed or assigned for the file.

**PASSWORD = <c-string 1..4> / <x-string 1..8> /
<integer -2147483648..2147483647> / *SECRET**

Defines the password specified or necessary for access.

MODE =

Defines the open mode for the specified file.

MODE = *READ

Default: only read access is granted for the specified existing file.

MODE = *UPDATE

Both read and write access are granted for the specified existing file.

MODE = *CREATE

A new file is to be created.

COMMENTS =

Specifies whether any freely definable user comments on the file specified in the open mode UPDATE or CREATE are also to be stored.

COMMENTS = *NONE

No user comments are to be stored.

COMMENTS = <c-string 1..200 with-low>

Freely definable user comments on the file.

REMOVE-HP-CHARACTER

Delete character code from code table

Statement group: Resource accesses
Statement type: Substatement
Assigned main statements: ADD- / MODIFY-PRINT-RESOURCES -
OBJECT=*FONT(*HP-FONT)

Function

This statement deletes a character code from the current character code table of an HP font.

The font to be edited must have been selected previously via the main statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*FONT(*HP-FONT(HP-FONT-NAME=...)).

Format

REMOVE-HP-CHARACTER
CHARACTER-CODE = <x-string 1..2>

Operands

CHARACTER-CODE = <x-string 1..2>

Hexadecimal code of the character from the range {00,...FF} which is to be deleted from the character code table of the HP font.

REMOVE-PARAGRAPH

Delete paragraph of general loop

Statement group: Resource accesses
Statement type: Substatement
Assigned main statements: ADD- / MODIFY-PRINT-RESOURCES -
OBJECT=*GENERAL-LOOP

Function

This statement deletes an existing paragraph of a general loop, which was previously selected via the statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*GENERAL-LOOP(GENERAL-LOOP-NAME=..).

Format

REMOVE-PARAGRAPH
PARAGRAPH-NAME = <alphanum-name 1..8>

Operands

PARAGRAPH-NAME = <alphanum-name 1..8>

Name of the paragraph to be deleted.

REMOVE-PRINT-RESOURCES

Delete elements of PRFILE

Statement group: Resource accesses

Statement type: Main statement

Function

This statement deletes individual print resources or all print resources from the PRFILE currently opened, the resource library. The statement is only executed if the resource library was opened in UPDATE mode (see the OPEN-PR-FILE statement).

Format

(part 1 of 2)

REMOVE-PRINT-RESOURCES
<pre> OBJECT = *ALL / *BAND-ID(...) / *CHARACTER-IMAGE(...) / *TRANSLATION-TAB(...) / *FONT(...) / *HP-FONT-POOL(...) / *IMAGE(...) / *GENERAL-LOOP(...) / *LOOP(...) / *PREFORM(...) / *SOFT-FONT(...) / *MACRO(...) *BAND-ID(...) | BAND-ID-NAME = <alphanum-name 1..4> / *ALL *CHARACTER-IMAGE(...) | CHARACTER-IMAGE-NAME = <alphanum-name 1..3> / *ALL *TRANSLATION-TAB(...) | TRANSLATION-TAB-NAME = <alphanum-name 1..8> / *ALL *FONT(...) | FONT = *HP-FONT(...) / *ND-FONT(...) / *PCL-FONT(...) / *ALL | *HP-FONT(...) | | HP-FONT-NAME = <alphanum-name 1..3> / *ALL | *ND-FONT(...) | | ND-FONT-NAME = <alphanum-name 1..3> / *ALL </pre>

continued ➡

(part 2 of 2)

```

|   *PCL-FONT(...)
|   |   PCL-FONT-NAME = <alphanum-name 1..3> / *ALL
*HP-FONT-POOL(...)
|   |   HP-FONT-POOL-NAME = <alphanum-name 1..4> / *ALL
*IMAGE(...)
|   |   IMAGE = *FORMS-OVERLAY-BUFFER(...) / *OVERLAY(...) / *ALL
|   |   |   *FORMS-OVERLAY-BUFFER(...)
|   |   |   |   BUFFER-NAME = <alphanum-name 1..4> / *ALL
|   |   |   |   *OVERLAY(...)
|   |   |   |   |   OVERLAY-NAME = <alphanum-name 1..4> / *ALL
*GENERAL-LOOP(...)
|   |   GENERAL-LOOP-NAME = <alphanum-name 1..8> / *ALL
*LOOP(...)
|   |   LOOP = *HP-LOOP(...) / *ND-LOOP(...) / *LP-LOOP(...) / *ALL
|   |   |   *HP-LOOP(...)
|   |   |   |   HP-LOOP-NAME = <alphanum-name 1..3> / *ALL
|   |   |   |   *ND-LOOP(...)
|   |   |   |   |   ND-LOOP-NAME = <alphanum-name 1..3> / *ALL
|   |   |   |   *LP-LOOP(...)
|   |   |   |   |   LP-LOOP-NAME = <alphanum-name 1..3> / *ALL
*PREFORM(...)
|   |   PREFORM-NAME = <alphanum-name 1..4> / *ALL
*SOFT-FONT(...)
|   |   SOFT-FONT-NAME = <alphanum-name 1..8> / *ALL
*MACRO(...)
|   |   MACRO-NAME = <alphanum-name 1..8> / *ALL
,ENFORCE = *NO / *YES
,DIALOG-CONTROL = *STD / *NO / *YES / *ERROR
,ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...) / <date 8..10>
|   *INTERVAL(...)
|   |   FROM = 1950-01-01 / <date 8..10>
|   |   TO = *TODAY / <date 8..10>

```


Operands

OBJECT =

Type of print resources to be deleted from the resource library.

OBJECT = *ALL

The entire contents of the library with all print resource types are to be deleted.

OBJECT = *BAND-ID(...)

Print resources of the type BAND-ID are to be deleted.

BAND-ID-NAME =

Specifies which print resources of the type BAND-ID are to be deleted.

BAND-ID-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type BAND-ID which is to be deleted.

BAND-ID-NAME = *ALL

All print resources of the type BAND-ID are to be deleted from the current PROFILE.

OBJECT = *CHARACTER-IMAGE(...)

Print resources of the type CHARACTER-IMAGE are to be deleted.

CHARACTER-IMAGE-NAME =

Specifies which print resources of the type CHARACTER-IMAGE are to be deleted.

CHARACTER-IMAGE-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type CHARACTER-IMAGE which is to be deleted.

CHARACTER-IMAGE-NAME = *ALL

All print resources of the type CHARACTER-IMAGE are to be deleted from the current PROFILE.

OBJECT = *TRANSLATION-TAB(...)

Print resources of the type TRANSLATION-TABLE are to be deleted.

TRANSLATION-TAB-NAME =

Specifies which print resources of the type TRANSLATION-TABLE are to be deleted.

TRANSLATION-TAB-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type TRANSLATION-TABLE which is to be deleted.

TRANSLATION-TAB-NAME = *ALL

All print resources of the type TRANSLATION-TABLE are to be deleted from the current PROFILE.

OBJECT = *FONT(...)

Print resources of the object class font, which includes the object types HP font, ND font and PCL font, are to be deleted.

FONT =

Defines which object types are selected from the object class font. The object types HP font, ND font and PCL font can be selected. Print resources of the type HP-font pool can be selected with a separate operand.

FONT = *HP-FONT(...)

Only print resources of the type HP font are to be deleted from the current PRFILE.

HP-FONT-NAME =

Specifies which print resources of the type HP font are to be deleted.

HP-FONT-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type HP font which is to be deleted.

HP-FONT-NAME = *ALL

All print resources of the type HP font are to be deleted from the current PRFILE.

FONT = *ND-FONT(...)

Only print resources of the type ND font are to be deleted from the current PRFILE.

ND-FONT-NAME =

Specifies which print resources of the type ND font are to be deleted.

ND-FONT-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type ND font which is to be deleted.

ND-FONT-NAME = *ALL

All print resources of the type ND font are to be deleted from the current PRFILE.

FONT = *PCL-FONT(...)

Only print resources of the type PCL font are to be deleted from the current PRFILE.

PCL-FONT-NAME =

Specifies which print resources of the type PCL font are to be deleted.

PCL-FONT-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type PCL font which is to be deleted.

PCL-FONT-NAME = *ALL

All print resources of the type PCL font are to be deleted from the current PRFILE.

FONT = *ALL

All print resources of types HP font, ND font and PCL font are to be deleted from the current PRFILE.

OBJECT = *HP-FONT-POOL(...)

Print resources of the type HP-font pool are to be deleted.

HP-FONT-POOL-NAME =

Specifies which print resources of the type HP-font pool are to be deleted.

HP-FONT-POOL-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type HP-font pool to be deleted.

HP-FONT-POOL-NAME = *ALL

All print resources of the type HP-font pool are to be deleted from the current PRFILE.

OBJECT = *IMAGE(...)

Print resources of the object class image, which contains the object types forms overlay buffer (FOB) and PCL overlay, are to be deleted.

IMAGE =

Specifies which object types from the object class image are to be selected. The object types FOB and PCL overlay can be selected.

IMAGE = *FORMS-OVERLAY-BUFFER(...)

Print resources of the type FOB are to be deleted from the current PRFILE.

BUFFER-NAME =

Specifies which print resources of the type FOB are to be deleted.

BUFFER-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type FOB which is to be deleted.

BUFFER-NAME = *ALL

All print resources of the type FOB are to be deleted from the current PRFILE.

IMAGE = *OVERLAY(...)

Print resources of the type PCL overlay are to be deleted from the current PRFILE.

OVERLAY-NAME =

Specifies which print resources of the type PCL overlay are to be deleted.

OVERLAY-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type PCL overlay which is to be deleted.

OVERLAY-NAME = *ALL

All print resources of the type PCL overlay are to be deleted from the current PRFILE.

IMAGE = *ALL

All print resources of the type forms overlay buffer (FOB) and PCL overlay are to be deleted from the current PRFILE.

OBJECT = *GENERAL-LOOP(...)

Print resources of the type general loop are to be deleted.

GENERAL-LOOP-NAME =

Specifies which print resources of the type general loop are to be deleted.

GENERAL-LOOP-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type general loop to be deleted.

GENERAL-LOOP-NAME = *ALL

All print resources of the type general loop are to be deleted from the current PRFILE.

OBJECT = *LOOP(...)

Print resources of the type loop are to be deleted.

LOOP =

Specifies the printer type whose loop records are to be deleted. Loop records of the printer types HP, ND or LP can be selected.

LOOP = *HP-LOOP(...)

Only print resources of types HP font and ND font are to be deleted from the current PRFILE.

HP-LOOP-NAME =

Specifies which print resources of the type HP loop are to be deleted.

HP-LOOP-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type HP loop which is to be deleted.

HP-LOOP-NAME = *ALL

All print resources of the type HP loop are to be deleted from the current PRFILE.

LOOP = *ND-LOOP(...)

Only print resources of the type ND loop are to be deleted from the current PRFILE.

ND-LOOP-NAME =

Specifies which print resources of the type ND loop are to be deleted.

ND-LOOP-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type ND loop which is to be deleted.

ND-LOOP-NAME = *ALL

All print resources of the type ND loop are to be deleted from the current PRFILE.

LOOP = *LP-LOOP(...)

Only print resources of the type LP loop are to be deleted from the current PRFILE.

LP-LOOP-NAME =

Specifies which print resources of the type LP loop are to be deleted.

LP-LOOP-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type LP loop which is to be deleted.

LP-LOOP-NAME = *ALL

All print resources of the type LP loop are to be deleted from the current PRFILE.

LOOP = *ALL

All print resources of the type loop are to be deleted, regardless of the printer type.

OBJECT = *PREFORM(...)

Print resources of the type preform record are to be deleted.

PREFORM-NAME =

Specifies which print resources of the type preform record are to be deleted.

PREFORM-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type preform record which is to be deleted.

PREFORM-NAME = *ALL

All print resources of the type preform record are to be deleted from the current PRFILE.

OBJECT = *SOFT-FONT(...)

Print resources of the type PCL softfont are to be deleted.

SOFT-FONT-NAME =

Specifies which print resources of the type PCL softfont are to be deleted.

SOFT-FONT-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type PCL softfont which is to be deleted.

SOFT-FONT-NAME = *ALL

All print resources of the type PCL softfont are to be deleted from the current PRFILE.

OBJECT = *MACRO(...)

Print resources of the type PCL macro are to be deleted.

MACRO-NAME =

Specifies which print resources of the type PCL macro are to be deleted.

MACRO-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type PCL macro which is to be deleted.

MACRO-NAME = *ALL

All print resources of the type PCL macro are to be deleted from the current PRFILE.

ENFORCE =

Specifies whether print resources of the type HP font are to be deleted even though they belong to an HP-font pool.

ENFORCE = *NO

Before the requested deletion of the resource of the type HP font, the program checks whether it is assigned to an HP-font pool. If so, the resource is not deleted. The same applies to PCL fonts and PCL overlays if these reference PCL softfonts or PCL macros.

ENFORCE = *YES

The resource is deleted without being checked.

DIALOG-CONTROL =

Specifies whether a dialog with the user is to be started to allow controlled execution of the statement.

DIALOG-CONTROL = *STD

The setting is taken from the default value set via the MODIFY-PRM-OPTIONS statement.

DIALOG-CONTROL = *NO

No dialog is to be started.

DIALOG-CONTROL = *YES

A dialog is to be started. This allows you to control the way the program handles each resource to be deleted, i.e. whether it is to be deleted or not, or whether the statement is to be canceled.

DIALOG-CONTROL = *ERROR

A conditional dialog is to be started. Only in the event of an error during processing can you control further operation: statement to be continued with next resource (response: "0") or canceled (response: "1").

ACCESS-DATE =

The date of the last access can act as an additional criterion for selection of the objects to be deleted. Here you can specify a particular date or a range of dates. Each write access (ADD, MODIFY) to an object by PRM and each access from SPOOL (for printing purposes) is logged with a time stamp. The access date thus corresponds to the last access to this object.

A date can be specified in the format YY-MM-DD or YYYY-MM-DD (Y=year; M=month; D=day), e.g. 94-08-10 or 1994-08-10.

If the year is only given as two digits, the following rule will apply after the turn of the century: all numbers (xy) ≤ 60 are interpreted as 20xy, while all numbers > 60 are interpreted as 19xy

ACCESS-DATE = *ANY

Default: the access date is not to serve as a criterion for the selection of the objects to be deleted.

ACCESS-DATE = *TODAY

In conjunction with the above-named criteria, the last print resources to be accessed on the same day are to be deleted.

ACCESS-DATE = *INTERVAL(...)

A range of dates is specified.

FROM = 1950-01-01 / <date 8..10>

Lower limit of the date range. The default value is intended to ensure that no print resources older than 1950 are included.

TO = *TODAY / <date 8..10>

Upper limit of the date range. The default value is always the current date.

ACCESS-DATE = <date 8..10>

In conjunction with the above-named criteria, the print resources last accessed on the date specified in the format YY-MM-DD or YYYY-MM-DD are to be deleted

SHOW-HP-CHARACTER

Display attributes and shape of character

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*FONT(*HP-FONT)

Function

This statement displays the attributes and the shape of a character of a font. The font can be selected in the statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*FONT(*HP-FONT(HP-FONT-NAME=...)).

The following information is output:

- hexadecimal code of the character
- size of the character frame
- character width and height
- character matrix

In the character matrix shown, all dots which are set appear as “o”, and all those which are not set appear as “.”. Since the whole matrix, which comprises 40 lines and 40 columns, is too large to fit on the screen, you should use the SELECT operand to choose a suitable, displayable section of the matrix if output is to be on the screen. The output medium for the desired information can be specified via the MODIFY-PRM-OPTIONS statement.

Format

SHOW-HP-CHARACTER
CHARACTER-CODE = <u>*ALL</u> / <x-string 1..2> ,SELECT = <u>*ALL</u> / *TOP / *BOTTOM / *MIDDLE / *LINE-RANGE(...) *LINE-RANGE(...) | FROM = <u>13</u> / <integer 1..40> | ,TO = <u>30</u> / <integer 1..40> ,REVERSE-MODE = <u>*NO</u> / *YES

Operands

CHARACTER-CODE =

Specifies the code(s) of the characters to be displayed.

CHARACTER-CODE = *ALL

Default: all codes of the current HP font are to be displayed on the screen or on the specified output medium.

CHARACTER-CODE = <x-string 1..2>

Hexadecimal code of the individual character to be displayed.

SELECT =

Defines a line range of the character matrix to be output.

SELECT = *ALL

Default: all 40 lines of the character matrix are to be output.

SELECT = *TOP

Only the upper range of the matrix (lines 1 to 17) is to be output.

SELECT = *BOTTOM

Only the lower range of the matrix (lines 24 to 40) is to be output.

SELECT = *MIDDLE

Only the middle range of the matrix (lines 13 to 29) is to be output.

SELECT = *LINE-RANGE(...)

The range of the matrix to be output is limited in the following substructure.

FROM = 13 / <integer 1..40>

Lower limit of the line range.

TO = 30 / <integer 1..40>

Lower limit of the line range. The value for TO must be greater than or equal to the value for FROM.

REVERSE-MODE =

Defines whether the character is to be displayed in reverse video. The operand only affects the display, i.e. the attributes defined when the character is created are not changed.

REVERSE-MODE = *NO

Default: the character is not to be displayed in reverse video.

REVERSE-MODE = *YES

The character is to be displayed in reverse video.

SHOW-LINE-DESCRIPTOR

Display attributes of loop line

Statement group:	Resource accesses
Statement type:	Substatement
Assigned main statements:	ADD- / MODIFY-PRINT-RESOURCES - OBJECT=*LOOP

Function

This statement queries the attributes of the lines of a loop which were defined via the MODIFY-LINE-DESCRIPTOR statement. The loop containing the desired lines is specified earlier via the statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*LOOP.

Format

SHOW-LINE-DESCRIPTOR
LINE-NUMBER = <u>*ALL</u> / <integer 1..1024>

Operands

LINE-NUMBER =

Specifies the lines about which information is requested.

LINE-NUMBER = *ALL

Default: information is requested about all lines of the loop.

LINE-NUMBER = <integer 1..1024>

Line number about which information is requested.

SHOW-PARAGRAPH

Query attributes of general loop paragraphs

Statement group: Resource accesses
Statement type: Substatement
Assigned main statements: ADD- / MODIFY-PRINT-RESOURCES -
 OBJECT=*GENERAL-LOOP

Function

This statement queries the attributes of all paragraphs of a general loop which were previously defined via the statement ADD- or MODIFY-PRINT-RESOURCES OBJECT=*GENERAL-LOOP(GENERAL-LOOP-NAME=..).

Format

SHOW-PARAGRAPH
PARAGRAPH-NAME = <u>*ALL</u> / <alphanum-name 1..8>

Operands

PARAGRAPH-NAME =

Specifies the name of the general loop paragraph whose attributes are to be displayed.

PARAGRAPH-NAME = *ALL

Default: the attributes of all paragraphs of the selected general loop are to be displayed.

PARAGRAPH-NAME = <alphanum-name 1..8>

Name of the paragraph whose attributes are to be displayed.

SHOW-PR-FILE-ATTRIBUTES

Query attributes of current PRFILE

Statement group: File accesses
Statement type: Main statement

Function

This statement queries the attributes of the current resource library. The current resource library is the last one to be opened by means of the OPEN-PR-FILE statement.

Format

SHOW-PR-FILE-ATTRIBUTES

SHOW-PRINT-RESOURCES

Output elements of PRFILE

Statement group: Resource accesses

Statement type: Main statement

Function

This statement queries the attributes of individual print resources or all print resources in the PRFILE currently opened. The scope of the information normally depends on the default value specified by means of the MODIFY-PRM-OPTIONS statement, but can be varied temporarily.

When output, the attributes are sorted by name of the resource, type of the resource and assigned printer type.

In addition to the attributes of the resource, further information can be requested via the IMPLEMENTATION-INFO operand, namely which SDF statements and operands were or could be used to create the resource. This functionality can be used, for example, for converting existing procedures (see also page 54).

Format

(part 1 of 2)

SHOW-PRINT-RESOURCES
<p>OBJECT = *<u>ALL</u> / *BAND-ID(...) / *CHARACTER-IMAGE(...) / *TRANSLATION-TAB(...) / *FONT(...) / *HP-FONT-POOL(...) / *IMAGE(...) / *GENERAL-LOOP(...) / *LOOP(...) / *PREFORM(...) / *SOFT-FONT(...) / *MACRO(...)</p> <p>*BAND-ID(...) | BAND-ID-NAME = *<u>ALL</u> / <alphanum-name 1..4></p> <p>*CHARACTER-IMAGE(...) | CHARACTER-IMAGE-NAME = *<u>ALL</u> / <alphanum-name 1..3></p> <p>*TRANSLATION-TAB(...) | TRANSLATION-TAB-NAME = *<u>ALL</u> / <alphanum-name 1..8></p> <p>*FONT(...) | FONT = *<u>ALL</u> / HP-FONT(...) / *ND-FONT(...) / *PCL-FONT(...) | *HP-FONT(...) | | HP-FONT-NAME = *<u>ALL</u> / <alphanum-name 1..3> | *ND-FONT(...) | | ND-FONT-NAME = *<u>ALL</u> / <alphanum-name 1..3> | *PCL-FONT(...) | | PCL-FONT-NAME = *ALL / <alphanum-name 1..3></p> <p>*HP-FONT-POOL(...) | HP-FONT-POOL-NAME = *<u>ALL</u> / <alphanum-name 1..4></p> <p>*IMAGE(...) | IMAGE = *ALL / *FORMS-OVERLAY-BUFFER(...) / *OVERLAY(...) | *FORMS-OVERLAY-BUFFER(...) | | BUFFER-NAME = *<u>ALL</u> / <alphanum-name 1..4> | *OVERLAY(...) | | OVERLAY-NAME = *ALL / <alphanum-name 1..4></p> <p>*GENERAL-LOOP(...) | GENERAL-LOOP-NAME = *<u>ALL</u> / <alphanum-name 1..8></p>

continued ➡

```

*LOOP(...)
  |
  | LOOP = *ALL / *HP-LOOP(...) / *ND-LOOP(...) / *LP-LOOP(...)
  |
  |   *HP-LOOP(...)
  |   |
  |   | HP-LOOP-NAME = *ALL / <alphanum-name 1..3>
  |   *ND-LOOP(...)
  |   |
  |   | ND-LOOP-NAME = *ALL / <alphanum-name 1..3>
  |   *LP-LOOP(...)
  |   |
  |   | LP-LOOP-NAME = *ALL / <alphanum-name 1..3>
  |
  | *PREFORM(...)
  | |
  | | PREFORM-NAME = *ALL / <alphanum-name 1..4>
  |
  | *SOFT-FONT(...)
  | |
  | | SOFT-FONT-NAME = *ALL / <alphanum-name 1..8>
  |
  | *MACRO(...)
  | |
  | | MACRO-NAME = *ALL / <alphanum-name 1..8>
  |
  | ,INFORMATION = *STD / *SUMMARY / *ALL
  | ,IMPLEMENTATION-INFO = *NO / *YES
  | ,OUTPUT = *STD / *SYSOUT / *SYSLST(...) / *FILE(...)
  |
  |   *SYSLST(...)
  |   |
  |   | SYSLST-NUMBER = *STD / <integer 1..99>
  |
  |   *FILE(...)
  |   |
  |   | FILE-NAME = *STD / <filename 1..54>
  |
  | ,LINES-PER-PAGE = *STD / <integer 3..9999>
  | ,EXTRA-FORM-FEED = *STD / *YES / *NO
  | ,HEADER-LINES = *STD / *YES / *NO
  | ,ACCESS-DATE = *ANY / *TODAY / *INTERVAL(...) / <date 8..10>
  |
  |   *INTERVAL(...)
  |   |
  |   | FROM = 1950-01-01 / <date 8..10>
  |   | TO = *TODAY / <date 8..10>

```

Operands

OBJECT =

Type of the print resources whose attributes are to be displayed.

OBJECT = *ALL

Default: the entire contents of the library with all print resource types is to be displayed.

OBJECT = *BAND-ID(...)

Information on print resources of the type BAND-ID is to be displayed.

BAND-ID-NAME =

Specifies the print resources of the type BAND-ID about which information is requested.

BAND-ID-NAME = *ALL

Default: information on all print resources of the type BAND-ID in the current PRFILE is to be displayed.

BAND-ID-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type BAND-ID about which information is to be displayed.

OBJECT = *CHARACTER-IMAGE(...)

Information on print resources of the type CHARACTER-IMAGE is to be displayed.

CHARACTER-IMAGE-NAME =

Specifies the print resources of the type CHARACTER-IMAGE about which information is requested.

CHARACTER-IMAGE-NAME = *ALL

Default: information on all print resources of the type CHARACTER-IMAGE in the current PRFILE is to be displayed.

CHARACTER-IMAGE-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type CHARACTER-IMAGE about which information is to be displayed.

OBJECT = *TRANSLATION-TAB(...)

Information on print resources of the type TRANSLATION-TABLE is to be displayed.

TRANSLATION-TAB-NAME =

Specifies the print resources of the type TRANSLATION-TABLE about which information is requested.

TRANSLATION-TAB-NAME = *ALL

Default: information on all print resources of the type TRANSLATION-TABLE in the current PRFILE is to be displayed.

TRANSLATION-TAB-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type TRANSLATION-TABLE about which information is to be displayed.

OBJECT = *FONT(...)

Information on print resources of the object class font, which includes the object types HP font, ND font and PCL font, is to be displayed.

FONT =

Defines which object types from the object class font are selected. The object types HP font, ND font and PCL font can be selected. Print resources of the type HP-font pool can be selected via a separate operand.

FONT = *ALL

Information on all print resources of the types HP font, ND font and PCL font in the current PRFILE is to be displayed.

FONT = *HP-FONT(...)

Only information on print resources of the type HP font in the current PRFILE is to be displayed.

HP-FONT-NAME =

Specifies the print resources of the type HP font about which information is to be displayed.

HP-FONT-NAME = *ALL

Default: information on all print resources of the type HP font in the current PRFILE is to be displayed.

HP-FONT-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type HP font about which information is to be displayed.

FONT = *ND-FONT(...)

Only information on print resources of the type ND font in the current PRFILE is to be displayed.

ND-FONT-NAME =

Specifies the print resources of the type ND font about which information is to be displayed.

ND-FONT-NAME = *ALL

Information on all print resources of the type ND font in the current PRFILE is to be displayed.

ND-FONT-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type ND font about which information is to be displayed.

FONT = *PCL-FONT(...)

Only information on print resources of the type PCL font in the current PRFILE is to be displayed.

PCL-FONT-NAME =

Specifies the print resources of the type PCL font about which information is to be displayed.

PCL-FONT-NAME = *ALL

Information on all print resources of the type PCL font in the current PRFILE is to be displayed, i.e. information on name, last access, ID, reference and call escape sequence.

PCL-FONT-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type PCL font about which information is to be displayed.

OBJECT = *HP-FONT-POOL(...)

Information on print resources of the type HP-font pool is to be displayed.

HP-FONT-POOL-NAME =

Specifies the print resources of the type HP-font pool about which information is to be displayed.

HP-FONT-POOL-NAME = *ALL

Information on all print resources of the type HP-font pool in the current PRFILE is to be displayed.

HP-FONT-POOL-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type HP-font pool about which information is to be displayed.

OBJECT = *IMAGE(...)

Specifies which object types from the object class image are to be selected. The object types FOB and PCL overlay can be selected.

IMAGE = *ALL

All print resources of the types FOB and PCL overlay in the current PRFILE are to be displayed.

IMAGE = *FORMS-OVERLAY-BUFFER(...)

Information on print resources of the type FOB in the current PRFILE is to be displayed.

BUFFER-NAME =

Specifies the print resources of the type FOB about which information is to be displayed.

BUFFER-NAME = *ALL

Information on all print resources of the type FOB in the current PRFILE is to be displayed.

BUFFER-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type FOB about which information is to be displayed.

IMAGE = *OVERLAY(...)

Information on print resources of the type PCL overlay in the current PRFILE is to be displayed.

OVERLAY-NAME =

Specifies the print resources of the type PCL overlay about which information is to be displayed.

OVERLAY-NAME = *ALL

Information on all print resources of the type PCL overlay in the current PRFILE is to be displayed, i.e. information on name, last access, ID and reference.

OVERLAY-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type PCL overlay about which information is to be displayed.

OBJECT = *GENERAL-LOOP(...)

Information on print resources of the type general loop is to be displayed.

GENERAL-LOOP-NAME =

Specifies the print resources of the type general loop about which information is to be displayed.

GENERAL-LOOP-NAME = *ALL

Default: information on all print resources of the type general loop in the current PRFILE is to be displayed.

GENERAL-LOOP-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type general loop about which information is to be displayed.

OBJECT = *LOOP(...)

Information on print resources of the type loop is to be displayed.

LOOP =

Specifies the printer type about whose loop records information is to be displayed. Loop records of the printer types HP, ND or LP can be selected.

LOOP = *ALL

Default: information on all print resources of the type loop is to be output, irrespective of the printer type.

LOOP = *HP-LOOP(...)

Only information on print resources of the type HP loop in the current PRFILE is to be displayed.

HP-LOOP-NAME =

Specifies the print resources of the type HP loop about which information is to be displayed.

HP-LOOP-NAME = *ALL

Default: information on all print resources of the type HP loop in the current PRFILE is to be displayed.

HP-LOOP-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type HP loop about which information is to be displayed.

LOOP = *ND-LOOP(...)

Only information on print resources of the type ND loop in the current PRFILE is displayed.

ND-LOOP-NAME =

Specifies the print resources of the type ND loop about which information is to be displayed.

ND-LOOP-NAME = *ALL

Default: information on all print resources of the type ND loop in the current PRFILE is to be displayed.

ND-LOOP-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type ND loop about which information is to be displayed.

LOOP = *LP-LOOP(...)

Only information on print resources of the type LP loop in the current PRFILE is to be displayed.

LP-LOOP-NAME =

Specifies the print resources of the type LP loop about which information is to be displayed.

LP-LOOP-NAME = *ALL

Default: information on all print resources of the type LP loop in the current PRFILE is to be displayed.

LP-LOOP-NAME = <alphanum-name 1..3>

Name of the individual print resource of the type LP loop about which information is to be displayed.

OBJECT = *PREFORM(...)

Information on print resources of the type preform record is output.

PREFORM-NAME =

Specifies the print resources of the type preform record about which information is to be displayed.

PREFORM-NAME = *ALL

Default: information on all print resources of the type preform record in the current PRFILE is to be displayed.

PREFORM-NAME = <alphanum-name 1..4>

Name of the individual print resource of the type preform record about which information is to be displayed.

OBJECT = *SOFT-FONT(...)

Information on print resources of the type PCL softfont is to be displayed.

SOFT-FONT-NAME =

Specifies the print resources of the type PCL softfont about which information is to be displayed.

SOFT-FONT-NAME = *ALL

Information on all print resources of the type PCL softfont in the current PRFILE is to be displayed, i.e. information on resource, last access, size, data format.

SOFT-FONT-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type PCL softfont about which information is to be displayed.

OBJECT = *MACRO(...)

Information on print resources of the type PCL macro is to be displayed.

MACRO-NAME =

Specifies the print resources of the type PCL macro about which information is to be displayed.

MACRO-NAME = *ALL

Information on all print resources of the type PCL macro in the current PRFILE is to be displayed, i.e. information on resource, last access, size, data format.

MACRO-NAME = <alphanum-name 1..8>

Name of the individual print resource of the type PCL macro about which information is to be displayed.

INFORMATION =

Specifies the scope of the information to be displayed about a print resource.

INFORMATION = *STD

The setting is taken from the default value specified via the MODIFY-PRM-OPTIONS statement.

INFORMATION = *SUMMARY

The information is to provide a summary. Special attributes of the print resource are not displayed.

INFORMATION = *ALL

The output is to contain all available information on the desired print resources.

IMPLEMENTATION-INFO =

Defines whether, in addition to the attributes of the resource, a list of the SDF statements which led to its creation are also to be displayed.

IMPLEMENTATION-INFO = *NO

Default: a list of the SDF statements which led to the creation of this resource is not to be displayed.

IMPLEMENTATION-INFO = *YES

A list of the SDF statements which led to the creation of this resource is also to be displayed.

OUTPUT =

Defines the output medium for the requested information on the print resources. The data can be displayed on the screen (SYSOUT) or written to a file (logical system file SYSLST or cataloged file).

OUTPUT = *STD

The setting is taken from the default value specified via the MODIFY-PRM-OPTIONS statement.

OUTPUT = *SYSOUT

Data is output to the logical system file SYSOUT, i.e. in interactive mode usually on the screen.

OUTPUT = *SYSLST(...)

The information is to be output to the logical system file SYSLST.

SYSLST-NUMBER =

Specifies whether the logical system file SYSLST is to receive a number, and, if so, which number.

SYSLST-NUMBER = *STD

The setting is taken from the default value specified via the MODIFY-PRM-OPTIONS statement.

SYSLST-NUMBER = <integer 1..99>

Number of the logical system file SYSLST.

OUTPUT = *FILE(...)

The information is to be output to a file.

FILE-NAME =

Name of the file to which the information is to be output.

FILE-NAME = *STD

The setting is taken from the default value specified via the MODIFY-PRM-OPTIONS statement.

FILE-NAME = <filename 1..54>

Name of the file to which the information is to be output. This can even be a temporary file. If a file of the same name already exists, the value of the WRITE-MODE operand in the MODIFY-PRM-OPTIONS statement determines whether this file can be overwritten.

LINES-PER-PAGE =

Defines the number of lines each page is to have if output to a file.

LINES-PER-PAGE = *STD

The setting is taken from the default value specified via the MODIFY-PRM-OPTIONS statement.

LINES-PER-PAGE = <integer 3..9999>

Number of lines per page. The minimum number of three lines per page includes the two header lines per page which can be set via the HEADER-LINES operand.

EXTRA-FORM-FEED =

Defines whether the information on resources requested by means of SHOW statements is prepared such that an extra page feed occurs after each block of related information.

EXTRA-FORM-FEED = *STD

The setting is taken from the default value specified via the MODIFY-PRM-OPTIONS statement.

EXTRA-FORM-FEED = *YES

There is to be an extra page feed after each block of related information on a print resource.

EXTRA-FORM-FEED = *NO

There is to be no extra page feed after each block of related information on a print resource. All requested information is output sequentially; page feeds are based solely on the number of lines (LINES-PER-PAGE operand).

HEADER-LINES =

Specifies whether two header lines per page are output in the printout.

HEADER-LINES = *STD

The setting is taken from the default value specified via the MODIFY-PRM-OPTIONS statement.

HEADER-LINES = *YES

Two header lines per page are also to be output.

HEADER-LINES = *NO

Two header lines per page are not to be output.

ACCESS-DATE =

The date of the last access can act as an additional criterion for selection of the objects about which information is requested. Here you can specify a particular date or a range of dates. Each write access (ADD, MODIFY) to an object by PRM and each access from SPOOL (for printing purposes) is logged with a time stamp. The access date thus corresponds to the last access to this object.

A date can be specified in the format YY-MM-DD or YYYY-MM-DD (Y=year; M=month; D=day), e.g. 1994-08-10 or 94-08-10.

If the year is only given as two digits, the following rule will apply after the turn of the century: all numbers (xy) ≤ 60 are interpreted as 20xy, while all numbers > 60 are interpreted as 19xy.

ACCESS-DATE = *ANY

Default: the access date is not to serve as a criterion for selection of the objects on which information is requested.

ACCESS-DATE = *TODAY

In conjunction with the above-named criteria, information is to be requested on the last print resources to be accessed on the current day.

ACCESS-DATE = *INTERVAL(...)

A range of dates is specified.

FROM = 1950-01-01 / <date 8..10>

Lower limit of the date range. The default value is intended to ensure that no print resources older than 1950 are included.

TO = *TODAY / <date 8..10>

Upper limit of the date range. The default value is always the current date.

ACCESS-DATE = <date 8..10>

In conjunction with the above-named criteria, information is to be requested on the print resources last accessed on the specified date in the format YY-MM-DD or YYYY-MM-DD

SHOW-PRM-OPTIONS

Query default values for program run

Statement group: PRM options
Statement type: Main statement

Function

This statement queries the global default values for the output medium, dialog control, the scope of the information output and the mode of access to the opened resource library. These default values are defined via the MODIFY-PRM-OPTIONS statement and are the default values in the statements.

Format

SHOW-PRM-OPTIONS

6 Menu system

This chapter contains a description of all the PRM menus.

The PRM menu system comprises a main menu and object menus, which are structured differently for each object type. You can select the object type to be processed and the type of operation (action) from the main menu. If a new print resource is created, or an existing resource altered or if the attributes of a print resource are queried, PRM presents the associated object menu following selection from the main menu.

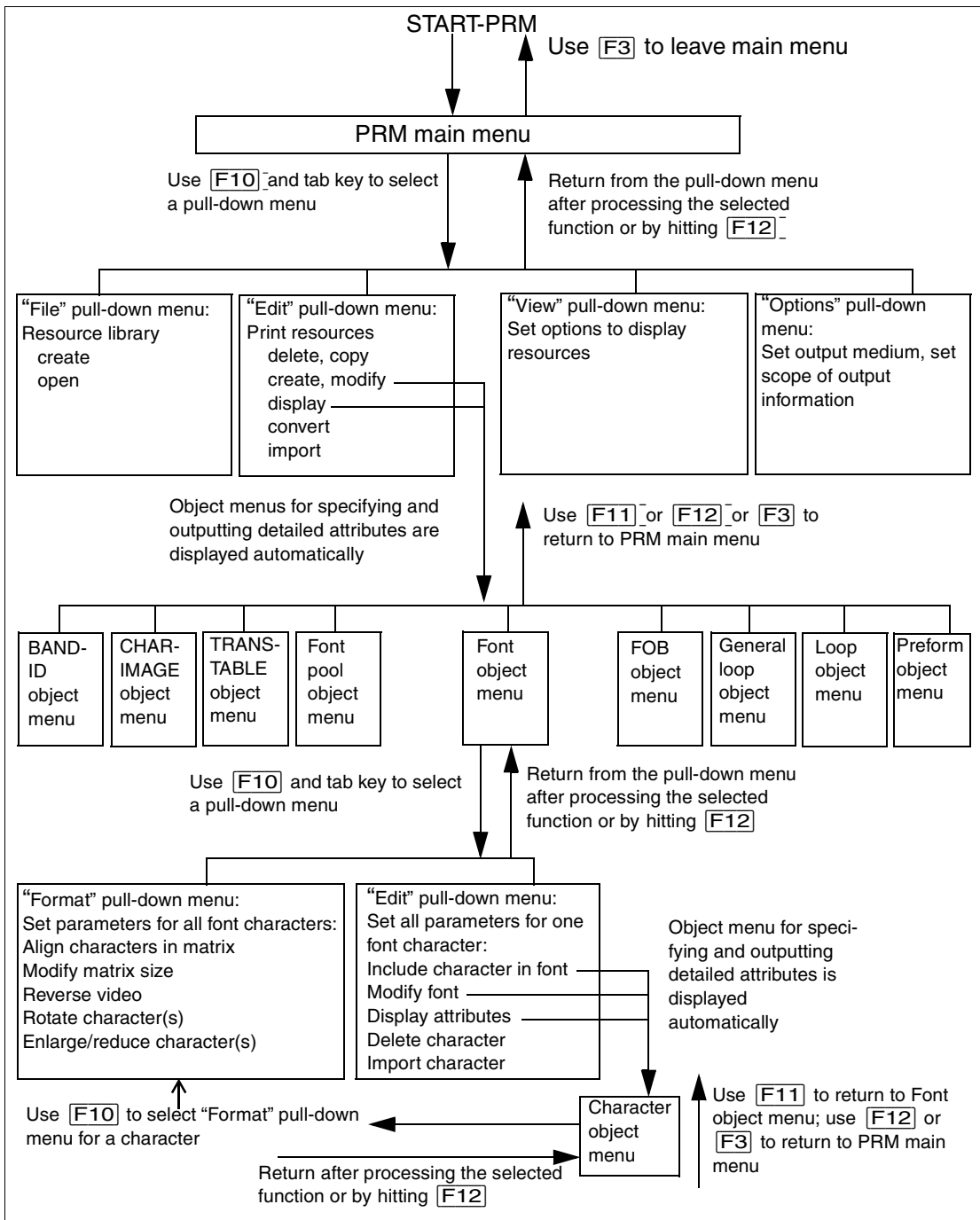
The description in this chapter is organized according to the sequence of the four pull-down menus in the menu bar: reading from left to right these are “File”, “Edit”, “View” and “Options”. Each pull-down menu has a series of menu items, each of which is described in detail, working from top to bottom. Following the description of the main menu and the associated pull-down menus, the object menus are described in the sequence in which they appear in the list of object types supported.

Concepts and how to use the system

In chapter 4, “Overview of the PRM interfaces”, on page 49ff you will find an explanation of relevant concepts (selection fields, boxes etc.) and a comprehensive description of how to use the menu system (positioning within the menu etc.).

Structure of the menu system

The following overview illustrates the structure of the menu system. Dependencies between the various levels and in particular how to change level using function keys (returning to a higher level) are explained in the menu description.



6.1 PRM main menu

Once you have called PRM using the START-PRM command, you will see the following screen:

```

File      Edit      View      Options
-----
                PRINT RESOURCES MANAGEMENT
-----
PRfile :
Name      Type      Lines      0 thru      0 of      0 Mode :
                More :
                Last access
: SPR0999 :
: BS2000 Print Resources Management (PRM) Version 1.2 :
: Copyright Fujitsu Siemens Computers GmbH 1999 :
: All Rights Reserved :
: :
: F12=Remove :
:.....:
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8+=  F10=Actions  F12=Cancel

```

The “File” pull-down menu

This menu brings together all the functions for processing a resource library:

- creating a new resource library
- opening and closing existing resource libraries
- requesting information on the current resource library
- terminating PRM

The “Edit” pull-down menu

This menu brings together all the functions for processing print resources in the current resource library:

- creating a new print resource
- modifying an existing print resource
- displaying the attributes of a print resource
- deleting print resources
- copying print resources
- converting print resources
- importing print resources

The “View” pull-down menu

This menu is used to limit the number of print resources to be processed and displayed on screen. The menu items contained in the pull-down menu list the print resource types managed by PRM. You may select one or more print resource types to process:

- Band Identification
- Character Image
- Translation Table
- Font
- Font Pool
- Forms Overlay Buffer
- General Loop
- Loop
- Preform
- PCL Overlay
- PCL Softfont
- PCL Macro

The “Options” pull-down menu

This menu is used to set the following global default values:

- output medium for the log file
- dialog control
- scope of the output information.

Contents of the work area

The name of the current resource library, the open mode for the file, and the individual print resources stored in the file are displayed in the work area. If you wish to process one or more of these resources (possible actions may be selected from the “Edit” pull-down menu) select them by positioning the cursor and marking your selection with “/”, “X” or “x”.

Function keys in the PRM main menu

- F1** Call the help function
- F3** Leave the menu system
- F4** Search within the displayed list in the work area
- F5** Select all resources in the work area
Cancel selection by pressing the function key again
- F7** Scroll backward in the list displayed
- F8** Scroll forward in the list displayed
- F10** Move to the first item in the menu bar
- F12** Cancel selection in the pull-down menu and place the cursor on the first item in the menu

6.2 The “File” pull-down menu in the main menu

This menu brings together all the functions for editing data:

- creating a new file
- importing print control files
- opening existing resource libraries
- querying information on the current resource library
- closing the current resource library

Use **F10** in the main menu to activate this initial menu title in the menu bar and position the cursor in the selection input field (“_”) in the pull-down menu. The next screen shows the valid menu items for selecting the required function:

```

File      Edit      View      Options
-----
:  1.New...   :          PRINT RESOURCES MANAGEMENT
:  2.Open...  : -----
:  3.Close   :
:  4.Info   (F4) :          Lines      0 thru      0 of      0 Mode :
:  5.Exit   (F3) : Type              Model1          Last access
:.....:

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8+=  F10=Actions  F12=Cancel

```


Leaving the “File” pull-down menu

Tab keys	Position the cursor within the menu bar; the cursor jumps from title to title.
F10	Cancel the pull-down menu display and return to the main menu.
F3 or F12	Delete the pull-down menu displayed; any selection entered will be ignored; the cursor is positioned on the first menu line.

Note

See page 215 for the meanings of the function keys in the PRM main menu.

6.2.1 The “New” menu item

This function creates a new resource library. When the function is executed successfully, the file is created, opened in update mode, and a blank work area is displayed in the PRM main menu.

To select the function, enter “1” in the pull-down menu and press **[DUE]** or **[ENTER]**. The next dialog box is displayed.

```

File      Edit      View      Options
-----
PRINT RESOURCES MANAGEMENT
-----
PRfile :
      Name ..... Lines      0 thru      0 of      0 Mode :
      : ..... Create a PRFILE ..... More :
      : Name of PRFILE to create :
      : Comments
      :
      : Command ==>
      : F1=Help  F3=Exit  F12=Cancel
      : .....
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=+  F10=Actions  F12=Cancel

```

Name of PRFILE to create (input field)

Specifies the name of the resource library to be created.

Comments (selection field)

Specifies whether any freely definable user comments are to be stored in the specified resource library. Entering “/”, “X” or “x” causes an input box to be displayed.

Function keys in the dialog box

- [F1]** Call the help function
- [F3]** or **[F12]** Cancel the function without saving the entries

Note

See page 215 for the meanings of the function keys in the PRM main menu.

6.2.2 The “Open” menu item

This function opens a resource library. All subsequent operations then refer to this library. The library remains available as the current library until it is closed explicitly with “File” → “Close” or until a new resource library is opened with “File” → “Open”. If a new library is opened, the previously opened library is closed implicitly.

“File” → “Open” allows you to open print control files of types HPFILE, NDFILE and SPOOLFILE as well as a PRFILE. If you do this, the entire contents of these files are converted to the same structure as the PRFILE and the individual resources thus become available to PRM. (For further details see section “Conversion of existing print control files” on page 35.)

When this function is executed successfully, the resource library is opened and the resources available in the file are displayed in the work area of the PRM main menu in accordance with the specifications in the “View” pull-down menu.

To select the function, enter “2” in the pull-down menu and press **[DUE]**. The following dialog box is displayed:

File	Edit	View	Options
----- PRINT RESOURCES MANAGEMENT -----			
PRfile :			Mode :
Name :	Open PRFILE		: ss
:	Name of PRFILE to open :		:
:	link name		:
:	Password :	(if any)	:
:	Open mode :	1 1.Read	:
:		2.Update	:
:	Comments		:
:	Command ==>		:
:	F1=Help	F3=Exit	F12=Cancel
:		

Command ==>			
F1=Help F3=Exit F4=Comments F5=All F7=- F8+= F10=Actions F12=Cancel			

Name of PRFILE to open (input field)

Specifies the name of the file to be opened. If you specify *STD, the system PRFILE is selected (for information on naming conventions, see chapter “Installing PRM”)

Link name (selection field)

Specifies whether the file name is to be interpreted as a link name. This link name must already have been associated with the name of the file using the SET-FILE-LINK command.

Password (input field)

Specifies the access password.

The password can be specified as an EBCDIC string (up to 4 characters), as a hexadecimal string (up to 8 characters) or as an integer.

Open mode (selection field)

Specifies the open mode (*Read* or *Update*) for the specified file.

Read specifies read-only access, while *Update* specifies read and write access.

Comments (selection field)

Specifies whether any freely definable user comments are to be stored for the specified file. Entering “/”, “X” or “x” causes an input box to be displayed in which an existing comment may be replaced.

Function keys in the dialog box**F1**

Help

F3 or **F12**

Cancel the function without saving the entries

Note

See page 215 for the meanings of the function keys in the PRM main menu.

6.2.3 The “Close” menu item

This function closes the current resource library and clears the work area in the PRM main menu.

To select this function, enter a “3” in the pull-down menu and press **[DUE]**.

```

File      Edit      View      Options
-----
: 3 1.New...      :          PRINT RESOURCES MANAGEMENT
: 2.Open...      :
: 3.Close        : POOL.PRFILE                               Mode : READ
: 4.Info (F4)    :          Lines      1 thru      14 of      229 More : +
: 5.Exit (F3)    : Type      Model      Last access
: .....:
#SG         FONT      HP          1996-05-02
#SN         FONT      HP          1996-05-02
#6A         FONT      HP          1996-05-02
#8C         FONT      HP          1996-05-02
#8F         FONT      HP          1996-12-05
C06         LOOP      HP          1996-05-02
C08         LOOP      HP          1996-05-02
C1          LOOP      LP          1996-12-05
C10         LOOP      HP          1996-05-02
C12         LOOP      HP          1996-05-02
C24         LOOP      HP          1996-05-02
D1D0        PREFORM   LP          1996-05-02
D1L0        PREFORM   LP          1996-05-02
-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8=+ F10=Actions F12=Cancel

```

Note

See page 215 for the meanings of the function keys in the PRM main menu.

6.2.4 The “Info” menu item

This function is used to view any user comments for the specified file.

To select the function, enter a “4” followed by **[DUE]** in the pull-down menu or press **[F4]** in the PRM main menu. The following dialog box will be displayed:

File	Edit	View	Options

PRINT RESOURCES MANAGEMENT			

PRfile :	:1SBZ:\$SYSSPOOL.PRFILE	Mode :	READ
Name :	.....	re :	+
#CF :	.....	Comments :	cess
#SG :	Attached comments to current processed library :		-02
#SN :			-02
#6A :			-02
#8C :			-02
#8F :			-05
C06 :			-02
C08 :			-02
C1 :	.....		-05
C10 :	Command ==>		-02
C12 :	F1=Help F3=Exit F12=Cancel		-02
C24 :	.....		-02
D1D0	PREFORM	LP	1996-05-02
D1L0	PREFORM	LP	1996-05-02

Command ==>			
F1=Help	F3=Exit	F4=Comments	F5=All F7=- F8+= F10=Actions F12=Cancel

Attached comments to current processed library (input field)

User comments (maximum of 200 characters) with freely selectable contents concerning the currently opened resource library.

Function keys in the dialog box

- [F1]** Help
- [F3]** or **[F12]** Cancel the function without saving the entries

Note

See page 215 for the meanings of the function keys in the PRM main menu.

6.2.5 The “Exit” menu item

This function terminates the PRM menu system and closes any resource library still open.

To select the function, enter a “5” in the pull-down menu and press **[DUE]**. This function corresponds to **[F3]** in the PRM main menu.

File	Edit	View	Options

: 5	1.New...	:	PRINT RESOURCES MANAGEMENT
:	2.Open...	:	-----
:	3.Close	:	POOL.PRFILE
:	4.Info (F4)	:	Lines 1 thru 14 of 229 Mode : READ
:	5.Exit (F3)	:	More : +
.....	.....	:	Type Model Last access
	#SG	:	FONT HP 1996-05-02
	#SN	:	FONT HP 1996-05-02
	#6A	:	FONT HP 1996-05-02
	#8C	:	FONT HP 1996-05-02
	#8F	:	FONT HP 1996-12-05
	C06	:	LOOP HP 1996-05-02
	C08	:	LOOP HP 1996-05-02
	C1	:	LOOP LP 1996-12-05
	C10	:	LOOP HP 1996-05-02
	C12	:	LOOP HP 1996-05-02
	C24	:	LOOP HP 1996-05-02
	D1D0	:	PREFORM LP 1996-05-02
	D1L0	:	PREFORM LP 1996-05-02

Command ==>			
F1=Help F3=Exit F4=Comments F5=All F7=- F8+= F10=Actions F12=Cancel			

Note

See page 215 for the meanings of the function keys in the PRM main menu.

6.3 The “Edit” pull-down menu in the main menu

This menu brings together all the functions for editing print resources in the current resource library:

- creating a new print resource
- modifying an existing print resource
- displaying the attributes of a print resource
- deleting print resources
- copying print resources
- converting print resources
- importing print resources

You can choose between two approaches when selecting print resources for editing: preselection in the main menu or selection in the dialog boxes.

When preselecting in the main menu, you can select an individual print resource or all print resources on which you want to perform an action by marking them in the work area. When you have indicated the required action in the pull-down menu, the corresponding attributes of the resource will be transferred to the next dialog box. Likewise, you can use function key **F5** to select all resources displayed or **F6** to select specific resources in the list displayed.

The procedure is reversed when selecting within dialog boxes: here you first specify the required action in the pull-down menu. Then you must specify the print resource in the next dialog box.

Use **F10** in the main menu and press the tab key once to activate this menu title in the menu bar and to position the cursor in the selection input field (“_”) in the pull-down menu. The next screen displays the range of possible menu items for selecting the required function:

File	Edit	View	Options
	: 1.Insert...	: NT	RESOURCES MANAGEMENT
	: 2.Convert...	:	
PRfile :	: 3.Copy...	: LE	Mode : UPDATE
	: 4.Import...	: Lines	1 thru 14 of 229 More : +
Name :	: 5.Modify...	:	Model
#CF :	: 6.Delete...	:	HP 1996-05-02
#SG :	: 7.Show...	:	HP 1996-05-02
#SN :	:	:	HP 1996-05-02
#6A :	: FONT	:	HP 1996-05-02
#8C :	: FONT	:	HP 1996-05-02
#8F :	: FONT	:	HP 1996-12-05
C06 :	: LOOP	:	HP 1996-05-02
C08 :	: LOOP	:	HP 1996-05-02
C1 :	: LOOP	:	LP 1996-12-05
C10 :	: LOOP	:	HP 1996-05-02
C12 :	: LOOP	:	HP 1996-05-02
C24 :	: LOOP	:	HP 1996-05-02
D1D0 :	: PREFORM	:	LP 1996-05-02
D1LO :	: PREFORM	:	LP 1996-05-02
Command ==>			
F1=Help F3=Exit F4=Comments F5=All F7=- F8+= F10=Actions F12=Cancel			

Leaving the “Edit” pull-down menu

Tab keys Position the cursor within the menu bar; the cursor jumps from title to title.

F10 Cancel the pull-down menu display and return to the main menu.

F12 Delete the pull-down menu displayed; any selection made will be ignored; the cursor is positioned on the first menu title (“File”).

Note

See page 215 for the meanings of the function keys in the PRM main menu.

6.3.1 The “Insert” menu item

This function initiates the creation of a new print resource. You may use the name and object type identification characteristics as attributes of the new print resource. PRM displays the appropriate object menu after this function has been executed. This allows you to specify the remaining attributes. Once the new print resource has been fully defined, it is stored in the current PRFILE. The resource library has to be opened in update mode.

To select the function, enter “1” in the pull-down menu and press **[DUE]**. The following dialog box is displayed:

File	Edit	View	Options
PRINT RESOURCES MANAGEMENT			
PRfile : :1SBZ:\$SYSSPOOL.PRFILE		Mode : UPDATE	
Name	: Create a new resource object	: ast access	29 More : +
#CF	:	: 996-05-02	
#SG	: Object type :	+ : 996-05-02	
#SN	: Printer model :	+ : 996-05-02	
#6A	: Object name :	: 996-05-02	
#8C	: Model object :	: 996-05-02	
#8F	: Write mode : 1 1.Create	: 996-12-05	
C06	:	2.Update	: 996-05-02
C08	:		: 996-05-02
C1	: Command ==>		: 996-12-05
C10	: F1=Help F3=Exit F6=List F12=Cancel		: 996-05-02
C12	:		: 996-05-02
C24	LOOP	HP	1996-05-02
D1D0	PREFORM	LP	1996-05-02
D1L0	PREFORM	LP	1996-05-02

Command ==>			
F1=Help F3=Exit F4=Comments F5=All F7=- F8=+ F10=Actions F12=Cancel			

Object type (input field)

Type of print resource created. If a particular type was selected in the PRM main menu, this preselection is automatically transferred to this input field. If the cursor is positioned in this input line, press **[F6]** to request a selection box and select the relevant print resource type there. You may also request the selection box by entering a plus (“+”) sign in the input field and pressing **[DUE]**.

Printer model (input field)

Type of printer for which the print resource of the type loop or font is to be created. If the cursor is in this input line, press **[F6]** to request a selection box and select the relevant printer type there. You may also request the selection box by entering a plus (“+”) sign in the input field and pressing **[DUE]**.

Object name (input field)

Name under which the print resource is to be stored in the current PRFILE.

Model object (input field)

Specifies that the attributes of the print resource to be created are to be taken over from a different resource of the same type, which acts as a reference model.

The name of this reference model may be indicated in the input field or transferred to this field by preselection in the PRM main menu. In a selection box PRM prepares a list of available print resources which exhibit the attributes required. This is done on the basis of the entries previously made regarding the type of print resource and the printer type. Press **F6** to request this selection box and select the corresponding print resource there.

Write mode (selection field)

The option *Create* or *Replace* determines whether an existing object with the same name may be overwritten when a print resource is created.

Whether a print resource may be included in the current PRFILE at all depends on how the file was opened; this is specified in the "Options" pull-down menu.

With *Create*, the print resource must not exist in the current PRFILE. The attributes specified are only stored in the PRFILE if no print resource of the same name and type already exists.

With *Replace*, an existing object of the same name may be overwritten.

Function keys in the dialog box

- | | |
|-------------------------|---|
| F1 | Help |
| F3 or F12 | Cancel this function without saving the entries |
| F6 | Request a dialog box |

Note

See page 215 for the meanings of the function keys in the PRM main menu.

6.3.2 The “Convert” menu item

This function converts specific object types into other object types. The object types that can be converted are: general loop, loop and ND font. You may choose between the following conversion options:

Loop → general loop

General loop → loop

ND font → HP font

You can select the conversion type in a selection box. You may set the conversion parameters in a subsequent dialog box. The structure of the dialog box varies according to the object type.

If a print resource was selected in the PRM main menu, the selection box is skipped and the corresponding dialog box is displayed immediately.

The current resource library must have been opened in “Update” mode.

To select this function, enter a “2” in the pull-down menu and press **[DUE]**. The following dialog box appears:

```

File      Edit      View      Options
-----
PRINT RESOURCES MANAGEMENT
-----
PRfile : :1SBZ:$SYSSPOOL.PRFILE                               Mode : UPDATE
          .....                                               +
Na :          Choose a conversion method                       :
#C :-----:                                               :
#S :                                               :
#S : Conversion type :   1.General loop --> loop              :
#6 :                   2.Loop      --> general loop          :
#8 :                   3.Nd font   --> hp font               :
#8 :                                               :
C0 :                                               :
C0 :                                               :
C1 :-----:                                               :
C1 : Command ==>                                           :
C1 : F1=Help  F3=Exit  F12=Cancel                            :
C2 :-----:                                               :
D1D0          PREFORM          LP          1996-05-02
D1L0          PREFORM          LP          1996-05-02
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=+  F10=Actions  F12=Cancel
    
```

Function keys in the dialog box**F1**

Help

F3or **F12**

Cancel the function without saving the entries

Note

See page 215 for the meanings of the function keys in the PRM main menu.

Converting a general loop into a loop

This type of conversion is used to convert a print resource of the type general loop (loop record which acts as the reference for creating individual loops) into a loop.

Enter a "1" and press **[DUE]** in the previous dialog box to select a conversion type (see page 228). The following dialog box will then be displayed:

```

File      Edit      View      Options
-----
PRINT RESOURCES MANAGEMENT
-----
PRfile : :1SBZ:$SYSSPOOL.PRFILE                               Mode : UPDATE
Name      : .....                                          29 More : +
          :          General loop --> loop                      : ast access
#CF       : .....                                          : 996-05-02
#SG       : General loop name :          +                    : 996-05-02
#SN       : Loop name       :          +                    : 996-05-02
#6A       : Printer model   : HP      +          : 996-05-02
#8C       : Conversion rule : 1 1.Full-fit      : 996-05-02
#8F       :                  : 2.Best-fit       : 996-12-05
C06       : Write mode : 1 1.Create      : 996-05-02
C08       :                  : 2.Replace       : 996-05-02
C1        : .....                                          : 996-12-05
C10       : Command ==>                                          : 996-05-02
C12       : F1=Help  F3=Exit  F6=List  F12=Cancel : 996-05-02
C24       : .....                                          : 996-05-02
D1D0      : PREFORM          LP          1996-05-02
D1L0      : PREFORM          LP          1996-05-02
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=A11  F7=-  F8+=  F10=Actions  F12=Cancel
    
```

General loop name (input field)

Name under which the print resource is stored in the current PRFILE.

Loop name (input field)

Name of the loop print resource to be created by converting the general loop.

Printer model (input field)

Type of printer for which the print resource is to be created. You may specify the type HP or LP. If the cursor is positioned in the input line, use **[F6]** to request a selection box and select the relevant printer type there.

Conversion rule (selection field)

You may select a conversion strategy in the selection field.

There are two options:

Full-fit strategy: an attempt is made to convert the definitions of the general loop into the device-specific loop on a 1:1 basis, and in particular to retain the precise line density; if the attempt fails, no conversion takes place.

Best-fit strategy: an attempt is made to find the best possible fit between the line density for the loop and the number and density of the lines defined in the general loop paragraphs, in order to cover all gaps in the loop.

Write mode (selection field)

The option *Create* or *Replace* determines whether an existing object with the same name may be overwritten when a print resource is converted.

Whether a print resource may be included in the current PRFILE at all depends on the write access specification as given in the “Options” pull-down menu.

With *Create*, the converted print resource must not exist in the current PRFILE. The attributes specified are only stored in the PRFILE if no print resource of the same name and type already exists.

With *Replace*, an existing object of the same name may be overwritten.

Function keys in the dialog box

- F1** Help
- F3** or **F12** Cancel this function without saving the entries
- F6** Request a dialog box

Note

See page 215 for the meanings of the function keys in the PRM main menu.

Converting a loop into a general loop

This type of conversion is used to convert a print resource of the type loop into a general loop.

To select this function select a “2” and press **[DUE]** in the previous dialog box for selecting a conversion strategy (see page 228). The following dialog box then appears:

```

File      Edit      View      Options
-----
PRINT RESOURCES MANAGEMENT
-----
PRfile : :1SBZ:$SYSSPOOL.PRFILE                               Mode : UPDATE
Name     : ..... 29 More : +
          : Loop --> general loop                               : ast access
#CF      : .....                                           : 996-05-02
#SG      : Loop name      : .....                               : 996-05-02
#SN      : Printer model  : .....                               : 996-05-02
#6A      : General loop name : .....                               : 996-05-02
#8C      : Write mode       : 1 1.Create           : 996-05-02
#8F      :                   : 2.Replace            : 996-12-05
C06      : .....                                           : 996-05-02
C08      : .....                                           : 996-05-02
C1       : .....                                           : 996-12-05
C10      : Command ==>         : .....                               : 996-05-02
C12      : F1=Help  F3=Exit  F6=List  F12=Cancel : .....                               : 996-05-02
C24      : .....                                           : 996-05-02
D1D0     : PREFORM           LP           : 1996-05-02
D1LO     : PREFORM           LP           : 1996-05-02
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=A11  F7=-  F8=+  F10=Actions  F12=Cancel
    
```

Loop name (input field)

Name under which the print resource is stored in the current PRFILE.

Printer model (input field)

Type of printer for which the loop print resource was created. You may enter the type HP, ND or LP. If the cursor is positioned in this input line, use **[F6]** to request a selection box and select the relevant printer type there.

General loop name (input field)

Name of the general loop print resource that is to be created by the loop conversion.

Write mode (selection field)

The option *Create* or *Replace* determines whether an existing object with the same name may be overwritten when a print resource is converted.

Whether a print resource may be included in the current PRFILE at all depends on the write access specification as given in the “Options” pull-down menu.

With *Create*, the converted print resource must not exist in the current PRFILE. The attributes specified are only stored in the PRFILE if no print resource of the same name and type already exists.

With *Replace*, an existing object of the same name may be overwritten.

Function keys in the dialog box

- F1** Help
- F3** or **F12** Cancel this function without saving the entries
- F6** Request a dialog box

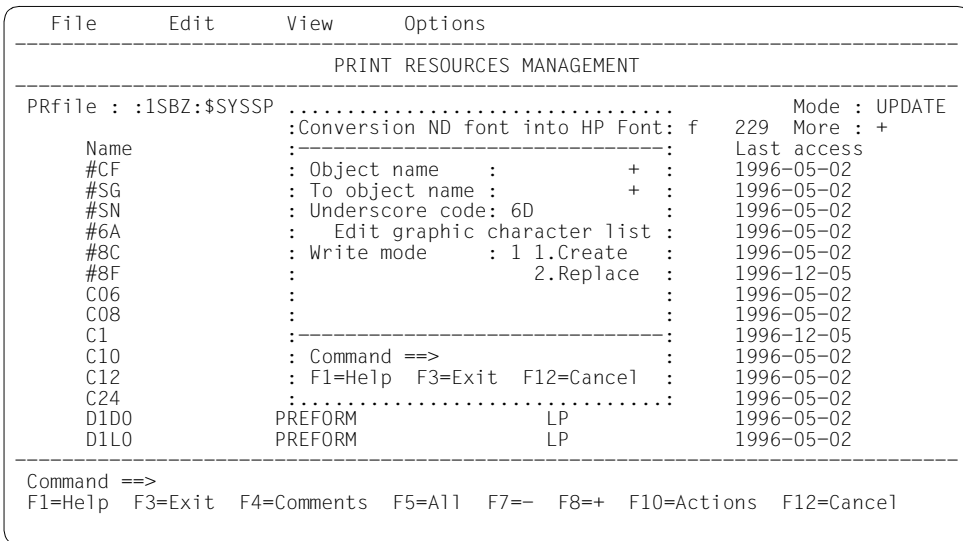
Note

See page 215 for the meanings of the function keys in the PRM main menu.

Converting ND font into HP font

This type of conversion is used to convert a print resource of type ND font (a matching set of print characters of the same size, typeface and style, created for a printer of the ND type) into a font for a printer of the type HP.

Enter a "3" and press **[DUE]** to select this function in the previous dialog box for selecting a conversion strategy (see page 228). The following dialog box is displayed:



Object name (input field)

Name under which the ND font print resource is stored in the current PROFILE.

To object name (input field)

Specifies the name under which the HP font is to be stored after conversion.

Underscore code (input field)

Hexadecimal code of the character in the ND font which will trigger the underscore function in the HP font.

Edit graphic character list (input field)

Specifies whether the ND font contains special graphics characters which must be subjected to a special conversion routine during conversion into the HP font. If you enter "x", "X" or "P", the "Build graphic character list" screen is automatically displayed (see description on page 236).

Write mode (Input field)

The option *Create* or *Replace* determines whether an existing object with the same name may be overwritten when a print resource is converted.

Whether a print resource may be included in the current PRFILE at all depends on the write access specification as given in the "Options" pull-down menu.

With *Create*, the converted print resource must not exist in the current PRFILE. The attributes specified are only stored in the PRFILE if no print resource of the same name and type already exists.

With *Replace*, an existing object of the same name may be overwritten.

Function keys in the dialog box

F1 Help

F3 or **F12** Cancel the function without saving the entries

Note

See page 215 for the meanings of the function keys in the PRM main menu.

Edit graphic character list (input field in previous screen);

If this input field is selected in the previous screen, PRM offers the following screen for the declaration of special graphics characters:

```

-----
                          Build graphic character list
-----
ND Font           : XXX
HP Font           : NDX
Vertical density  : 6
Graphic character list :   Lines 1 thru 12 of 12 More :
      .0 .1 .2 .3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
2.
3.
4.
5.
6.
7.
8.
9.
A.
B.
C.
D.
E.
F.
-----
Command ==>
F1=Help  F3=Exit  F7=-  F8+=  F11=Save  F12=Cancel

```

ND font (output field)

Name of the ND font.

HP font (output field)

Name of the HP font.

Vertical density (input field)

Sets the line density in lpi (6/8/12) that is to be used for the converted graphics character in the HP font.

Graphic characters (input field)

A table with 192 cells, in which the graphics character code can be selected. When first called, all cells in the table are set to " " (blank). If you want to select a code in the table, enter an "x", "X" or "/" in the relevant position. Characters selected in this manner are subject to a special conversion routine.

Function keys in the screen

- F1** Help
- F3** Return to the PRM main menu
- F7** Scroll backward within the table
- F8** Scroll forward within the table
- F11** Store table and return to “Conversion ND font into HP font” screen (page 234)
- F12** Cancel this function without saving the entries and return to the “Conversion ND Font into HP font” screen (page 234)

Note

See page 215 for the meanings of the function keys in the PRM main menu.

6.3.3 The “Copy” menu item

This function copies individual elements or all elements in a PRFILE, the resource library. The following options are available:

- Copy a single resource or a number of resources of the same type within the same library
- Copy a single resource or a number of resources of the same type from a source library into a target library
- Copy all the elements from a source library into a target library.

The source and target libraries must both be of the PRFILE type. Use the “Edit” → “Import” function to import elements from a different resource library.

Enter a “3” and press **[DUE]** in the pull-down menu to select the function. The following dialog box is displayed.

```

File      Edit      View      Options
-----
:          Copy Print Resource Objects
-----
PRfile : Object type      :      +      : : UPDATE
        : Printer model      :      +      : : +
Nam  : Object name      :      :      : : SS
#CF  : New name         :      :      : : 2
#SG  : Prfile          :      :      : : 2
#SN  : source          :      :      : : 2
#6A  : :1SBZ:$SYSSPOOL.PRFILE
#8C  : target          :      :      : : 2
#8F  : :1SBZ:$SYSSPOOL.PRFILE
C06  : Write mode      : 1 1.Create  : : 2
C08  :                 : 2.Replace   : : 2
C1   : Dialog control: 1 1.Error  : : 5
C10  :                 : 2.Yes       : : 2
C12  : X Attached objects
C24  :
D1D  : Command ==>
D1L  : F1=Help  F3=Exit  F6=List  F12=Cancel
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=+  F10=Actions  F12=Cancel
    
```

Object type (input field)

Type of print resource to be copied. If a particular type was selected in the PRM main menu, this preselection is automatically transferred to this input field. If the cursor is positioned in this input line, press **F6** to request a selection box and select the relevant print resource type there.

Printer model (input field)

Type of printer for which the loop or font print resource is to be copied. If the cursor is positioned in this input line, press **F6** to request a selection box and select the relevant printer type there.

Object name (input field)

Name under which the print resource is stored in the current PRFILE. If a print resource was selected in the PRM main menu, this selection is automatically transferred to the input field.

New Name (input field)

Specifies the names to be given to selected print resources in the source library after copying to the target library. If all the print resources of a particular type were selected in the PRM main menu or in the selection box, the names of the print resources must be retained. In this case this input field must remain blank.

PRFILE source (input field)

Specifies the library (source library) from which the print resources are to be copied. The name of the resource library currently opened appears as the default in this field. *STD refers to the system PRFILE (for information on the naming conventions see chapter 9, "Installing PRM", on page 389).

PRFILE target (input field)

Specifies the library (source library) to which the print resources are to be copied. The name of the resource library currently opened appears as the default in this field, provided that it has been opened in update mode. *STD refers to the system PRFILE.

Write mode (Input field)

The option *Create* or *Replace* determines whether an existing object with the same name may be overwritten when a print resource is copied.

Whether a print resource may be included in the current PRFILE at all depends on the write access specification as given in the "Options" pull-down menu.

With *Create*, the copy of the print resource must not exist in the current PRFILE. The attributes specified are only stored in the PRFILE if no print resource of the same name and type already exists.

With *Replace*, an existing object of the same name may be overwritten.

Dialog control (selection field)

Specifies whether a dialog with the user is to be started to allow you to control execution of the function.

If *Error* is selected, this specifies that a conditional dialog is to be started. You can only control further processing if an error occurs: you can indicate in a dialog box whether processing should continue with the next resource or be canceled.

If you select *Yes*, this means that execution of the function can be controlled at all stages. A dialog box allows you to indicate whether each resource is to be copied or not or whether processing is to be terminated.

Attached objects (selection field)

Specifies whether the selected print resource only is to be copied or whether all the objects assigned to it are also to be copied. This special function is provided for print resources of the type HP-font pool. This pool contains the various print resources of the type HP font. If the font pool is to be copied, mark this field to ensure that individual elements are copied recursively as well.

Function keys in the dialog box

- F1 Help
- F3 or F12 Cancel this function without saving the entries
- F6 Request a dialog box

Note

See page 215 for the meanings of the function keys in the PRM main menu.

6.3.4 The “Import” menu item

This function imports individual elements or all elements within a particular print control file into the current PRFILE. The current PRFILE is the resource library that was last opened using “File” → “Open”.

This function is only possible if the PRFILE was opened in “Update” mode.

The following table shows the possible print control files and the resources that may be imported from them.

Print control file	Resources in this file
HPFILE	HL loop, HP font, HP-font pool, FOB
NDFILE	ND loop, ND font
SPOOLFILE	LP loop, CHAR-IMAGE, BAND-ID, TRANSLATION TABLE, preform record
FGSFILE	FOB
PCLFILE	PCL font, PCL softfont, PCL overlay, PCL macro.
TRANSFILE	HP font, FOB, PCL softfont, PCL macro,

Enter a “4” in the pull-down menu and press **[DUE]** to select the function. The following dialog box is displayed:

```

File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
PRfile : : ..... Import resource objects ..... : : UPDATE
          : ..... : : +
          Nam : Object type      : + : s
          #CF : Object name      : :
          #SG : Printer control file type : + :
          #SN : Printer control file name : :
          #6A :                   : :
          #8C : Write mode : 1 1.Create : :
          #8F :                   : 2.Replace : :
          C06 : Dialog control : 1 1.Error : :
          C08 :                   : 2.Yes : :
          C1  : X Attached objects : :
          C10 : ..... : :
          C12 : Command ==> : :
          C24 : F1=Help F3=Exit F6=List F12=Cancel : :
          D1D : ..... : :
          D1LO ..... PREFORM ..... LP ..... 1996-05-02
-----
Command ==>
F1=Help F3=Exit F4=Comments F5=A11 F7=- F8=+ F10=Actions F12=Cancel

```

Object type (input field)

The type of print resource to be transferred from the print control file to the current PRFILE. If a particular type was selected in the PRM main menu, the selection is automatically transferred to this input field. If the cursor is positioned in this input line, press **F6** to request a selection box and select the relevant print resource type there.

Object name (input field)

Name under which the print resource is stored in the print control file. If a print resource was selected in the PRM main menu, this selection is automatically transferred to the input field.

Printer control file type (input field)

Specifies the print control file (i (HPFILE, NDFILE, SPOOLFILE, FGSFILE, PCLFILE or TRANSFILE) from which the print resources are to be imported. If the cursor is in this input line, press **F6** to request a selection box and select the type of print control file there.

Printer control file name (input field)

Fully qualified file name for the print control file of the specified type.

Write mode (Input field)

The option *Create* or *Replace* determines whether an existing object with the same name may be overwritten when a print resource is imported.

Whether a print resource may be included in the current PRFILE at all depends on the write access specification as given in the "Options" pull-down menu.

With *Create*, the imported print resource must not exist in the current PRFILE. The attributes specified are only stored in the PRFILE if no print resource of the same name and type already exists.

With *Replace*, an existing object of the same name may be overwritten.

Dialog control (selection field)

Specifies whether a dialog with the user is to be started to allow controlled execution of the function.

If *Error* is selected, this specifies that a conditional dialog is to be started. You can only control further processing if an error occurs: you can indicate in a dialog box whether processing should continue with the next resource or be canceled.

If you select *Yes*, this means that execution of the function can be controlled at all stages. A dialog box allows you to indicate whether each resource is to be imported or not or whether processing is to be terminated.

Attached objects (selection field)

Specifies whether the selected print resource only is to be imported or whether all the objects assigned to it are also to be imported. This special function is provided for print resources of the type HP-font pool. This pool contains the various print resources of the type HP font. If the font pool is to be imported, mark this field to ensure that individual elements are imported recursively as well.

Function keys in the dialog box

- F1** Help
- F3** or **F12** Cancel this function without saving the entries
- F6** Request a dialog box

Note

See page 215 for the meanings of the function keys in the PRM main menu.

6.3.5 The “Modify” menu item

This function is used to make changes to resource attributes entered in the current PRFILE. The current PRFILE is the resource library last opened using the “File” → “Open” function.

This function is only possible if the PRFILE was opened in “Update” mode.

You may use the Name identifier as a new attribute of the print resource. PRM displays the appropriate object menu after this function has been executed. This allows you to specify the remaining attributes. Once you have finished entering all the new attributes in the object menu, the modified resource is stored in the current PRFILE.

Enter a “5” in the pull-down menu and press **[DUE]** to select the function. The following dialog box is displayed:

File	Edit	View	Options

PRINT RESOURCES MANAGEMENT			

PRfile :	:1SBZ:\$SYSSPOOL.PRFILE	Mode :	UPDATE
		29 More :	+
Name	:	Modify resource object	: ast access
#CF	:		: 996-05-02
#SG	:	Object type :	+ : 996-05-02
#SN	:	Printer model :	+ : 996-05-02
#6A	:	Object name :	: 996-05-02
#8C	:	New name :	: 996-05-02
#8F	:	Write mode :	: 996-12-05
C06	:	2 1.Create	: 996-05-02
	:	2.Replace	: 996-05-02
C08	:		: 996-05-02
C1	:	Command ==>	: 996-12-05
C10	:	F1=Help F3=Exit F6=List F12=Cancel	: 996-05-02
C12	:		: 996-05-02
C24	:	LOOP HP	: 1996-05-02
D1D0	:	PREFORM LP	: 1996-05-02
D1L0	:	PREFORM LP	: 1996-05-02

Command ==>			
F1=Help	F3=Exit	F4=Comments	F5=All F7=- F8+= F10=Actions F12=Cancel

Object type (input field)

Type of print resource which is to be modified and whose attributes are to be reset in the associated object menu. If a particular type was selected in the PRM main menu, this selection is automatically transferred to this input field. If the cursor is positioned in this input line, press **[F6]** to request a selection box and select the relevant print resource type there.

Printer model (input field)

Type of printer for which a loop or font print resource is to be changed. If the cursor is positioned in this input line, use **[F6]** to request a selection box and select the relevant printer type there.

Object name input field)

Name under which the print resource is stored in the current PRFILE. If a print resource was selected in the PRM main menu, this selection is automatically transferred to the input field.

New Name (input field)

New name of the print resource if this print resource attribute is to be modified. If you leave this field blank, the name of the print resource is to be retained.

Write mode (selection field)

The option *Create* or *Replace* determines whether an existing object with the same name may be overwritten when renaming a print resource.

Whether a print resource may be included in the current PRFILE at all depends on the write access specification as given in the "Options" pull-down menu.

With *Create*, the print resource created by the renaming operation must not exist in the current PRFILE. The attributes specified are only stored in the PRFILE if no print resource of the same name and type already exists.

With *Replace*, an existing object of the same name may be overwritten.

Function keys in the dialog box

- F1 Help
- F3 or F12 Cancel this function without saving the entries
- F6 Request a dialog box

Note

See page 215 for the meanings of the function keys in the PRM main menu

6.3.6 The “Delete” menu item

This function deletes individual print resources or all print resources in the PRFILE, the resource library, currently opened. The statement will only be executed if the print resource library was opened in “Update” mode (see “File” → “Open”).

Enter a “6” in the pull-down menu and press **[DUE]** to select the function. The following dialog box is displayed:

File	Edit	View	Options
----- PRINT RESOURCES MANAGEMENT -----			
PRfile :	:1SBZ:\$		Mode : UPDATE
		Remove resource object	: 29 More : +
Name	:		: ast access
#CF	:	Object type :	+ : 996-05-02
#SG	:	Printer model :	+ : 996-05-02
#SN	:	Object name :	: 996-05-02
#6A	:	Access date : 1	: 996-05-02
#8C	:	2.Today	: 996-05-02
#8F	:	3.Interval...	: 996-12-05
C06	:	Dialog control : 1	: 996-05-02
C08	:	2.Yes	: 996-05-02
C1	:	Enforce	: 996-12-05
C10	:		: 996-05-02
C12	:	Command ==>	: 996-05-02
C24	:	F1=Help F3=Exit F6=List F12=Cancel	: 996-05-02
D1D0	:		: 996-05-02
D1L0	:	PREFORM LP	1996-05-02

Command ==>			
F1=Help	F3=Exit	F4=Comments	F5=All F7=- F8+= F10=Actions F12=Cancel

Object type (input field)

Type of print resource to be deleted from the resource library. If a particular type was selected in the PRM main menu, this selection is automatically transferred to this input field. If the cursor is positioned in this input line, press **[F6]** to request a selection box and select the relevant print resource type there.

Printer model (input field)

Type of printer for which a loop or font print resource is to be deleted. If the cursor is positioned in this input line, press **[F6]** to request a selection box and select the relevant printer type there.

Object name (input field)

Name under which the print resource is stored in the current PRFILE. If a print resource was selected in the PRM main menu, this selection is automatically transferred to the input field.

Access date (selection field)

Number of print resources available for selection with the “Delete” operation; may be restricted using the “Access date” criterion.

If you select *Any*, the set of print resources to be deleted is not restricted via the “Access date” criterion.

If you select *Today*, only the print resources whose last access date is the current date will be available for selection.

If you select *Interval*, a dialog box is displayed which allows you to specify a range for the last access date.

Dialog control (selection field)

Specifies whether a dialog with the user is to be started to allow controlled execution of the function.

If *Error* is selected, this specifies that a conditional dialog is to be started. You can only control further processing if an error occurs: you can indicate in a dialog box whether processing should continue with the next resource or be canceled.

If you select *Yes*, this means that execution of the function can be controlled at all stages. A dialog box allows you to indicate whether each resource is to be deleted or not or whether processing is to be terminated.

Enforce (selection field)

For print resources of the type HP font, this specifies whether the print resource is to be deleted, even though it belongs to an HP-font pool. If this field is not selected, the system checks whether the resource is assigned to an HP-font pool. If so, the resource is not deleted.

If this field is selected, the resource is deleted without being checked.

Function keys in the dialog box

- | | |
|-------------------------|---|
| F1 | Help |
| F3 or F12 | Cancel this function without saving the entries |
| F6 | Request a dialog box |

Note

See page 215 for the meanings of the function keys in the PRM main menu

6.3.7 The “Show” menu item

This function is used to query the attributes of an individual print resource or all print resources in the PRFILE currently open. Unless otherwise specified, the amount of information is determined by the setting entered in the “Options” pull-down menu. The detailed attributes of the print resources selected will then be displayed in the corresponding object menu. The object menus for the individual print resource type each differ in structure and are displayed automatically if the function described here is successfully processed.

In addition to the attributes of the resource, you can use the *Implementation* selection field to call up information on which SDF instructions and operands were used or could be used to create the resource. You can use this functionality, for example, when converting existing procedures (see also section “Statement generator” on page 54). This information is not displayed on screen, however, i.e. you must select any output medium other than “PRM desktop”.

Enter a “7” in the pull-down menu and press **[DUE]** to select the function. The following dialog box is displayed:

File	Edit	View	Options

: Show resource object : -----			
PRfile : :1SBZ:\$	:	Object type :	+ : 29 More : +
Name	:	Printer model :	+ : ast access
#CF	:	Object name :	: 996-05-02
#SG	:	Access date :	: 996-05-02
#SN	:	1 1.Any	: 996-05-02
#6A	:	2.Today	: 996-05-02
#8C	:	3.Interval...	: 996-05-02
#8F	:	Information : 1 1.All	: 996-05-02
C06	:	2.Summary	: 996-12-05
C08	:	Implementation	: 996-05-02
C1	:	Output settings : 1 1.PRM desktop	: 996-05-02
C10	:	2.Syslst...	: 996-12-05
C12	:	3.File...	: 996-05-02
C24	:	-----	: 996-05-02
D1D0	:	Command ==>	: 996-05-02
D1L0	:	F1=Help F3=Exit F6=List F12=Cancel	: 996-05-02

Command ==>			
F1=Help F3=Exit F4=Comments F5=All F7=- F8+= F10=Actions F12=Cancel			

Object type (input field)

Type of print resource whose attributes are to be output. If a particular type was selected in the PRM main menu, this selection is automatically transferred to this input field. If the cursor is positioned in this input line, press **[F6]** to request a selection box and select the relevant print resource type there.

Printer model (input field)

If the attributes of a print resource of the type loop or font are queried, the type of printer for which this resource was created may be specified. If the cursor is positioned in this input line, press **F6** to request a selection box and select the relevant printer type there.

Object name (input field)

Name of the individual print resource of the type selected, about which the information is to be output. If a print resource was selected in the PRM main menu, this selection is automatically transferred to this input field.

Access date (selection field)

The number of print resources whose attributes are to be displayed; may be restricted using the "Access date" criterion.

If you select *Any*, the set of print resources to be displayed is not restricted via the "Access date" criterion.

If you select *Today*, only the print resources whose last access date is the current date will be displayed.

If you select *Interval*, a dialog box is displayed which allows you to specify a range for the last access date.

Information (selection field)

Sets the scope of information on a print resource that is to be output.

All: the output should include all available information on the required print resource.

Summary: the output should be in summary form. Special attributes of print resources are not displayed.

Implementation (selection field)

Specifies whether a list of the SDF statements that led to the resource being created should be output as well. This information is not output on screen, however, i.e. a setting other than "PRM desktop" should be specified as the output medium.

If this field is not selected, no list will be output.

If the field is selected, the list is output.

Output settings (selection field)

Specifies the output medium for the requested information on print resources.

If you select *PRM desktop*, the information is output on screen. Partially qualified entries are not permitted in the *Object name*, *Object type* or *Printer model* field. It is not possible to output the "Implementation" information, and the value "All" must be selected in the *Information* field.

If you select *Syslst*, this means that the information is to be written to the logical system file SYSLST. The parameters for this output medium may be set in a subsequent dialog box.

If you select *File*, the information may be written to a file of your choice; the parameters may be set in a subsequent dialog box.

Function keys in the dialog box

- F1** Help
- F3** or **F12** Cancel this function without saving the entries
- F6** Request a dialog box

Note

See page 215 for the meanings of the function keys in the PRM main menu

6.4 The “View” pull-down menu in the main menu

You can use this menu to restrict the number of print resources to be displayed on screen in the work area of the PRM main menu. The pull-down menu contains a list of the print resource types managed by PRM. You can select one or more print resource types to process:

- Band Identification
- Character Image
- Translation Table
- Font
- Font Pool
- Forms Overlay Buffer
- General Loop
- Loop
- Preform
- PCL Overlay
- PCL Softfont
- PCL Macro

You have the option of selecting the print resources to be displayed before or after opening a resource library. The default is for all types of print resource to be displayed on screen after you have opened a resource library. Following selection in the pull-down menu, all print resources of the type selected are displayed on screen.

Press **[F10]** in the main menu and press the tab key twice to activate this menu title in the menu bar. Press **[DUE]** to position the cursor in the selection input field (“_”) in the pull-down menu. The following screen shows the possible menu entries for selecting the required function.

```

File      Edit      View      Options
-----
:         1.All          : T
:         2.Band Identification : -----
PRfile : :1SBZ:$SYS :         3.Character Image :
:         4.Translation Table : 14 of 229 More : +
Name      :         5.Font... : Last access
#CF       :         6.Font Pool : 1996-05-02
#SG       :         7.Forms Overlay Buffer : 1996-05-02
#SN       :         8.General Loop : 1996-05-02
#6A      :         9.Loop... : 1996-05-02
#8C      :        10.PreForm : 1996-05-02
#8F      :        11.Overlay : 1996-12-05
C06      :        12.Softfont : 1996-05-02
C08      :        13.Macro : 1996-05-02
C1       : ..... : 1996-12-05
C10      : LOOP HP : 1996-05-02
C12      : LOOP HP : 1996-05-02
C24      : LOOP HP : 1996-05-02
D1D0     : PREFORM LP : 1996-05-02
D1L0     : PREFORM LP : 1996-05-02
-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8=+ F10=Actions F12=Cancel

```

If you select the type Font (enter a "5" in the pull-down menu and press **[DUE]**), you can differentiate by font type in a further dialog box. The following dialog box will be displayed:

```

File      Edit      View      Options
-----
PRINT RESOURCES MANAGEMENT
-----
PRfile : :1SBZ:$SYSSPOOL.PRFILE
Lines      1 thru 14 of 229 More : +
Name      Type      Model      Last access
#CF       F : ..... : 1996-05-02
#SG       F : Font Printer Model : 1996-05-02
#SN       F : ----- : 1996-05-02
#6A      F : Select : 1 1.All : 1996-05-02
#8C      F : 2.Hp : 1996-05-02
#8F      F : 3.Nd : 1996-12-05
C06      L : 4.Pcl : 1996-05-02
C08      L : ----- : 1996-05-02
C1       L : Command ==> : 1996-12-05
C10      L : F1=Help F3=Exit F12=Cancel : 1996-05-02
C12      L : ..... : 1996-05-02
C24      LOOP HP : 1996-05-02
D1D0     PREFORM LP : 1996-05-02
D1L0     PREFORM LP : 1996-05-02
-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8=+ F10=Actions F12=Cancel

```

If you select the type Loop (enter a “9” in the pull-down menu and press **[DUE]**), you can differentiate by loop type in a subsequent dialog box. The following dialog box will be displayed:

File	Edit	View	Options
PRINT RESOURCES MANAGEMENT			
PRfile : :1SBZ:\$SYSSPOOL.PRFILE			Mode : UPDATE
		Lines 1 thru 14 of	119 More : +
Name	T	.....	Last access
#CF	F	: Loop Printer Model	: 1996-05-02
#SG	F	-----	: 1996-05-02
#SN	F	: Select : 1 1.All	: 1996-05-02
#6A	F	: 2.Hp	: 1996-05-02
#8C	F	: 3.Lp	: 1996-05-02
#8F	F	: 4.Nd	: 1996-12-05
R01	F	-----	: 1996-05-02
UK	F	: Command ==>	: 1996-05-02
001	F	: F1=Help F3=Exit F12=Cancel	: 1996-05-02
002	F	-----	: 1996-05-02
1A1	FONT		HP 1996-05-02
100	FONT		HP 1996-05-02
101	FONT		HP 1996-12-05
102	FONT		HP 1996-05-02

Command ==>			
F1=Help F3=Exit F4=Comments F5=All F7=- F8+= F10=Actions F12=Cancel			

Function keys in the dialog box

- [F1]** Help
- [F3]** or **[F12]** Cancel the function without saving the entries

Leaving the “View” pull-down menu

- Tab keys Position the cursor within the menu bar; the cursor jumps from title to title
- [F10]** Cancel the display of the pull-down menu and return to the main menu
- [F12]** Delete the pull-down menu displayed; any selection entered is ignored; the cursor is positioned on the first menu title (“File”)

6.5 The “Options” pull-down menu in the main menu

You can use this menu to specify the default values for the output medium, dialog control, the scope of the information to be output and the access mode of the open resource library. These defaults may be specified by *STD in the individual input fields. Each change to preset values made by way of this menu takes effect immediately and remains valid until the next explicit change.

Press **[F10]** in the main menu and press the tab key three times to activate this menu title in the menu bar. Press **[DUE]** to position the cursor in the selection input field (“_”) in the pull-down menu. The next screen shows the only menu item for selecting the required function:

File	Edit	View	Options

PRI : 1 1.Options : GEMENT			
:.....:			
PRfile : :1SBZ:\$SYSSPOOL.PRFILE			
		Lines	1 thru 14 of 29 Mode : UPDATE More : +
Name	Type	Model	Last access
C06	LOOP	HP	1996-05-02
C08	LOOP	HP	1996-05-02
C1	LOOP	LP	1996-12-05
C10	LOOP	HP	1996-05-02
C12	LOOP	HP	1996-05-02
C24	LOOP	HP	1996-05-02
R06	LOOP	HP	1996-05-02
R08	LOOP	HP	1996-05-02
R10	LOOP	HP	1996-05-02
R12	LOOP	HP	1996-05-02
R24	LOOP	HP	1996-05-02
R98	LOOP	HP	1996-05-02
S06	LOOP	HP	1996-05-02
S08	LOOP	HP	1996-05-02

Command ==>			
F1=Help F3=Exit F4=Comments F5=A11 F7=- F8+= F10=Actions F12=Cancel			

Enter a “1” in the pull-down menu and press **[DUE]** to select the required function. The following dialog box is displayed:

File	Edit	View	Options
PRINT RESOURCES MANAGEMENT			
PRfile : :1SBZ:\$SYSSPOOL.PRFILE			Mode : UPDATE
Options			

: Output settings : 1 1.PRM desktop :			
: : 2.Syslst... :			
: : 3.File... :			
: Write mode setting : 1 1.Create 2.Replace :			
: Dialog control setting : 1 1.Error 2.Yes :			
: Output info setting : 1 1.All attributes 2.Summary :			
: : : :			
: Command ==> : :			
: F1=Help F3=Exit F12=Cancel : :			
: : : :			
R98	LOOP	HP	1996-05-02
S06	LOOP	HP	1996-05-02
S08	LOOP	HP	1996-05-02

Command ==>			
F1=Help F3=Exit F4=Comments F5=All F7=- F8+= F10=Actions F12=Cancel			

Output settings (selection field)

Specifies the output medium for the PRM log data and the information requested on print resources. The data may be output on screen (*PRM desktop*) or written to a file. If you output to a file, you may specify either the logical system file (*Syslst*) or a cataloged file (*File*). If you mark the *Syslst* or *File* field, a further dialog box appears (see below).

Write mode setting (selection field)

The option *Create* or *Replace* determines whether an existing object with the same name may be overwritten when a print resource is created or renamed.

With *Create*, the print resource created must not exist in the current PRFILE. The attributes specified are only stored in the PRFILE if no print resource of the same name and type already exists.

With *Replace*, an existing object of the same name may be overwritten.

Dialog control setting (selection field)

Specifies whether a dialog with the user is to be started to allow him/her to control execution of certain functions (deleting, importing, copying of print resources).

If *Error* is selected, this specifies that a conditional dialog is to be started. You can only control further processing if an error occurs: you can indicate in a dialog box whether processing should continue with the next resource or be canceled.

If you select *Yes*, this means that execution of the function can be controlled at all stages. A dialog box allows you to indicate whether each resource is to be processed or not or whether processing is to be terminated.

Output info setting (input table)

Sets the amount of information to be output on a print resource.

Summary: the output should be in summary form. Special attributes of print resources are not displayed.

All attributes: the output should cover all available information on the required print resources.

Function keys in the dialog box

F1 Help

F3 or **F12** Cancel the function without saving the entries

Note

See page 215 for the meanings of the function keys in the PRM main menu

Output settings - Syslst

If the *Syslst* field is selected as the output medium in the selection field, the following dialog box is displayed:

File	Edit	View	Options

PRINT RESOURCES MANAGEMENT			

PRfile :	:1SBZ:\$SYSSPOOL.PRFILE		Mode : UPDATE
:	:.....:		
:	: Syslst Specifications :.....:		
:	Output :	Syslst number : 0 1 to 99 or 0 for STD :	:
:	:	Lines per page : 60 3 to 9999 :	:
:	Write m :	Extra form feed :	e :
:	Dialog :	X Header lines :	:
:	Output :	-----	y :
:	:	Command ==>	-----
:	:	Command : F1=Help F3=Exit F12=Cancel	:
:	:	F1=Help	:
:	:.....:		
R98	LOOP	HP	1996-05-02
S06	LOOP	HP	1996-05-02
S08	LOOP	HP	1996-05-02

Command ==>			
F1=Help F3=Exit F4=Comments F5=All F7=- F8+= F10=Actions F12=Cancel			

SYSLST number (input field)

Specifies the number to be given to the logical system file SYSLST.

Lines per page (input field)

Specifies the number of lines per page when printing the logical system file SYSLST. Any number between 3 and 9999 may be entered. The minimum number of three lines per page includes the two header lines per page which can be set via the *Header lines* selection field.

Extra form feed (selection field)

Specifies whether the information on resources requested is prepared in such a way that a page feed is added after each block of information on a resource. If you mark this field, a page feed will be added. If you do not mark the field, there will be no additional page feed. All information requested will be output sequentially; page feeds are based solely on the number of lines (*Lines per page* field).

Header lines (selection field)

Specifies whether two header lines per page are to be printed. If you mark this field, two header lines will be output. If you do not mark the field, the two header lines will not be output.

Function keys in the dialog box

F1

Help

F3

or **F12**

Cancel the function without saving the entries

Output settings - File

If you mark the *File* field in the selection field as the output medium, the following dialog box will be displayed:

File	Edit	View	Options

PRINT RESOURCES MANAGEMENT			

PRfile :	:1SBZ:\$SYSSPOOL.PRFILE	Mode :	UPDATE
.....			
File Specifications			

:	File : S.PRM.0FA1.1996-12-05.103829	:	:
:	Line/page: 60 3 to 9999	:	:
:	Extra form feed	:	:
:	X Header lines	:	:

:	Command ==>	:	:
:	F1=Help F3=Exit F12=Cancel	:	:
.....			
R98	LOOP	HP	1996-05-02
S06	LOOP	HP	1996-05-02
S08	LOOP	HP	1996-05-02

Command ==>			
F1=Help	F3=Exit	F4=Comments	F5=All F7=- F8+= F10=Actions F12=Cancel

File (input field)

Here you enter the fully qualified name of the file to which the information is to be output. You can also specify a temporary file. If a file of the same name has already been created, the entry in the *Write mode setting* selection field determines whether this file may be overwritten. If you enter *STD, a default output file "S.PRM.nnnn.yyyy-mm-dd.ttttt" is to be created, where <nnnn> is the TSN (task sequence number) and <yyyy-mm-dd.ttttt> indicates the year, month, day and time of the call.

Line/page (input field)

Specifies the number of lines per page when printing out the logical system file SYSLST. Any number between 3 and 9999 may be entered. The minimum number of three lines per page includes the two header lines per page which can be set via the *Header lines* selection field.

Extra form feed (selection field)

Specifies whether the information on resources requested is prepared in such a way that a page feed is added after each block of information on a resource. If you mark this field, a page feed will be added. If you do not mark the field, there will be no additional page feed. All information requested will be output sequentially; page feeds are based solely on the number of lines (*Line / page* field).

Header lines (selection field)

Specifies whether two header lines per page are to be printed. If you mark the field, two header lines will be printed. If you do not mark the field, the two header lines will not be printed.

Function keys in the dialog box

- F1** Help
- F3** or **F12** Cancel the function without saving the entries

Note

See page 215 for the meanings of the function keys in the PRM main menu.

Leaving the “Options” pull-down menu

- Tab keys Position the cursor within the menu bar; the cursor jumps from title to title
- F10** Cancel the display of the pull-down menu and return to the main menu
- F12** Delete the pull-down menu displayed; any selection entered is ignored; the cursor is positioned on the first menu title (“File”)

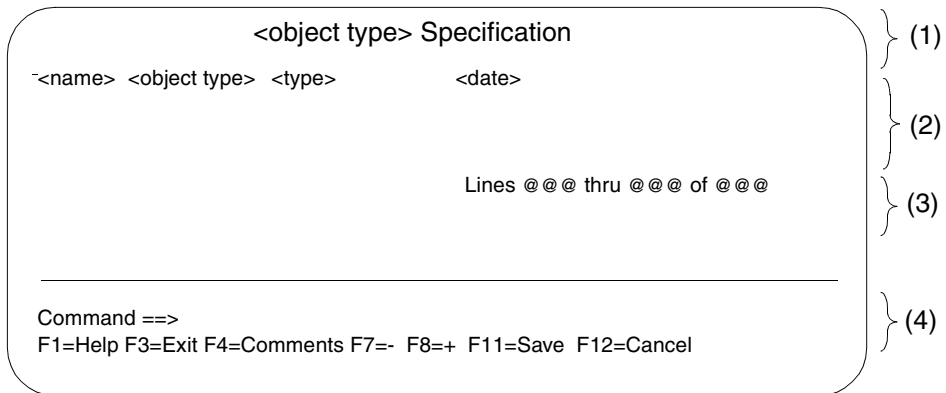
6.6 The object menus

The PRM menu system comprises a main menu and the object menu for each object type. The structure of these object menus differs from type to type. You can select the object type to be processed and the type of operation (action) in the main menu. If you wish to create a new print resource, modify an existing one or query the attributes of a print resource, PRM will display the corresponding object menu following your selection in the main menu. These object menus are described in detail in the following section.

If you select the INSERT, MODIFY or SHOW operation, the object menu will be displayed on screen automatically. Use the object menus to query detailed information on the resources selected or to specify or modify particular attributes of the resources. The individual object menus for displaying the resource differ in appearance depending on the type and complexity of the object type, e.g. an additional menu bar with pull-down menus for selecting functions is provided in some screens.

There are features common to all object menus as a result of their basic structure and the uniform way in which the function keys are used

Basic structure of the object menus



Area (1): title and name line

The abbreviated name of the object type appears as the menu name and the full name of the object type (`<object type>`) is displayed.

Area (2): identification area

The identifying attributes of the resource displayed are shown in this area:

- name under which the print resource is stored in the current PRFILE (<name>)
- type of print resource (<object type>)
- type of printer for which this resource was created (<type>)
- date of the last write access to this resource (<date>)

Area (3); scroll function area

The number of the line in which output of the object attributes starts and the currently displayed line range are shown here. You can specify the area to be displayed for some objects by entering a line number.

Area (4): Function key definitions

The following function key definitions apply to all the object menus:

- F1** Help
- F3** Terminate input without saving and return to the PRM main menu
- F4** Call an input box to enter or query comments attached to the specified resource
- F7** Scroll backward in the list of object attributes displayed
- F8** Scroll forward in the list of object attributes displayed
- F11** With INSERT or MODIFY: store the new resource attributes and return to the PRM main menu.
With SHOW: return to the PRM main menu
- F12** Cancel this function (without saving) and return to the PRM main menu

6.7 The object menu for BAND-ID

All the attributes of a print resource of the type BAND-ID may be processed in this object menu. Depending on the action selected in the main menu, the attributes of this code conversion table may be selected or created from scratch, or existing attributes modified or queried. Use **[F11]** to store the new or modified attributes in the current PROFILE.

Band Identification Specifications

```

1081          BAND-IDENTIFICATION          LP          1996-12-05
Control code   : 41
Conversion table
      .0 .1 .2 .3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.    80 80 80 80 80 80 80 80 80 80 80 80 80 80 80 80
1.    80 80 80 80 80 80 80 80 80 80 80 80 80 80 80 80
2.    80 80 80 80 80 80 80 80 80 80 80 80 80 80 80 80
3.    80 80 80 80 80 80 80 80 80 80 80 80 80 80 80 80
4.    20 80 80 80 80 80 80 80 80 80 80 80 80 80 80 80
5.    26 80 80 A7 80 80 80 80 80 80 80 80 A1 A4 2A 29 3B 80
6.    AD 2F 40 80 80 80 80 80 80 80 5E 2C 25 80 3E BF
7.    80 80 80 80 80 80 80 80 80 80 DF BA 23 80 A7 3D A2
8.    80 80 80 80 80 80 80 80 80 80 80 5B DC 5D 80 80
9.    80 80 80 80 80 80 80 80 80 80 80 80 80 80 80 80
A.    80 80 80 80 80 80 80 80 80 80 80 80 80 80 80 80
B.    80 80 5E 80 80 80 80 80 80 80 80 5B DC 5D 80 80
C.    80 C1 C2 43 C4 45 46 C7 C8 49 80 80 80 80 80 80
D.    80 4A CB 4C CD CE 4F D0 51 52 80 80 80 80 80 80
E.    80 80 D3 54 D5 D6 57 58 D9 DA 80 80 80 80 80 80

```

Command ==>
F1=Help F3=Exit F4=Comments F7=- F8=+ F11=Save F12=Cancel

Control code (input field)

Specifies a control code in the form of a 1-byte hexadecimal code which is linked to the name of the BAND-ID and is used for identification when accessing this resource. A control code is mandatory for LP PRINTERS of types 3337, 3338 and 3339. This code is initialized with X'00'.

Conversion table (input field)

Code table for the conversion of specific character codes. If you wish to create a new print resource, a default code table is automatically displayed, which is used to initialize all 256 possible codes (from X'00' to X'FF') with the value X'80'. This value represents a non-printable character. If a code conversion which differs from the default setting is specified, the character code to be converted may be entered in the matrix in hexadecimal form.

The position within the character code matrix represents the hexadecimal character code in the print file that is to be converted into some other character code. This character code is represented by the hexadecimal value located at the corresponding position of the matrix.

Leaving the “BAND-ID” object menu

- | | |
|------------|---|
| F3 | Cancel this function (without saving) and return to the PRM main menu |
| F11 | With INSERT or MODIFY: store the new resource attributes and return to the PRM main menu.
With SHOW: return to the PRM main menu |
| F12 | Cancel this function (without saving) and return to the PRM main menu |

Note

See page 261 for the meanings of the function keys in the object menus.

Example

	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	.A	.B	.C	.D	.E	.F
0.	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
1.	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
2.	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F
3.	30	31	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E	3F
4.	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F
5.	50	51	52	53	54	55	56	34	58	59	5A	5B	5C	5D	5E	5F
6.	60	61	62	63	64	65	66	67	68	69	6A	6B	6C	6D	6E	6F
7.	70	71	72	73	74	75	76	77	78	79	7A	7B	7C	7D	7E	7F
8.	80	81	82	83	84	85	86	87	88	89	8A	8B	8C	8D	8E	8F
9.	90	91	92	93	94	95	96	97	98	99	9A	9B	9C	9D	9E	9F
A.	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	AA	AB	AC	AD	AE	AF
B.	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	BA	BB	BC	BD	BE	BF
C.	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC	CD	CE	CF
D.	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	DB	DC	DD	DE	DF
E.	E0	E1	E2	E3	E4	E5	E6	E7	E8	E9	EA	EB	EC	ED	EE	EF
F.	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9	FA	FB	FC	FD	FE	FF

The values specified in this table indicate that any occurrence of the character code X'57' (= position within the matrix) in the print file is to be converted into the value X'34' (= value at this position).

6.8 The object menu for CHARACTER-IMAGE

You can process all the attributes of a print resource of type CHARACTER-IMAGE in this object menu. Depending on the action selected in the PRM main menu, you can create the attributes of this code conversion table, or modify or query existing attributes. Press **F11** to store the new or modified attributes in the current PROFILE.

Character Image Specifications																
108	CHARACTER-IMAGE															
Conversion table	LP 1996-12-05															
	Lines 1 thru 16 of 16 More :															
	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	.A	.B	.C	.D	.E	.F
0.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
1.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
2.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
3.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
4.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
5.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
6.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
7.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
8.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
9.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
A.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
B.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
C.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
D.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
E.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80
F.	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80	80

Command ==>
F1=Help F3=Exit F4=Comments F7=- F8=+ F11=Save F12=Cancel

Conversion table (input field)

Code table for converting certain character codes. If you wish to produce a new print resource, a default code table is automatically displayed, in which all 256 codes (from X'00' to X'FF') are initialized with the value X'80'. This value represents a non-printable character. If a code conversion which differs from the default setting is specified, the character code to be converted may be entered in the matrix in hexadecimal form. The position within the character code matrix represents the hexadecimal character code in the print file that is to be converted into some other character code. This character code is represented by the hexadecimal value located at the corresponding position of the matrix.

Leaving the “CHARACTER-IMAGE” object menu

- F3** Cancel this function (without saving) and return to the PRM main menu.
- F11** With INSERT or MODIFY: store the new resource attributes and return to the PRM main menu.
With SHOW: return to the PRM main menu.
- F12** Cancel this function (without saving) and return to the PRM main menu.

Note

See page 261 for the meanings of the function keys in the object menus.

Example

	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	.A	.B	.C	.D	.E	.F
0.	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
1.	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
2.	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F
3.	30	31	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E	3F
4.	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F
5.	50	51	52	53	54	55	56	34	58	59	5A	5B	5C	5D	5E	5F
6.	60	61	62	63	64	65	66	67	68	69	6A	6B	6C	6D	6E	6F
7.	70	71	72	73	74	75	76	77	78	79	7A	7B	7C	7D	7E	7F
8.	80	81	82	83	84	85	86	87	88	89	8A	8B	8C	8D	8E	8F
9.	90	91	92	93	94	95	96	97	98	99	9A	9B	9C	9D	9E	9F
A.	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	AA	AB	AC	AD	AE	AF
B.	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	BA	BB	BC	BD	BE	BF
C.	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC	CD	CE	CF
D.	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	DB	DC	DD	DE	DF
E.	E0	E1	E2	E3	E4	E5	E6	E7	E8	E9	EA	EB	EC	ED	EE	EF
F.	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9	FA	FB	FC	FD	FE	FF

The values specified in this table indicate that any occurrence of the character code X'57' (= position within the matrix) in the print file is to be converted into the value X'34' (= value at this position).

6.9 The object menu for TRANSLATION-TABLE

You can process all the attributes of a print resource of the type TRANSLATION-TABLE in this object menu. Depending on the action selected in the PRM main menu, the attributes of this code conversion table may be created from scratch or existing attributes modified or queried. Use **[F11]** to store the new or modified attributes in the current PROFILE

Translation Table Specifications																
TRI	TRANSLATION-TABLE															
Conversion table	Lines 1 thru 16 of 16															
0.	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	.A	.B	.C	.D	.E	.F
1.	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
2.	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F
3.	30	31	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E	3F
4.	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F
5.	50	51	52	53	54	55	56	57	58	59	5A	5B	5C	5D	5E	5F
6.	60	61	62	63	64	65	66	67	68	69	6A	6B	6C	6D	6E	6F
7.	70	71	72	73	74	75	76	77	78	79	7A	7B	7C	7D	7E	7F
8.	80	81	82	83	84	85	86	87	88	89	8A	8B	8C	8D	8E	8F
9.	90	91	92	93	94	95	96	97	98	99	9A	9B	9C	9D	9E	9F
A.	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	AA	AB	AC	AD	AE	AF
B.	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	BA	BB	BC	BD	BE	BF
C.	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC	CD	CE	CF
D.	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	DB	DC	DD	DE	DF
E.	E0	E1	E2	E3	E4	E5	E6	E7	E8	E9	EA	EB	EC	ED	EE	EF
F.	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9	FA	FB	FC	FD	FE	FF

Command ==>
 F1=Help F3=Exit F4=Comments F7=- F8=+ F11=Save F12=Cancel

Conversion table (input field)

Code table for converting certain character codes. If you wish to produce a new print resource, a default code table is automatically displayed, in which all 256 codes are initialized with the values X'00' through X'FF'. If a code conversion which differs from the default setting is specified, the character code to be converted may be entered in the matrix in hexadecimal form.

The position within the character code matrix represents the hexadecimal character code in the print file that is to be converted into some other character code. This character code is represented by the hexadecimal value located at the corresponding position of the matrix

Leaving the “TRANSLATION-TABLE” object menu

- | | |
|------------|--|
| F3 | Cancel this function (without saving) and return to the PRM main menu. |
| F11 | With INSERT or MODIFY: store the new resource attributes and return to the PRM main menu.
With SHOW: return to the PRM main menu. |
| F12 | Cancel this function (without saving) and return to the PRM main menu. |

Note

See page 261 for the meanings of the function keys in the object menus.

Example

	.0	.1	.2	.3	.4	.5	.6	.7	.8	.9	.A	.B	.C	.D	.E	.F
0.	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
1.	10	11	12	13	14	15	16	17	18	19	1A	1B	1C	1D	1E	1F
2.	20	21	22	23	24	25	26	27	28	29	2A	2B	2C	2D	2E	2F
3.	30	31	32	33	34	35	36	37	38	39	3A	3B	3C	3D	3E	3F
4.	40	41	42	43	44	45	46	47	48	49	4A	4B	4C	4D	4E	4F
5.	50	51	52	53	54	55	56	34	58	59	5A	5B	5C	5D	5E	5F
6.	60	61	62	63	64	65	66	67	68	69	6A	6B	6C	6D	6E	6F
7.	70	71	72	73	74	75	76	77	78	79	7A	7B	7C	7D	7E	7F
8.	80	81	82	83	84	85	86	87	88	89	8A	8B	8C	8D	8E	8F
9.	90	91	92	93	94	95	96	97	98	99	9A	9B	9C	9D	9E	9F
A.	A0	A1	A2	A3	A4	A5	A6	A7	A8	A9	AA	AB	AC	AD	AE	AF
B.	B0	B1	B2	B3	B4	B5	B6	B7	B8	B9	BA	BB	BC	BD	BE	BF
C.	C0	C1	C2	C3	C4	C5	C6	C7	C8	C9	CA	CB	CC	CD	CE	CF
D.	D0	D1	D2	D3	D4	D5	D6	D7	D8	D9	DA	DB	DC	DD	DE	DF
E.	E0	E1	E2	E3	E4	E5	E6	E7	E8	E9	EA	EB	EC	ED	EE	EF
F.	F0	F1	F2	F3	F4	F5	F6	F7	F8	F9	FA	FB	FC	FD	FE	FF

The values specified in this table indicate that any occurrence of the character code X'57' (= position within the matrix) in the print file is to be converted into the value X'34' (= value at this position).

6.10 The Font object menu

You can process the attributes of a print resource of the type font in this object menu. A font is a matching set of print characters of the same size, typeface and style. Depending on the action selected in the PRM main menu, the attributes of this resource may be created from scratch or existing attributes may be modified or queried. Use **F11** to store the new or modified attributes in the current PRFILE.

If a new font is created (i.e. no existing font is modified and the font is not created using a model), PRM first expects the specifications for the global attributes of this resource (space code, underscore code, default line density). You cannot use **F11** to process the rows and columns in the character code table until these global attributes have been entered. Press **F11** again to store the font in the current PRFILE.

Edit	Format
Font Specifications	
R02	FONT HP 1996-05-02
Number of characters :	191
Space code :	40 Underscore code : 6D Vertical density : 24
Code table :	Lines 1 thru 12 of 16 More : +
	.0 .1 .2 .3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.	
1.	15
2.	15 15
3.	15 15 15
4.	15 15 15 15
5.	15 15 15 15 15
6.	15 15 15 15 15 15
7.	15 15 15 15 15 15 15
8.	15 15 15 15 15 15 15 15
9.	15 15 15 15 15 15 15 15 15
A.	15 15 15 15 15 15 15 15 15 15
B.	15 15 15 15 15 15 15 15 15 15 15
Command ==>	
F1=Help F3=Exit F4=Comments F7=- F8+= F10=Actions F11=Save F12=Cancel	

Number of characters (output field)

The number of characters in this font.

Space code (input/output field)

This specifies the space code in hexadecimal form.

Using the CHARACTER-SETS operand in the PRINT-DOCUMENT command you can load up to 16 fonts for the print file. A blank must be defined at the beginning of the first specified font.

The default EBCDIC value for the space is the code X'40'.

If you do not enter anything in this field, this font cannot be used as the first font in the CHARACTER-SETS operand (PRINT-DOCUMENT command).

Underscore code (input/output field)

Specifies EBCDIC code (in hexadecimal form) for the character that creates an underscore in conjunction with the LINEMERGE function.

The default is the code X'6D' (see the EBCDIC table).

If you do not enter anything in this field, no underscore character is to be specified.

Vertical density (input/output field)

Specifies the default line density in lpi for the font characters and in particular for all new characters included in this font. The default is 6 lpi. Select a value from 6, 8, 10, 12 or 24 as the line density for all characters in the font. This value also acts as a default for new characters added to this font, for instance.

You can modify this line density default in the pull-down menu (function "Format" → "Box size") for individual characters or all characters in a font by setting the character height. The value specified here is checked against the value specified in the "Edit" pull-down menu for the number of lines that the individual character is to occupy in the character matrix.

Depending on the line density, the individual character can only be represented in a particular range of lines in the character matrix, which comprises a maximum of 40 lines. The following table compares the values for line density and the range of lines available for representing the character.

Line density	Line range
6 lpi	1 - 40
8 lpi	7 - 36
10 lpi	11 - 34
12 lpi	13 - 32
24 lpi	21 - 30

Code table (input/output field)

Character code table for the font. An identifier in the form of a 1-byte code is assigned to each individual character. Each individual character is stored in the form of a bitmap, which represents the binary-coded description of the character. Each of the maximum of 256 characters, which can be represented by one byte, is identified on the basis of the character code and represented in accordance with the bitmap.

Various functions for designing the layout of a character or characters may be selected under "Format" in the pull-down menu (called by **F10**).

Leaving the “Font” object menu

F3 or **F12**

If a pull-down menu is displayed: cancel selection in the menu and position the cursor on the first menu item.
If no pull-down menu is displayed, cancel without saving and return to the PRM main menu

F11

With INSERT or MODIFY: store the new resource attributes and return to the PRM main menu.
With SHOW: return to the PRM main menu

Note

See page 261 for the meanings of the function keys in the object menus.

6.10.1 The “Edit” pull-down menu

This menu brings together all the functions for processing a font:

- enter a new character in the character code table
- modify a character code in the character code table
- delete a character code from the code table
- output the attributes and shape of a character
- import a character from the HP font into the current character code table

Use **[F10]** in the object menu for fonts to activate this menu title in the menu bar. Press **[DUE]** to position the cursor in the selection input field (“_”) in the pull-down menu. The next screen shows the possible menu items for selecting the required function:

```

Edit      Format
-----
: 1.Insert... :                      Font Specifications
: 2.Import... : -----
: 3.Modify... :                      HP      1996-12-05
: 4.Delete... : rs : 191
: 5.Show...   :   : 40   Underscore code : 6D   Vertical density : 8
: 6.Exit (F3) :                      Lines 1 thru 12 of 16   More : +
:.....: 3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.
1.
2.
3.      15      15      15      15      15
4. 15 15      15      15      15 15 15 15 15 15 15 15
5. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
6. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
7. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
8. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
9. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
A. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
B. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F7=-  F8=+  F10=Actions  F11=Save  F12=Cancel
    
```

Leaving the “Edit” pull-down menu

Tab keys	Position the cursor within the menu bar; the cursor jumps from title to title
F10	Cancel display of the pull-down menu and return to the object menu
F12	Delete the pull-down menu displayed; any selection entered is ignored. The cursor is positioned on the first menu title (“Edit”)

Note

See page 261 for the meanings of the function keys in the object menus.

6.10.1.1 The “Insert” menu item

This function is used to enter a new character in the current character code table. The character code and character width (character density) may be explicitly specified as attributes. The character height (line density) is determined implicitly by the line density which applies to the font. A blank character matrix is also linked automatically with any character for which no bitmap yet exists.

When the global attributes have been specified successfully for the new character, PRM automatically displays the character object menu, which can be used to shape the character and the bitmap for the new character.

Enter a “1” in the pull-down menu and press **[DUE]** to select the function. The following dialog box is displayed:

```

Edit      Format
-----
Font Specifications
-----
R02      FONT      HP      1996-12-05
Number of characters : 191
Space code : 40      Underscore code : 6D      Vertical density : 8
Code table : ..... More : +
  .0 .1 .2 .3 . :      Insert New Character      :
0. :-----:
1. : Character code : :
2. : 15 : Horizontal density : 6 or :
3. : 15 15 1 : number of column : :
4. : 15 15 1 :-----:
5. : 15 15 15 15 1 : Command ==> :
6. : 15 15 15 15 1 : F1=Help F3=Exit F12=Cancel :
7. : 15 15 15 15 1 :-----:
8. : 15 15 15 15 15 15 15 15 15 15 15 15 15 15 :
9. : 15 15 15 15 15 15 15 15 15 15 15 15 15 15 :
A. : 15 15 15 15 15 15 15 15 15 15 15 15 15 15 :
B. : 15 15 15 15 15 15 15 15 15 15 15 15 15 15 :
-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8=+ F10=Actions F11=Save F12=Cancel
    
```

Character code (input field)

Hexadecimal code for the new character in the range {00...FF}. This code is to be entered in the character table for the HP font.

Horizontal density (input field)

Determines the width (density) of the character.

The width may be specified in fractions of an inch or in dots (*number of column*). Possible values for the fraction of an inch are 1/6, 1/10, 1/12 1/15 or 1/20. A value between 2 and 40 may be specified as the character width in dots. The new character is to occupy this number of columns in the character matrix.

The value range $2 \leq \text{number} < 12$ can only be specified for characters of a font which is to be processed on special printers. These printers (types NDX, NDW, APA1 and APA2) are capable of printing even the smallest characters.

The close relationship between the character density (in cpi) and the number of columns in the character matrix (number of dots) may also be presented in such a way that a character in the character matrix must not exceed a specified number of columns, depending on the character density. The following table shows the possible column range for each character density:

Line density	Column range
6 cpi	1 - 40
10 cpi	1 - 24
12 cpi	1 - 20
15 cpi	1 - 16
20 cpi	1 - 12

Function keys in the dialog box

- F1** Help
- F3** or **F12** Cancel the function without saving the entries

Note

See page 261 for the meanings of the function keys in the object menus.

6.10.1.2 The “Import” menu item

This function is used to enter character codes from an HP font in the character code table currently being processed. Character codes already occupied in the current code table may not be overwritten with this function. If you wish to transfer a character from an HP font into the current code table, you must specify an unoccupied position in the table.

Select “2” in the pull-down menu and press **[DUE]** to select the function. The following dialog box is displayed:

Edit		Format	
Font Specifications			
R02	FONT	HP	1996-12-05
Number of ch	.....		ity : 8
Space code	: Import character from a font		:
Code t	:		: +
.0	:	Hp font name	: +
0.	:	From code	: 00
1.	:	To code	: FF
2.	:	New start code	: 00
3.	1	Rule	: 1 1.Without gap
4.	15 1		: 2.With gap
5.	15 1	:	
6.	15 1	: Command ==>	
7.	15 1	: F1=Help F3=Exit F6=List F12=Cancel	
8.	15 1	:	
9.	15 15	15 15 15 15 15 15 15 15 15 15 15 15 15 15	
A.	15 15	15 15 15 15 15 15 15 15 15 15 15 15 15 15	
B.	15 15	15 15 15 15 15 15 15 15 15 15 15 15 15 15	
Command ==>			
F1=Help F3=Exit F4=Comments F7=- F8=+ F10=Actions F11=Save F12=Cancel			

HP font name (input field)

Name of the HP font from which the characters are to be transferred. If the cursor is positioned in this input line, press **[F6]** or enter a “+” sign to request a selection box and mark the relevant print resource to select it.

From code (input field)

The character codes to be imported from the HP font may be specified in terms of a range. The lower limit of the range is set using *From code*, i.e. the first hexadecimal code of the set of characters to be imported that is to be entered in the current character code table.

To code (input field)

This sets the upper limit of the range, i.e. the last hexadecimal code of the set of characters to be imported that is to be entered in the current character code table. If you specify the same character code as in *From code*, only a single character code is to be entered in the character code table.

New start code (input field)

Use this entry to allocate a new code in the current character code table to the imported character from the HP font. If a range was selected using *From code* and *To code*, check there is still sufficient free space in the character code table above the start code specified here. The characters to be transferred are entered in the table sequentially, starting with the start code.

If you do not enter a value in this field, this means that the imported characters are to be entered in the character code table with their original code from the HP font.

Rule (Selection field)

Specifies how any gaps in the character code sequence of the HP font are to be dealt with. The character code sequence to be imported from the HP font is selected using *From code* and *To code*.

with gap: gaps in the HP font character code sequence are included in the transfer to the character code table.

without gap: gaps in the HP font character code sequence are not included in the transfer. The characters to be imported are arranged in the current character code table in ascending order of their codes.

Function keys in the dialog box

- | | |
|-------------------------|---|
| F1 | Help |
| F3 or F12 | Cancel this function without saving the entries |
| F6 | Request a dialog box |

Note

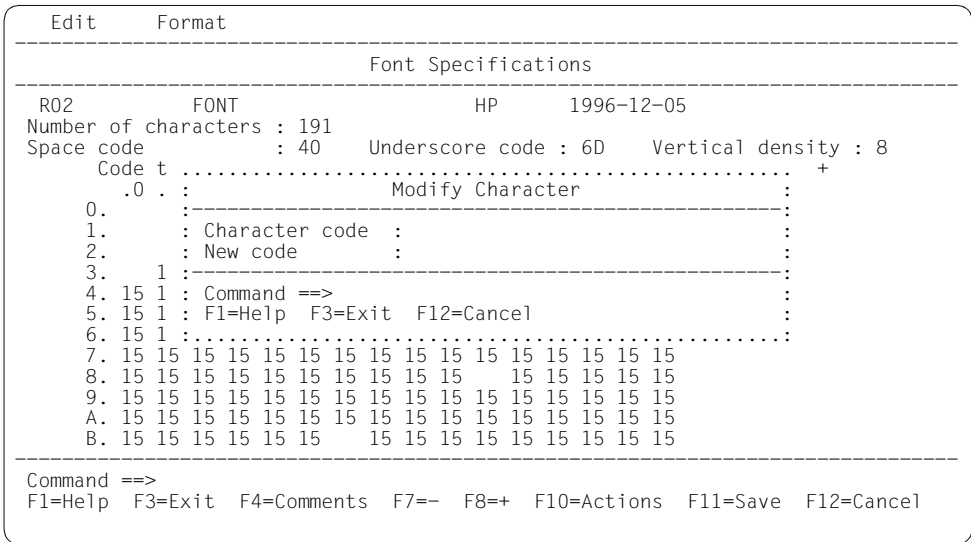
See page 261 for the meanings of the function keys in the object menus.

6.10.1.3 The “Modify” menu item

This function modifies the code for any character in the character code table for the current font.

Modifying the code means changes to the location of the character in the character code matrix, since every code is assigned precisely one place in the matrix. Every character within the matrix is represented by its hexadecimal code (1 byte); the left half-byte represents the column and the right half-byte represents the row in the matrix. Following successful modification of the character code, PRM automatically displays the character object menu, which you may use to modify the bitmap for the new character.

Enter “3” in the pull-down menu and press **[DUE]** to select the function. The following dialog box is then displayed:



Character code (input field)

Hexadecimal code of the character to which a new code and thus a new position in the character code matrix is to be assigned.

New code (input field)

New hexadecimal code for the sign.

Function keys in the dialog box**F1**

Help

F3or **F12**

Cancel the function without saving the entries

Note

See page 261 for the meanings of the function keys in the object menus.

6.10.1.4 The “Delete” menu item

This function deletes a character code from the character code table for the current font.

Enter a “4” in the pull-down menu and press **[DUE]** to select the function. The following dialog box is then displayed:

```

Edit      Format
-----
Font Specifications
-----
R02      FONT      HP      1996-12-05
Number of characters : 191
Space code      : 40      Underscore code : 6D      Vertical density : 8
Code table :      Lines 1 thru 12 of 16      More : +
.0 . : .....
0.   :      Remove Character      :
1.   : .....
2.   : Character code :      :
3.   1 : .....
4. 15 1 : Command ==>      :
5. 15 1 : F1=Help F3=Exit F12=Cancel      :
6. 15 1 : .....
7. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
8. 15 15 15 15 15 15 15 15 15 15 15 15 15 15
9. 15 15 15 15 15 15 15 15 15 15 15 15 15 15
A. 15 15 15 15 15 15 15 15 15 15 15 15 15 15
B. 15 15 15 15 15 15 15 15 15 15 15 15 15 15
-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8=+ F10=Actions F11=Save F12=Cancel
    
```

Character code (input field)

Hexadecimal code from the range {00,...FF} of the character to be deleted from the character code table for the current font.

Function keys in the dialog box

- [F1]** Help
- [F3]** or **[F12]** Cancel the function without saving the entries

Note

See page 261 for the meanings of the function keys in the object menus.

6.10.1.5 The “Show” menu item

This function outputs the attributes and shape of a character in the current font.

Once you have selected the character code, PRM automatically displays the character object menu showing the bitmap for this character.

Enter “5” in the pull-down menu and press **[DUE]** to select the function. The following dialog box is displayed:

Edit	Format

Font Specifications	

R02	FONT HP 1996-12-05
Number of characters :	191
Space code :	40
Code table :	Underscore code : 6D Vertical density : 8
	Lines 1 thru 12 of 16 More : +
0.	.0 : Show Character :
1.	: :
2.	: Character code : :
3.	1 : :
4.	15 1 : Command ==> :
5.	15 1 : F1=Help F3=Exit F12=Cancel :
6.	15 1 : :
7.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 :
8.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 :
9.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 :
A.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 :
B.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 :

Command ==>	
F1=Help F3=Exit F4=Comments F7=- F8+= F10=Actions F11=Save F12=Cancel	

Character code (input field)

Hexadecimal code of the character whose shape is to be output.

Function keys in the dialog box

[F1]

Help

[F3] or **[F12]**

Cancel the function without saving the entries

Note

See page 261 for the meanings of the function keys in the object menus.

6.10.1.6 The “Exit” menu item

This function is used to leave the “Font” object menu and to return to the PRM main menu.

Enter a “6” in the pull-down menu and press **[DUE]** to select the function. This function corresponds to **[F3]** in the object menu.

```

Edit      Format
-----
: 6 1.Insert... :          Font Specifications
: 2.Import... : -----
: 3.Modify... :          HP          1996-12-05
: 4.Delete... : rs : 191
: 5.Show... : : 40      Underscore code : 6D      Vertical density : 8
: 6.Exit (F3) :          Lines 1 thru 12 of 16      More : +
:.....: 3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.
1.
2.          15          15          15          15          15          15
3.      15          15          15          15          15          15
4. 15 15          15          15          15 15 15 15 15 15 15 15
5. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
6. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
7. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
8. 15 15 15 15 15 15 15 15 15 15          15 15 15 15 15
9. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
A. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
B. 15 15 15 15 15 15          15 15 15 15 15 15 15 15
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F7=-  F8=+  F10=Actions  F11=Save  F12=Cancel
    
```

Note

See page 261 for the meanings of the function keys in the object menus.

6.10.2 The “Format” pull-down menu

This menu brings together the functions for processing the characters in a font:

- align a character in the character matrix
- change the size of the character frame
- display a character in reverse video
- rotate a character clockwise
- overlay a character with a different character from the same font or with a template from a different font
- enlarge or reduce a character (zoom)

The settings made using this function apply to all characters in the font. If you want to change only one character in a font, you must explicitly select the character using the “Edit” → “Modify” function. When you have selected the character, PRM displays the character object menu in which the bitmap for the character is displayed.

Use **[F10]** in the font object menu and press the tab key once to activate this menu title in the menu bar. Press **[DUE]** to position the cursor in the selection input field (“_”) in the pull-down menu. The next screen shows the possible menu items for selecting the required function.

```

Edit      Format
-----
: 1.Align... : Font Specifications
: 2.Box size... :
-----
R02      : 3.Reverse   : HP      1996-12-05
Number o : 4.Rotate    :
Space co : 5.Overlay... : Underscore code : 6D   Vertical density : 8
Co       : 6.Zoom...  : Lines 1 thru 12 of 16   More : +
:.....: .7 .8 .9 .A .B .C .D .E .F

0.
1.
2.      15      15      15      15      15
3.     15     15     15     15     15
4.  15 15     15     15     15 15 15 15 15 15 15 15
5.  15 15 15 15 15 15 15 15 15 15 15 15 15 15
6.  15 15 15 15 15 15 15 15 15 15 15 15 15 15
7.  15 15 15 15 15 15 15 15 15 15 15 15 15 15
8.  15 15 15 15 15 15 15 15 15 15 15 15 15 15
9.  15 15 15 15 15 15 15 15 15 15 15 15 15 15
A.  15 15 15 15 15 15 15 15 15 15 15 15 15 15
B.  15 15 15 15 15 15 15 15 15 15 15 15 15 15
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F7=-  F8+=  F10=Actions  F11=Save  F12=Cancel

```

Leaving the “Format” pull-down menu

Tab keys	Position the cursor within the menu bar; the cursor jumps from title to title
F10	Cancel the display of the pull-down menu and return to the object menu
F12	Delete the pull-down menu displayed; any selection entered is ignored; the cursor is positioned on the first menu title (“Edit”)

Note

See page 261 for the meanings of the function keys in the object menus.

Shift up (input field)

The character selected is to be moved upward within the character frame by the number of rows entered in this field.

Shift down (input field)

The character selected is to be moved downward within the character frame by the number of rows entered in this field.

Shift left (input field)

The character selected is to be moved to the left within the character frame by the number of columns entered in this field.

Shift right (input field)

The character selected is to be moved to the right within the character frame by the number of columns entered in this field.

Function keys in the dialog box**F1**

Help

F3or **F12**

Cancel the function without saving the entries

Note

See page 261 for the meanings of the function keys in the object menus.

If the width of the character frame is to be given in fractions of an inch (1 inch = 2.54 cm), the following character frame width results from the value 15:
 $1/5 \text{ inch} \approx 2.54/5 \text{ cm} \approx 0.17 \text{ cm}$

Modify contents too (input field)

Specifies whether the character enclosed by the frame is to be reduced or enlarged in line with the required change. If this field is selected, the character size is also changed.

Function keys in the dialog box

F1

Help

F3

or **F12**

Cancel the function without saving the entries

Note

See page 261 for the meanings of the function keys in the object menus.

6.10.2.3 The “Reverse” menu item

This function modifies the form of the characters in the font by displaying them in reverse video, i.e. by reversing the background and character color.

The bitmap for the character is represented in the character matrix by dots which are set (“Character color”) or not set (“Background color”). A dot which is set is represented by a “1” and a dot which is not set is represented by a “0” when the character is displayed in the character object menu. The reverse function reverses these figures: every “1” becomes a “0” and every “0” a “1”.

Enter a “3” in the pull-down menu and press **[DUE]** to select the function, which then executes immediately. No further dialog box is displayed.

```

Edit      Format
-----
          : 3 1.Align...  : Font Specifications
          : 2.Box size...  :
R02      : 3.Reverse      : HP          1996-12-05
Number o : 4.Rotate       :
Space co : 5.Overlay...  : Underscore code : 6D   Vertical density : 8
Co       : 6.Zoom...     : Lines 1 thru 12 of 16   More : +
          : .....: .7 .8 .9 .A .B .C .D .E .F
0.
1.
2.      15      15      15      15      15
3.     15     15     15     15     15
4.  15 15     15     15     15 15 15 15 15 15 15 15 15 15
5.  15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
6.  15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
7.  15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
8.  15 15 15 15 15 15 15 15 15 15     15 15 15 15 15
9.  15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
A.  15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
B.  15 15 15 15 15 15     15 15 15 15 15 15 15 15

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F7=-  F8=+  F10=Actions  F11=Save  F12=Cancel

```

Note

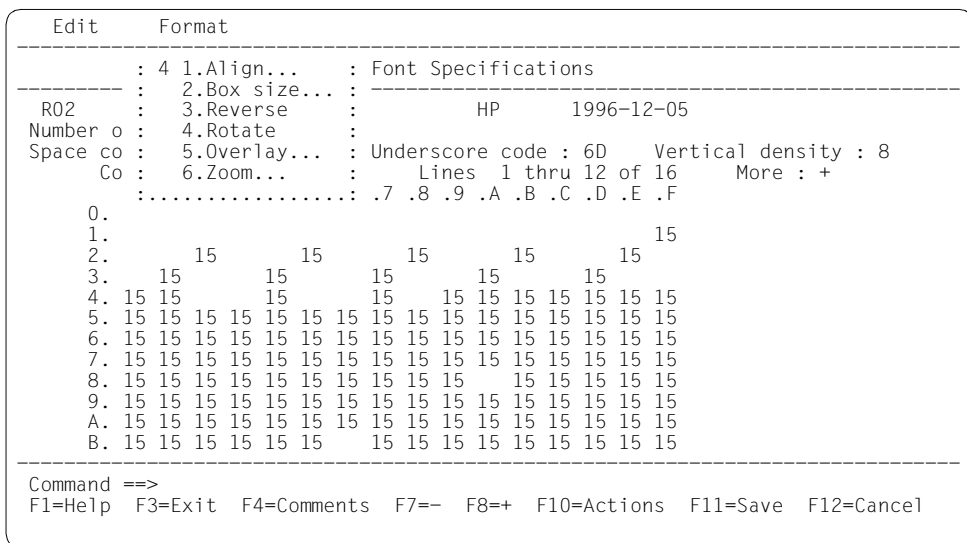
See page 261 for the meanings of the function keys in the object menus.

6.10.2.4 The “Rotate” menu item

You can use this function to change the form of the characters in the font by rotating them clockwise.

Each time this function is called, all the font characters rotate through 90⁰ steps. The axis of rotation runs through the imaginary line and column number 20.5 in the character matrix.

Enter a “4” in the pull-down menu and press **[DUE]** to select the function, which then executes immediately. No further dialog box is displayed.



Note

See page 261 for the meanings of the function keys in the object menus.

6.10.2.5 The “Overlay” menu item

This function modifies the shape of the characters in the font by overlaying them with a character from the same font or any character from a different HP font. This option is useful if you want to construct a complete set of letters from a character set consisting only of “individual parts” of letters (e.g. only vertical and horizontal lines) by combining and overlaying.

Enter a “5” in the pull-down menu and press **[DUE]** to select the function. The following dialog box is then displayed:

Edit		Format	
Font Specifications			
R02	FONT	HP	1996-12-05
Number of characters : 191			
Space code : 40			
Underscore code : 6D			
Vertical density : 8			
Code table ore : +			
.0 .1 .2 : Overlay raster pattern :			

0.	:	With	1.A character code
1.	:		:
2.	15	:	2.A HP font and a
3.	15	:	character
4.	15 15	:	-----
5.	15 15 15	:	Command ==>
6.	15 15 15	:	F1=Help F3=Exit F12=Cancel
7.	15 15 15	:	-----
8.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15	:	
9.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15	:	
A.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15	:	
B.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15	:	

Command ==>			
F1=Help F3=Exit F4=Comments F7=- F8=+ F10=Actions F11=Save F12=Cancel			

with (selection field)

Specifies whether the characters in the font are to be overlaid with a different character from the current font (enter “1”) or by a freely selectable character from a different HP font (enter “2”).

If the characters in the font are to be overlaid with a different character from the current font, the following dialog box is displayed for entering the character code:

Edit		Format	

Font Specifications			

R02	FONT	HP	1996-12-05
Number of characters : 191			
Space code	: 40	Underscore code : 6D	Vertical density : 8
Code table	..... ore : +		
.0 .1 .2	.....	
0.	:	Overlay from current font	:
1.	:		:
2.	15	: With character code :	:
3.	15	:	:
4.	15 15	: Command ==>	:
5.	15 15 15	: F1=Help F3=Exit F12=Cancel	:
6.	15 15 15	:	:
7.	15 15 15	:	:
8.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15		
9.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15		
A.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15		
B.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15		

Command ==>			
F1=Help F3=Exit F4=Comments F7=- F8=+ F10=Actions F11=Save F12=Cancel			

With character code (input field)

Hexadecimal code of the character from the current font which is to overlay the characters.

Function keys in the dialog box

- F1** Help
- F3** Cancel the function without saving the entries

Note

See page 261 for the meanings of the function keys in the object menus.

If the font characters are to be overlaid with a character from a different HP font, the following dialog box for entering the character code and the HP font is displayed:

Edit		Format	

Font Specifications			

R02	FONT	HP	1996-12-05
Number of characters : 191			
Space code	: 40	Underscore code : 6D	Vertical density : 8
Code table	.....		ore : +
.0 .1 .2	: Overlay from another font		:
0.	:		:
1.	: with font name :		+
2.	15	: and code :	
3.	15	:	
4.	15 15	: Command ==>	
5.	15 15 15	: F1=Help F3=Exit F6=List F12=Cancel	
6.	15 15 15	:	
7.	15 15 15	:	
8.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15		
9.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15		
A.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15		
B.	15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15		

Command ==>			
F1=Help F3=Exit F4=Comments F7=- F8=+ F10=Actions F11=Save F12=Cancel			

With font name (input field)

Name of the HP font from which the character to overlay the characters is to be taken. If the cursor is in this input line, press **[F6]** or enter “+” to request a selection box. In this box you can select an HP font from a list of all available print resources of this type by marking it.

and code (input field)

Hexadecimal code for the character from the specified HP font which is to overlay the characters.

Function keys in the dialog box

- [F1]** Help
- [F3]** or **[F12]** Cancel this function without saving the entries
- [F6]** Request a dialog box

Note

See page 261 for the meanings of the function keys in the object menus.

6.10.2.6 The “Zoom” menu item

This function modifies the form of the font by enlarging or reducing the characters.

The change in size need not be proportional, i.e. different percentage changes may be set for character height (line density) and character width (character density).

You should bear in mind that the shape of the character may differ from the desired result on account of unavoidable rounding discrepancies. For the same reason, the original shape of the character cannot be guaranteed if you reduce the size of a character by a given percentage and then enlarge it by the same amount. The only element to be retained regardless of the operation is the centering of the character at a particular position.

The default values for line spacing and line density for the font or the character are retained; this means that any characters which, when enlarged, extend beyond the character frame predefined by the line spacing and character density are “truncated” in the printout.

Enter a “6” in the pull-down menu and press **[DUE]** to select the function. The following dialog box will be displayed:

```

Edit      Format
-----
Font Specifications
-----
R02      FONT      HP      1996-12-05
Number of characters : 191
Space code      : 40      Underscore code : 6D      Vertical density : 8
Code table ..... ore : +
  .0 .1 .2      :      Zoom character      :
0.      : .....:
1.      : Character height : 100 +      :
2.      15      : Character width  : 100 +      :
3.      15      : .....:
4. 15 15      : Command ==>      :
5. 15 15 15   : F1=Help  F3=Exit  F6=List  F12=Cancel :
6. 15 15 15   : .....:
7. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
8. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
9. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
A. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
B. 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15 15
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F7=-  F8=+  F10=Actions  F11=Save  F12=Cancel
    
```

character height (input field)

The height of the character is to be enlarged or reduced by a specified percentage. If you enter a percentage, the character height will be increased by 125%, 135%, 150% or 200% compared to the original, or reduced by 80%, 75%, 65% or 50%.

If you do not enter a value or enter 100 in this field, the character height will not change.

If the cursor is positioned in this field, press **[F6]** or enter “+” to request a dialog box in which you can select a permitted value.

character width (input field)

The width of the character is to be enlarged or reduced by a specified percentage. If you enter a percentage, the character width will be increased by 125%, 135%, 150% or 200% compared to the original, or reduced by 80%, 75%, 65% or 50%.

If you enter the value 100 in this field, the character width will not change. If the cursor is positioned in this field, press **F6** or enter “+” to request a dialog box in which you can select a permitted value.

Function keys in the dialog box

- F1** Help
- F3** or **F12** Cancel this function without saving the entries
- F6** Request a dialog box

Note

See page 261 for the meanings of the function keys in the object menus.

6.11 The object menu for characters

This object menu modifies the shape, i.e. the bitmap for an individual character of the type HP font. You must explicitly select the character to be modified in the Font object menu using the INSERT, MODIFY or SHOW function. Once you have selected the character, PRM will automatically display the character object menu and allow you to modify the attributes of the individual character.

Depending on the action selected in the Font object menu, the attributes may be created or existing attributes modified or queried. Use **[F11]** to store the new or modified attributes in the current PRFILE.

Use **[F10]** and **[DUE]** to access the pull-down menu in order to select the corresponding functions for defining attributes.

```

Format
-----
                        Character Specification
-----
Character code 10 with 8 lpi and 6 cpi or 40 columns
Set / reset matrix :
                        Lines 17 thru 28 of 40      More : + -
                1234567890123456789012345678901234567890
17  .....
18  .....
19  .....
20  .....
21  .....
22  .....
23  .....
24  .....
25  .....
26  .....
27  .....
28  .....
   C:
-----
Command ==>
F1=Help  F3=Exit  F7=-  F8=+  F10=Actions  F11=Save  F12=Cancel

```

Character code (output field)

Hexadecimal code for the character from the character code table whose shape (bitmap) is shown in the matrix, together with the cpi and lpi values and the number of columns.

Editing the character

Depending on the character density, part of the character frame, which must not exceed 40 lines and 40 columns, is displayed on screen. 12 lines and 40 columns are displayed on each screen. Use the **[F7]** and **[F8]** function keys to scroll forward and backward. There are various ways of processing the character layout within the character frame displayed: dot by dot, row by row, column by column or using the entire matrix.

Dot-by-dot processing

Move the cursor to any position within the matrix and set the dot by marking with any character other than " " (blank), or reset it using " " (blank).

Row-by-row or column-by-column processing

You can select any row or column for modifying the character by marking the appropriate fields associated with the rows and columns. The entries in the mark field have the following meanings:

Character entered	Meaning
1	Set all dots in the row or column
0	Reset all dots in the row or column
i	Insert a whole row or column
d	Delete the selected row or column

Processing the entire matrix

If you mark the "Set / reset matrix" field in the work area of the object menu, you can process the entire matrix and thus the character layout. The entries in the field have the following meanings:

Character entered	Meaning
1	Display matrix
0	Remove matrix

Leaving the “Character” object menu**F3** or **F12**

If the pull-down menu is displayed, cancel the menu selection and position the cursor on the first menu item. If no pull-down menu is displayed, cancel without saving and return to the Font object menu.

F11

With INSERT or MODIFY: store the new resource attributes and return to the Font object menu.
With SHOW: return to the Font object menu

Note

See page 261 for the meanings of the function keys in the object menus.

6.11.1 The “Format” pull-down menu

All the functions for processing a character from the current font are grouped together under the “Format” pull-down menu:

- align characters in the character matrix
- change the size of the character frame
- display a character in reverse video
- rotate a character clockwise
- overlay a character with a different character from the same font or with a template from a different font
- enlarge or reduce a character (zoom)

Press **[F10]** and **[DUE]** in the character object menu to activate this menu title (the only one) in the menu bar and position the cursor in the selection input field (“_”) in the pull-down menu. The following screen shows the possible menu items for selecting the required function:

```

Format
-----
: 1.Align...      : Character Specification
: 2.Box size...  : -----
: 3.Reverse      : th 8 lpi and 6 cpi or 40 columns
: 4.Rotate       :
: 5.Overlay...   : Lines 17 thru 28 of 40   More : + -
: 6.Zoom...      : 890123456789012345678901234567890
: .....         : .....
: 18 .....      : .....
: 19 .....      : .....
: 20 .....      : .....
: 21 .....      : .....
: 22 .....      : .....
: 23 .....      : .....
: 24 .....      : .....
: 25 .....      : .....
: 26 .....      : .....
: 27 .....      : .....
: 28 .....      : .....
: C:            :
-----
Command ==>
F1=Help F3=Exit F7=- F8+= F10=Actions F11=Save F12=Cancel

```

The menu items are not described in any further detail below. The functionality is identical to the menu items in the Font object menu, which are described in detail on pages 285 to 296. The only difference is that all the characters in a font can be processed using the Font menu items, but only one character from a font can be processed using the menu items displayed above.

Leaving the “Format” pull-down menu

- | | |
|------------|--|
| F10 | Cancel display of the pull-down menu and return to the Character object menu |
| F12 | Delete the pull-down menu displayed;
any selection entered is ignored;
the cursor is positioned on the first menu title (“Format”) |

Note

See page 261 for the meanings of the function keys in the object menus.

6.12 The Font Pool object menu

This object menu is used to process all the attributes of a print resource of the type HP-font pool. Depending on the action selected in the PRM main menu, the attributes of this font pool may be created or existing attributes modified or queried. Press **F11** to store the new or modified attributes in the current PROFILE.

Font Pool Specifications						
TE1	FONT-POOL	HP	1996-12-05			
Font list		Lines	1 thru	1 of	1	More :
Action	HP font	activated	cpi	lpi		
i/a/d	+	by code	--	--		
		0xFF40				

Command ==>						
F1=Help F3=Exit F4=Comments F6=List F7=- F8+= F11=Save F12=Cancel						

Font list (output field)

List of the HP fonts (maximum: 64) that make up the pool.

For every font belonging to the pool the control character used to activate it is also output. In addition, the character density and line density are displayed for the first font in the list.

i/a/d (selection field)

Mark field for processing list elements.

If an HP font is to be added to the list of fonts that make up the pool, you must enter the name of this print resource in the first free position in the list.

Enter an "i" in the first field to create an additional line before the current line. If you enter an "a", an additional line will be added at the end of the list.

To replace an existing font in the list, you can overwrite the corresponding item in the list with the name of the new resource. Press **F6** or enter "+" in the *HP font* field to request a list of all existing HP fonts.

If you want to delete an HP font from the list, mark the first field in the list with a "d".

HP font (output field)

Name of an HP font which is included in the list of HP fonts (maximum: 64) that comprise the pool. Press **F6** or enter “+” to request a dialog box which lists all existing HP fonts.

Leaving the “Font Pool” object menu

F3 or **F12** Cancel this function (without saving) and return to the PRM main menu

F11 With INSERT or MODIFY: store the new resource attributes and return to the Font object menu.
With SHOW: return to the Font object menu

Note

See page 261 for the meanings of the function keys in the object menus.

When you press **F6**, the following dialog box is displayed within the screen to allow you to add an HP font resource to the font list. To select a resource and transfer it to the object menu, mark the relevant line with “x”, “X” or “/”.

Font Pool Specifications			
TE1	FONT-POOL	HP	1996-12-05
Font li	:	Object Selection	: e :
Action	:		:
i/a/d	:	Already existing FONT	:
i	:	Lines 1 thru 7 of 119 More : +	:
:	:	Name Model	:
:	:	#CF HP	:
:	:	#SG HP	:
:	:	#SN HP	:
:	:	#6A HP	:
:	:	#8C HP	:
:	:	#8F HP	:
:	:	R01 HP	:
:	:		:
:	:	Command ==>	:
:	:	F1=Help F3=Exit F7=- F8+= F12=Cancel	:
:	:		:

Command ==>			
F1=Help F3=Exit F4=Comments F6=List F7=- F8+= F11=Save F12=Cancel			

Function keys in the dialog box

- F1** Help
- F3** or **F12** Cancel this function without saving the entries
- F7** Scroll backward in the list of fonts displayed
- F8** Scroll forward in the list of fonts displayed

Note

See page 261 for the meanings of the function keys in the object menus.

6.13 The FOB object menu

This object menu is used to query all the attributes of a print resource of the type forms overlay buffer (FOB). Unlike the other resources, this print resource, a data overlay, cannot be created with PRM; it has to be imported from a print control file. The only attribute that can be changed for this print resource is the name of the resource. Use **F11** to store the new or modified attribute in the current PRFILE.

```

Forms Overlay Buffer Specifications
-----
FOB2   FOFRMS-OVERLAY-BUFFER   HP   1996-11-21
Size           : 0562 sublines (0681 kbytes)
Maximum width  : 08.3 inches
Maximum length : 11.3 inches
Number sub-fobs : 0001
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F11=Save  F12=Cancel
    
```

Size (output field)

Size of the data overlay expressed in terms of the number of sublines and Kbytes. The data in the FOB data overlay is stored as pixel information in the form of sublines. An FOB data overlay for HP printers may contain a maximum of 672 such sublines, an FOB data overlay for HP90 printers a maximum of 4032 sublines (depending on the size of the memory that holds the overlays).

Maximum width (output field)

Maximum width of the electronic form in inches.

Maximum length

Maximum length of the electronic form in inches.

Number of sub-fobs (output field)

Number of subFOBs assigned to the FOB.

Leaving the “FOB” object menu

- F3** or **F12** Cancel this function (without saving) and return to the PRM main menu
- F11** With INSERT or MODIFY: store the new resource attributes and return to the PRM main menu.
With SHOW: return to the PRM main menu.

Note

See page 261 for the meanings of the function keys in the object menus.

6.14 The General Loop object menu

This object menu is used to process all the attributes of a print resource of the type general loop. Depending on the action selected in the PRM main menu, the attributes of this loop record, which serves as a reference for the creation of individual loops, may be created or existing attributes modified or queried. Press **F11** to store the new or modified attributes in the current PRFILE.

If you create a new general loop (i.e. you do not modify an existing one or create one using a model), PRM first expects the entries on the global attributes of the resource (object name and type of printer). You can only press **F11** to process the paragraphs of the general loop after you have input these global attributes. Press **F11** again to store the general loop in the current PRFILE.

General Loop Specifications						
TE1	GENERAL-LOOP		NONE	1996-12-05		
Total length : 12+ 3/ 6 inches						
Paragraph list		Lines	1 thru	1 of	1	More :
i/a/d	paragraph	location	channel#	line count		lpi
		0+ 0/ 6	0	0		6

Command ==>						
F1=Help F3=Exit F4=Comments F7=- F8+= F11=Save F12=Cancel						

Total length (input/output field)

Length of the general loop.

The length is specified in inches. The definition comprises an integer value (for a full inch) and a fraction for possible decimal places. The integer part may be a value between 1 and 31 +255/6, while multiples of 1/6, 1/8, 1/10, 1/12 or 1/24 inch can be set for the fraction.

The general loop is arranged into individual paragraphs, each with its own length specifications. You should note that the total length specified must not be exceeded when the individual paragraphs are defined. They can be defined in the screen work area under *Paragraph*.

i/a/d (selection field)

Mark field for processing the list elements.

If you enter “i”, an additional line is inserted in the list before the marked position.

If you enter “a”, an additional line is added after the marked position.

If you want to delete a general loop from the list, mark the first field in the list with a “d”.

paragraph (input/output field)

Name of the paragraph to which the following definitions refer. A paragraph for a general loop consists of a group of lines linked by the same channel number and which have the same attributes. This name can be used to address the correct part of the form when you make changes. If the length of all the paragraphs exceeds the maximum length of the general loop, as defined by *Total length*, no additional paragraph will be created.

location (input/output field)

Specifies the position of the paragraph in the form. A paragraph always starts at the end of the previous paragraph or, if it is the first paragraph, at the top left-hand corner of the form.

The position may, however, also be specified in absolute terms (in inches). The reference point is then the reference point for the paper format. The definition comprises an integer value (for full inches) and a fraction for possible decimal places. The integer can be a value between 0 and 31, while multiples (0 to 225) of 1/6, 1/8, 1/10, 1/12 or 1/24 inch may be set for the fractions.

channel# (input/output field)

Specifies whether a vertical tab should be defined for positioning text on the line specified by the channel number. You can specify a channel between 1 and 12. If you enter “00” no vertical tab will be selected.

line count (input/output field)

Specifies the number of lines with the same line density which are to make up this paragraph (1 to 1024).

lpi (input/output field)

Line density in lpi for the lines grouped together in this paragraph.

Leaving the “General Loop” object menu

- F3** or **F12** Cancel this function (without saving) and return to the PRM main menu
- F11** With INSERT or MODIFY: store the new resource attributes and return to the PRM main menu.
With SHOW: return to the PRM main menu

Note

See page 261 for the meanings of the function keys in the object menus.

6.15 The Loop object menu

This object menu is used to process all the attributes of a print resource of the type loop. Depending on the action selected in the PRM main menu, the attributes of this form feed information may be created or existing attributes modified or queried. Press **[F11]** to store the new or modified attributes in the current PRFILE.

You can only query the attributes of a loop for an ND printer in this object menu, i.e. you cannot modify them.

If you create a new loop (i.e. you do not modify an existing one or create one using a model) PRM first expects the specifications regarding the length of the loop and the line density. You can only use **[F11]** to move to the work area of the screen and define the paragraphs of the loop after you have entered these global attributes. Press **[F11]** again to store the loop in the current PRFILE.

Loop Specifications						
C07	LOOP	HP	1996-12-05			
Vertical density : 8 lpi						
Total length : 12 + 0/6 0096						
Line descriptors		lines	1 thru	4 of	4	More :
From line to line	vertical	density	channel#			
1 1	8		2			
2 2	8		0			
3 3	8		1			
4 96	8		0			
0	0	8	0			
Command ==>						
F1=Help F3=Exit F4=Comments F7=- F8+= F11=Save F12=Cancel						

Vertical density (input field)

Line density in lpi for the lines in the loop record. You can specify the value 6, 8, 10, 12 or 24 for an HP loop, and 6 or 8 for an LP loop.

Total length (input/output field)

Length of the loop. When entering or outputting the values, you can distinguish between HP loops and LP loops as follows:

HP loop:

The length, specified in inches, comprises an integer value (for full inches) and a fraction of 1/6 inch.

A value between 1 and 17 may be set as the integer value for the length of the loop in inches, and a value between 0 and 5 for the fraction. If you are creating a resource, this line is preset to "00 +00/6" or to the values of a different HP loop, which was selected as the reference model for creating the resource. If you want to change the attributes of an existing resource, the current value is displayed and can be modified.

LP loop:

The length, specified in inches, comprises an integer value (for full inches) and a fraction of 1/120 inch or, alternatively, the number of lines (in the range 1 through 1024). You can set a value between 1 and 31 + 255/6 as the integer value for the length of the loop in inches, and a value between 0 and 5 as the fraction. If you are creating a resource, this line is preset to "00+00/6" or to the values from a different LP loop, which was selected as a reference model for creating the resource.

One important attribute of LP loop that should be borne in mind when creating a loop is the constant density of the lines in the loop: if all the lines in the loop have a line density of 6 lpi, the length of the loop must be a multiple of 1/6 inch; if all the loop lines have a line density of 8 lpi, the length of the loop must be a multiple of 1/8 inch.

If you wish to modify the attributes of an existing resource, the current value is displayed in the line and may be modified.

Line descriptors (input/output field)

The individual lines of this list contain the values for the density and channel feeds for individual contiguous line ranges in the loop. A distinction can be made between HP and LP loops when inputting or outputting values. Entries are not made in the relevant line but in the input line at the bottom of the work area.

HP loop:

You can define a line range in the "*Line to line*" columns by specifying pairs of line numbers (from 001 to 408); this range is then subject to uniform page feeds and uniform line density. One of the values 6, 8, 10, 12 or 14 may be entered as the line density for this range, and a value between 00 and 12 as the channel number. If you enter 00 as the channel number, this indicates that no page feed has been specified for this range. Channel number 9 should not be selected since this number triggers an interrupt followed by error handling (the print job continues, however).

LP loop:

You can define a line range in the "*Line to line*" columns by specifying pairs of line numbers (from 001 to 1024); this range is then subject to uniform page feeds and uniform line density. A value from the range {6, 8} may be entered as the line density for this range (and thus for the entire loop), and a value between 00 and 12 as the channel number. If you enter 00 as the channel number, this indicates that no page feed has been specified for this range.

Once the line density (6 or 8 lpi) has been defined, it cannot be changed.

Leaving the “Loop” object menu**F3** or **F12**

Cancel this function (without saving) and return to the PRM main menu.

F11

With INSERT or MODIFY: store the new resource attributes and return to the PRM main menu.
With SHOW: return to the PRM main menu.

Note

See page 261 for the meanings of the function keys in the object menus.

6.16 The Preform object menu

This object menu is used to process all the attributes of a print resource of the type preform. Depending on the action selected in the PRM main menu, you can create the attributes of this resource (printer-specific control characters for LP-EMULATED-PRINTER type printers) or modify or query existing attributes. Press **F11** to store the new or modified attributes.

```

-----
Preform Specifications
-----
D1D1          PREFORM          LP          1996-12-05

Escape sequence          Lines 1 thru 13 of 13      More :
12345678901234567890123456789012345678901234567890
001 (\EVELAN=De,CPI=10,DRAFT;)
061
121
181
241
301
361
421
481
541
601
661
721

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F7=-  F8=+  F11=Save  F12=Cancel

```

Escape sequence (input/output field)

You can specify up to 768 characters, each consisting of a pair of hexadecimal characters (0..9, A..F) between 00 and FF. If you specify printable characters in EBCDIC format, these characters must be enclosed in double quotes.

Leaving the “Preform” object menu

- F3** or **F12** Cancel this function (without saving) and return to the PRM main menu.
- F11** With INSERT or MODIFY: store the new resource attributes and return to the PRM main menu.
With SHOW: return to the PRM main menu.

Note

See page 261 for the meanings of the function keys in the object menus.

6.17 The PCL Font object menu

This object menu is used to display all characteristics of a print resource of the type PCL font.

PCL Font Specification			
FONT	PCL	1996-12-05	
ID	: none		
Refer to	: none		
x Activated by	:		
	Lines 1 thru 1 of 1	More :	,
C'e(8U\e(s8p10.08h12.0v0s0bBT			,
C'			,
C'			,
C'			,
C'			,
C'			,
C'			,
C'			,
C'			,

Command ==>
 F1=Help F3=Exit F/=-- F8=+ F12=Cancel

ID

If this field is marked with an "x", the ID of the PCL font activated via the PCL font object is displayed.

Refer to

If this field is marked with an "x", the softfont name which is referenced is displayed.

Activated by

If this field is marked with an "x", an escape sequence which activates the PCL font is displayed.

Leaving the "PCL Font Specification" object menu

[F3] or **[F12]**

Cancel this function (without saving) and return to the PRM main menu.

Note

See page 261 for the meanings of the function keys in the object menus.

6.18 The PCL Softfont object menu

This object menu is used to display all characteristics of a print resource of the type PCL softfont.

PCL Softfont Specification			
	Softfont	PCL	1996-12-05
Size	:	bytes	
Encoding	:	x ASCII EBCDIC	

Command ==>
 F1=Help F3=Exit F12=Cancel

Size

File size of the PCL softfont in bytes.

Encoding

The data is in the format marked with an "x" (ASCII in the above example).

Leaving the "PCL Softfont Specification" object menu

F3 or **F12**

Cancel this function (without saving) and return to the PRM main menu.

Note

See page 261 for the meanings of the function keys in the object menus.

6.19 The PCL Overlay object menu

This object menu is used to display all characteristics of a print resource of the type PCL overlay.

PCL Overlay Specification			
	OVERLAY	PCL	
			1996-12-05
x ID	:	321	
Refer to	:	none	

Command ==>			
F1=Help F3=Exit F12=Cancel			

ID

If this field is marked with an "x", the ID of the PCL overlay activated via the overlay is displayed.

Refer to

If this field is marked with an "x", the PCL overlay which is referenced is displayed.

Leaving the "PCL Overlay Specification" object menu

[F3] or **[F12]**

Cancel this function (without saving) and return to the PRM main menu.

Note

See page 261 for the meanings of the function keys in the object menus.

6.20 The PCL Macro object menu

This object menu is used to display all characteristics of a print resource of the type PCL macro.

PCL Macro Specification			
	MACRO	PCL	1996-12-05
Size	: 343578 bytes		
Encoding	: x ASCII	EBCDIC	

Command ==>			
F1=Help F3=Exit F12=Cancel			

Size

File size of the PCL macro in bytes.

Encoding

The data is in the format marked with an "x" (ASCII in the above example).

Leaving the "PCL Macro Specification" object menu

F3 or **F12**

Cancel this function (without saving) and return to the PRM main menu.

Note

See page 261 for the meanings of the function keys in the object menus.

7 Utility routines for migration and post-editing

SPOOL V3.2 and higher are supplied with the utility routine "Migration & Refinement Utilities V1.0A". This routine allows HP print resources to be converted into PCL print resources and then edited on a PC. The utilities use the Windows graphics interface and provide users with tools for improving quality and creating their own print resources.

The term "migration" denotes the conversion of HP print resources into PCL print resources.

Refinement refers to the "improvement", achieved by post-editing, of the result of a migration of HP print resources to PCL print resources.

Further information on the components of the product can be found in section 9.1, "Installing the subsystems", on page 390.

7.1 Migration of print resources

This section describes the migration of a complete PRFILE. This involves the conversion of all HP print resources contained in a PRFILE - within this PRFILE - into PCL print resources, thus enabling the advantages of the new PCL technology to be used.

The statement described below can be used to convert HP fonts and FOBs into the corresponding PCL objects, PCL fonts and PCL soffonts as well as PCL overlays and PCL macros.

Format

MIGRATE-PRINT-RESOURCES
<p>OBJECT=*<u>ALL</u>/ *HP-FONT(...) / *FORMS-OVERLAY-BUFFER(...)</p> <p>*HP-FONT(...) | FONT-NAME=*<u>ALL</u>/ < alphanum-name 1..3></p> <p>*FORMS-OVERLAY-BUFFER(...) | BUFFER-NAME=*<u>ALL</u>/ < alphanum-name 1..4></p> <p>FILE-NAME=<filename 1..54></p>

Operands

OBJECT=

Specifies which HP resource is to be converted.

*ALL means that all HP fonts and all form overlay buffers (FOBs) will be converted.

OBJECT=*HP-FONT(...)

Specifies that only HP fonts will be converted into the corresponding PCL objects PCL font and PCL softfont.

FONT-NAME=*ALL**< alphanum-name 1..3>**

Specifies the name of the HP font for which the corresponding PCL resources PCL font and PCL softfont are to be generated.

*ALL means that all HP fonts in the PRFILE are to be converted.

OBJECT=*FORMS-OVERLAY-BUFFER(...)

Specifies that only HP FOBs are to be converted into the corresponding PCL objects PCL overlay and PCL macro. HP FOBs are always regarded as one unit, i.e. subFOBs are not handled separately.

The migration of HP-FOBs can result in very large files, because the files created are not compressed. The size of the target PRFILE can therefore increase substantially.

BUFFER-NAME=*ALL**< alphanum-name 1..4>**

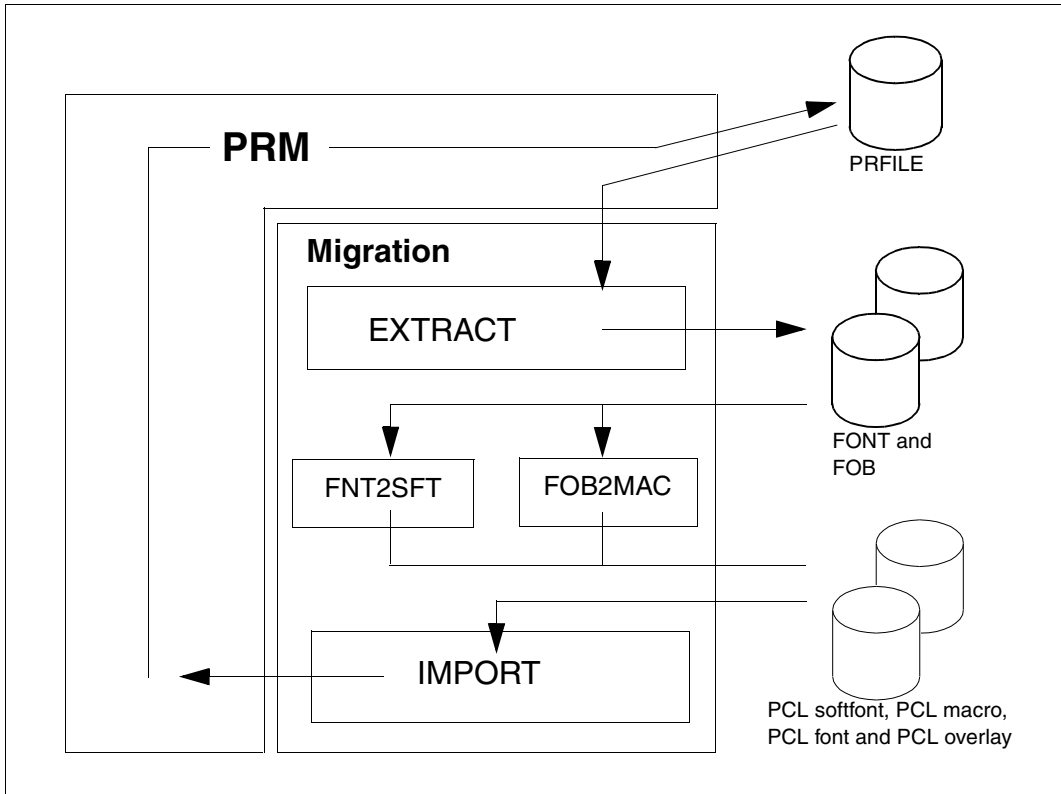
Specifies the name of the HP FOB for which the corresponding PCL resources PCL overlay and PCL macro are to be generated.

*ALL means that all HP FOBs in the PRFILE are to be converted.

FILE-NAME=<filename 1..54>

Specifies the name of the PRFILE in which the conversion is to take place.

The following graphic shows the sequence of a migration.



Migration sequence

EXTRACT

This module copies resources from a PRFILE and creates the corresponding resources in one or more SAM files. These must then be further processed with FNT2SFT and FOB2MAC.

You can also use this module to copy resources from a PRFILE in order to edit them on a PC using the “*refinement utilities*”.

FNT2SFT

Converts a SAM file with HP fonts (with one-byte coding) into a PCL soffont file. The PCL-coded soffont description does not contain a font ID assignment (SPOOL or the filter manage the font ID assignment at the time of loading). The PCL file is a SAM file in ASCII format.

FOB2MAC

Converts a SAM file with HP FOBs into a PCL raster graphic embedded in a macro overlay. The PCL-coded macro description does not contain a macro ID assignment (SPOOL or the filter manage the macro ID assignment at the time of loading). The PCL file is a SAM file in ASCII format.

IMPORT

When PRM is used, this command integrates the PCL resource file (PCL soffont / PCL macro) into the PRFILE and creates the new PRM objects which are necessary for management of the PCL resources:

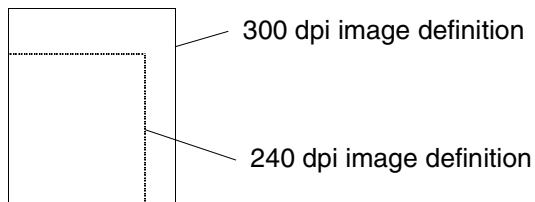
- PCL font objects and PCL soffont objects
- PCL overlay objects and PCL macro objects

7.2 Why post-editing?

The following section explains the most important reasons why post-editing of the print resources created via migration is necessary.

Increase from 240 dpi to 300 dpi

HP resources are defined with a resolution of 240 dpi, but the PCL resolution on Océ PCL printers is at least 300 dpi. Therefore, in order to create a PCL resource from an HP font or an FOB, the image bitmap definition must be enlarged by around 25% (equally in all directions). The conversion algorithm, which multiplies the image by 1.25, can create inaccuracies, especially for small images and/or images which are not defined in a grid of x dots / y dots in which x and y are multiples of 4.



The inaccuracies resulting in this way can be ironed out with the PC refinement utilities by editing the PCL soffonts. PCL overlays must be converted into editable BMP bitmaps beforehand.

Missing information for the generation of PCL fonts from HP fonts

HP fonts are defined in bitmap format. For each character of the font they contain information which includes the following: the horizontal density (6, 10, 12, 15, 20 cpi); vertical density (6, 8, 10, 12, 24 lpi); the baseline axis, depending on the vertical density.

PCL softfonts are defined as bitmap fonts and require information that is not contained in the HP font.

The following values are set to the PCL default values:

Symbol set: 8U
Orientation: portrait
Cell height: 40
Font name: `Aprint:<UNAME>`
Compression: No

7.3 What can be edited with the refinement utilities?

The following list describes the different ways in which files that can be edited with “refinement utilities” may be created.

- A PCL resource that was created via migration of a complete PRFILE in BS2000 can be extracted and transferred in binary to a PC with MS-Windows for post-editing.
- A PCL macro can be converted into a BMP bitmap and then edited using any image processing program. Equally, a BMP bitmap can be converted into a PCL macro and then transferred to BS2000 and integrated into the PRFILE.
- There are various softfont editors available as shareware on the market. You can use these to edit the converted HP fonts or even to create new ones. These fonts can then be integrated into the PRFILE.

7.4 Post-editing print resources

This section describes how to write HP resources, fonts and FOBs as well as PCL resources from a PRFILE to a file in order to edit them further using the “refinement utilities”.

Use the following statement:

Forma

EXTRACT-PRINT-RESOURCES
OBJECT=*SOFT-FONT(...) / *MACRO(...) / *HP-FONT(...) / *FORMS-OVERLAY-BUFFER(...) *SOFT-FONT(...) | SOFT-FONT-NAME=*ALL/ < alphanum-name 1..8> *MACRO(...) | MACRO-NAME=*ALL/ < alphanum-name 1..8> *HP-FONT(...) | FONT-NAME=*ALL/ < alphanum-name 1..3> *FORMS-OVERLAY-BUFFER(...) | BUFFER-NAME=*ALL/ < alphanum-name 1..4> FILE-NAME=<filename 1..54>

Operands

OBJECT=

Specifies which objects are to be copied from the PRFILE.

OBJECT=*SOFT-FONT(...)

Only softfonts are to be copied from the PRFILE. The following naming convention applies: <softfont name>.SFT.

SOFT-FONT-NAME=*ALL/ < alphanum-name 1..8>

Specifies the names of the softfont objects to be copied from the PRFILE.

*ALL means that all PCL softfonts in the PRFILE will be written to a file.

OBJECT=*MACRO(...)

Specifies that only PCL macros are to be copied from the PRFILE. The following naming convention applies: <macro name>.MAC.

MACRO-NAME=*ALL/ < alphanum-name 1..8>

Specifies the names of the PCL macro objects to be copied from the PRFILE.

*ALL means that all PCL macros in the PRFILE will be written to a file.

OBJECT=*HP-FONT(...)

Specifies that only HP fonts are to be copied from the PRFILE. The following naming convention applies: <HP font name>.MXM.

FONT-NAME=*ALL/< alphanum-name 1..8>

Specifies the names of the HP font objects to be copied from the PRFILE.

*ALL means that all HP fonts in the PRFILE will be written to a file.

OBJECT=*FORMS-OVERLAY-BUFFER(...)

Specifies that only HP FOBs are to be copied from the PRFILE. The following naming convention applies: <fob name>.FOB.

BUFFER-NAME=*ALL/< alphanum-name 1..8>

Specifies the names of the HP FOB objects to be copied from the PRFILE.

*ALL means that all HP FOBs in the PRFILE will be written to a file.

FILE-NAME=<filename 1..54>

Name of the PRFILE containing the resources to be copied.

Example:

1. Copy the resource from the PRFILE into a file (e.g. MYFONT):

```
/EXTRACT-PRINT-RESOURCES OBJECT=*SOFT-FONT(MYFONT), FILE-NAME=MY.PRFILE
```

2. Transfer the file MYFONT.SFT in binary to a PC (e.g. with FT-PCD).

3. Edit the file with the “refinement utilities” on the PC.

4. Transfer the edited resource file back to BS2000 (in binary).

5. Import the resource into the corresponding PRFILE:

```
/MODIFY-JOB-SWITCHES ON=1
```

```
/START-PRM
```

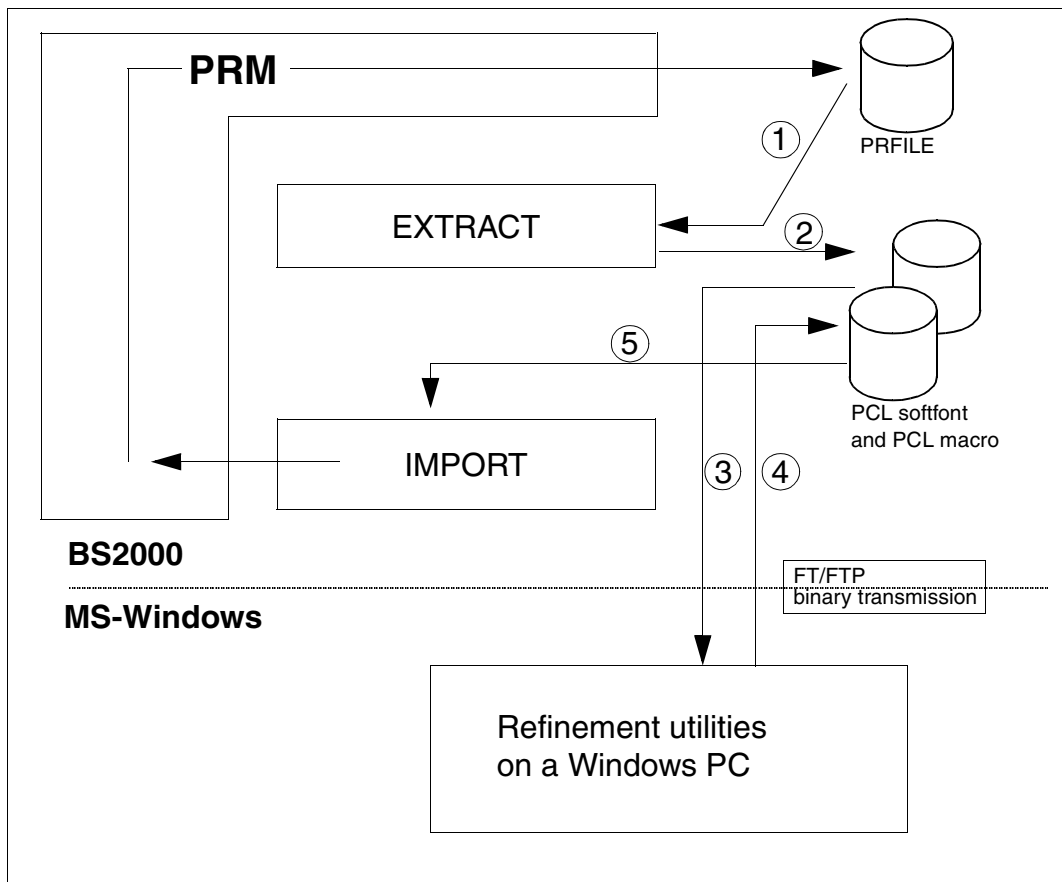
```
//OPEN MY.PRFILE, , *UPDATE
```

```
//IMPORT-PRINT-RESSOURCES *SOFT-FONT(MYFONT), *PCLFILE(MYFONT.SFT).-
```

```
// WRITE-MODE=REPLACE
```

```
//END
```

The following graphic shows the sequence of postediting a print resource created with EXTRACT.

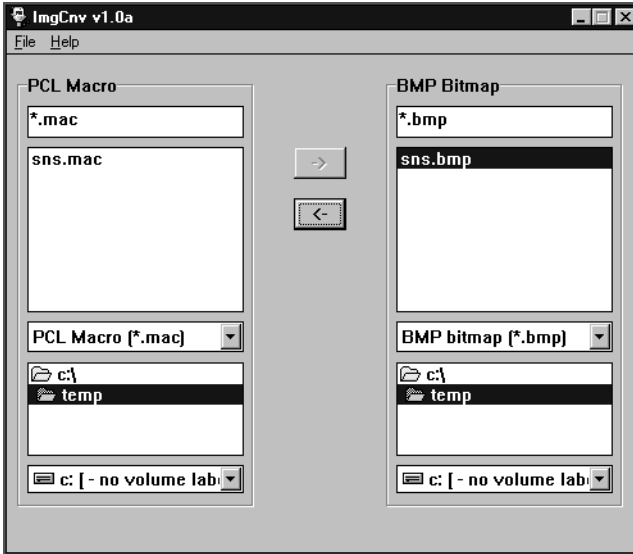


Post-editing sequence

- (1), (2) . Copying from the PRFILE and writing to a BS2000 SAM file
- (3), (4). File transfer to the PC and back to BS2000
- (5). Import and integration into the PRFILE

7.5 ImgCnv

This is a graphical user interface for converting BMP bitmaps into PCL macros and vice versa. For more information on this subject, see page 393.



Converting BMPs into PCL macros:

Select the BMP file(s) in the file list under "*BMP Bitmap*" and click on =>, or drag and drop the selected files into the "*PCL Macro*" field.

Converting PCL macros into BMPs:

Select the PCL file(s) in the file list under "*PCL Macro*" and click on <=, or "drag and drop" the selected files into the "*BMP Bitmap*" field.

8 Examples

8.1 Converting an HPFILE

You have an HPFILE and want to convert it into PRFILE format. Call PRM using START-PRM. The following screen is then displayed:

```
File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
-----
PRfile :
      Name          Type          Lines      0 thru      0 of      0 Mode :
                                Model          More :
                                Last access
      :
      : BS2000 Print Resources Management (PRM) Version 1.0 :
      : Copyright Fujitsu Siemens Computers GmbH 1999      :
      : All Rights Reserved                                  :
      : F12=Remove                                           :
      :.....:
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
```

In order to open a resource file (an HPFILE in this case), you have to press the **F10** function key to position the cursor to the menu bar. If the cursor is positioned on the menu item FILE (first item and therefore default value), hit the ENTER key and enter "2" to select the OPEN action in the pull-down menu that appears.

```

File      Edit      View      Options
-----
: 2 1.New...      :          PRINT RESOURCES MANAGEMENT
: 2.Open...      :
: *.Close       :
: *.Info (F4)   :          Lines      0 thru      0 of      0 Mode :
: 5.Exit (F3)   : Type          Model      Last access
: .....

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
    
```

Once you have selected the OPEN action, a dialog box in which the file attributes can be specified appears on the screen.

```

File      Edit      View      Options
-----
          PRINT RESOURCES MANAGEMENT
-----
PRfile :          Mode :
Name :          Open PRFILE          : ss
: .....
: Name of PRFILE to open :          :
: user.hpfile ----->(1)
: link name          :          :
: Password :          (if any) -----> (2)
: Open mode : 1 1.Read -----> (3)
:           2.Update
: Comments          :          :
: .....
: Command ==>
: F1=Help  F3=Exit  F12=Cancel
: .....

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
    
```

Explanations

- (1) Here you enter the name of the HPFILE: USER.HPFILE.
- (2) If the file is password-protected, the appropriate password can be entered here. The file USER.HPFILE is not protected.
- (3) You want to open the file in read mode.

Fill in all the fields and hit the ENTER key. The following message box is then displayed:

File	Edit	View	Options

PRINT RESOURCES MANAGEMENT			

PRfile :	:	:	:
:	:	SPR0004	:
Name :	:	:	SS
:	:	Import all print resource objects	:
:	:	:	:
:	:	from file :	:
:	:	:K:\$PRM.USER.HPFILE	:
:	:	to library :	:
:	:	:K:\$PRM.USER.PRFILE	:
:	:	:	:
:	:	Reply 0 0.yes -----	(1)
:	:	:	:
:	:	2.no	:
:	:	:	:
:	:	F1=Help F12=Cancel	:
:	:	:	:

Command ==>			
F1=Help F3=Exit F4=Comments F5=All F7=- F8= F10=Actions F12=Cancel			

Explanation

- (1) You specify that you wish to convert all resources from the HPFILE into a new resource library, PRFILE.

Once conversion has been completed, the contents of the new PRFILE are displayed on the screen.

```

File      Edit      View      Options
-----
                PRINT RESOURCES MANAGEMENT
-----
PRfile : :K:$PRM.USER.PRFILE                               Mode : READ
                Lines 118 thru 131 of 131 More : -
Name          Type          Model          Last access
796           FONT          HP             1996-01-19
830           FONT          HP             1996-01-19
840           FONT          HP             1996-01-19
848           FONT          HP             1996-01-19
856           FONT          HP             1996-01-19
900           FONT          HP             1996-01-19
906           LOOP          HP             1996-01-19
908           LOOP          HP             1996-01-19
910           LOOP          HP             1996-01-19
912           LOOP          HP             1996-01-19
920           FONT          HP             1996-01-19
924           LOOP          HP             1996-01-19
950           FONT          HP             1996-01-19
980           FONT          HP             1996-01-19
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
    
```

8.2 Converting an individual resource

A print resource located (under a foreign user ID) in the print control file \$XXX.USER.HPFILE is to be used for your printout. As yet, there is no PRFILE under your own user ID.

Call PRM using START-PRM. The following screen is then displayed:

```

File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
-----
PRfile :
Name      Type      Lines      0 thru      0 of      0 Mode :
           Type      Mode1      More :
           Last access

:
: BS2000 Print Resources Management (PRM) Version 1.0 :
: Copyright Fujitsu Siemens Computers GmbH 1999 :
: All Rights Reserved :
: :
: F12=Remove :
:.....:

-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8= F10=Actions F12=Cancel

```

In order to create a new resource library, you have to press the **F10** function key to position the cursor to the menu bar. If the cursor is positioned on the menu item FILE (first item and therefore default value), hit the ENTER key and enter "1" to select the NEW action in the pull-down menu that appears.

```

File      Edit      View      Options
-----
: 1 1.New...      :          PRINT RESOURCES MANAGEMENT
: 2.Open...      : -----
: *.Close        :
: *.Info (F4)    :          Lines      0 thru      0 of      0 Mode :
: 5.Exit (F3)    : Type              Model          Last access
: .....

-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8= F10=Actions F12=Cancel
    
```

Once you have selected the NEW action, a dialog box in which the attributes of the new file can be specified (with or without comments) appears on the screen.

```

File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
-----
PRfile :
      Lines      0 thru      0 of      0      Mode :
      Name ..... Create a PRFILE .....      More :
      :                               :      SS
      :                               :
      : Name of PRFILE to create :
      : MY.PRFILE ----->(1)
      : X Comments ----->(2)
      :                               :
      :                               :
      : Command ==>
      : F1=Help  F3=Exit  F12=Cancel
      :                               :
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel

```

Explanations

- (1) Here you specify the name of the new resource library.
- (2) You specify that you wish to define a comment.

Fill in the fields and hit the ENTER key. The following dialog box is displayed; you can enter your comment in this box.

```

File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
-----
PRfile :                               Mode :
Name . :                               : re :
      :                               : . ss
      :                               : :
      : : Attached comments to current processed library : :
      : : They are comments for my resource file ----->(1)
      : :
      : :
      : :
      : :
      : :
      : :
      : : Command ==>
      : : F1=Help F3=Exit F12=Cancel
      : :
      : :
-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8= F10=Actions F12=Cancel
    
```

Explanation

- (1) Comment on the new resource library (comprising up to 200 characters).

Once the file has been created, the PRM main menu is displayed again. Now you have to hit the **[F10]** function key to position the cursor to the menu bar and press the tab key to position to the EDIT menu item. After hitting the ENTER key, enter “4” to select the IMPORT action in the resultant pull-down menu.

```

File      Edit      View      Options
-----
: 4 1.Insert... : NT RESOURCES MANAGEMENT
: 2.Convert... :
PRfile : : 3.Copy... :
: 4.Import... : Lines      0 thru      0 of      0 Mode : CREATE
Name : : 5.Modify... :           Model      Last access
: 6.Delete... :
: 7.Show... :
:.....:

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel

```

There now follows a dialog box in which you are requested to identify the resource you wish to import.

```

File      Edit      View      Options
-----
PRINT RESOURCES MANAGEMENT
-----
PRfile : : Import resource objects : : CREATE
: : : : :
Nam : Object type : LOOP ----->(1)
: Object name : B10 ----->(2)
: Printer control file type : HPFILE ----->(3)
: Printer control file name : :
: $XXX.USER.HPFILE ----->(4)
: Write mode : 1 1.Create ----->(5)
: : 2.Replace :
: Dialog control : 1 1.Error :
: : 2.Yes :
: X Attached objects :
: :
: Command ==> :
: F1=Help F3=Exit F6=List F12=Cancel :
: :
-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8= F10=Actions F12=Cancel
    
```

Explanations

- (1) You wish to import a resource of the type loop.
- (2) The name of the loop in the print control file is “B10”.
- (3) The resource comes from a print control file of the type HPFILE.
- (4) The name of the HPFILE is “\$XXX.USER.HPFILE”.
- (5) Here you specify either that the resource is to be created or, if there is already a resource of this name in your PRFILE, that this resource is to be replaced.

Once the resource has been imported, the PRM main menu is displayed.

```
File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
-----
PRfile : :K:$PRM.USER.PRFILE
                                Mode : CREATE
Name      Type      Lines    1 thru    1 of      1 More :
B10      LOOP      HP      HP      1996-01-20
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
```

8.3 Importing an FOB to a PRFILE

You have created a forms overlay buffer using the product FGS and now wish to print it out for checking purposes. Before you can use this FOB, you have to import it to your PRFILE as a print resource.

Call PRM using START-PRM. The following screen is then displayed:

```

File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
-----
PRfile :
      Name          Type          Lines      0 thru    0 of     0 Mode :
              More :
              Last access
      :
      : BS2000 Print Resources Management (PRM) Version 1.0 :
      : Copyright Fujitsu Siemens Computers GmbH 1999    :
      : All Rights Reserved                               :
      :                                                     :
      : F12=Remove                                         :
      : .....
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
    
```

In order to open your resource library, you have to press the **F10** function key to position the cursor to the menu bar. If the cursor is positioned on the menu item FILE (first item and therefore default value), hit the ENTER key and enter “2” to select the OPEN action in the pull-down menu that appears.

```

File      Edit      View      Options
-----
: 2 1.New...      :          PRINT RESOURCES MANAGEMENT
: 2.Open...      : -----
: *.Close        :
: *.Info (F4)    :          Lines      0 thru      0 of      0 Mode :
: 5.Exit (F3)    : Type              Model          Last access
: .....

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel

```

After you have selected the OPEN action, a dialog box in which you can specify the file attributes is displayed on the screen.

```

File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
-----
PRfile :                               Mode :
Name : ..... Open PRFILE ..... : ss
: .....
: Name of PRFILE to open : .....
: MY.PRFILE ----->(1)
: link name .....
: Password : ..... (if any) ----->(2)
: Open mode : 2 1.Read .....>(3)
:           2.Update .....
: Comments .....
: .....
: Command ==> .....
: F1=Help F3=Exit F12=Cancel .....
: .....
-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8= F10=Actions F12=Cancel
    
```

Explanations

- (1) Here you specify the name of the PRFILE: MY.PRFILE.
- (2) If the file is password-protected, the appropriate password can be entered here. The file MY.PRFILE is not protected.
- (3) You want to open the file in update mode.

In the dialog box which then appears you are requested to identify the resource which you wish to import.

```

File      Edit      View      Options
-----
PRINT RESOURCES MANAGEMENT
-----
PRfile : : Import resource objects : : UPDATE
: : : : : :
Nam : Object type : FORMS-OVERLAY-BUFFER ----->(1)
B10 : Object name : FOB1 ----->(2)
: Printer control file type : FGSFILE ----->(3)
: Printer control file name : :
: MY.FGSFILE ----->(4)
: Write mode : 1 1.Create ----->(5)
: : 2.Replace :
: Dialog control : 1 1.Error :
: : 2.Yes :
: X Attached objects :
: :
: Command ==> :
: F1=Help F3=Exit F6=List F12=Cancel :
: :
: :
-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8= F10=Actions F12=Cancel
    
```

Explanations

- (1) You wish to import a resource of the type FOB.
- (2) The name of the forms overlay buffer in the print control file is "FOB1".
- (3) The resource comes from a print control file of the type FGSFILE.
- (4) The name of the FGSFILE is "MY.FGSFILE".
- (5) Here you specify either that the resource is to be created or, if there is already a resource of this name in your PRFILE, that this resource is to be replaced.

Once the resource has been imported, the PRM main menu is displayed with its new contents.

```
File      Edit      View      Options
-----
                PRINT RESOURCES MANAGEMENT
-----
PRfile :  :K:$PRM.MY.PRFILE
                Lines      1 thru      2 of      2
Name          Type          Model        Last access
B10           LOOP          HP           1996-01-20
FOB1          FORMS-OVERLAY-BUFFER HP           1996-01-20
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
```

8.4 Viewing the attributes of a font

You wish to use a font from the system PRFILE for your printout. Before you start, you would like to have a look at the font.

Call PRM using START-PRM. The following screen is then displayed:

```

File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
-----
PRfile :
      Name              Type              Lines      0 thru      0 of      0 Mode :
                                Model          Model          Last access
:
: BS2000 Print Resources Management (PRM) Version 1.0 :
: Copyright Fujitsu Siemens Computers GmbH 1999    :
: All Rights Reserved                               :
:                                                    :
: F12=Remove                                        :
:.....:
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel

```

In order to open the system PRFILE, you have to press the **F10** function key to position the cursor to the menu bar. If the cursor is positioned on the menu item FILE (first item and therefore default value), hit the ENTER key and enter “2” to select the OPEN action in the pull-down menu that appears.

```

File      Edit      View      Options
-----
: 2 1.New...      :          PRINT RESOURCES MANAGEMENT
: 2.Open...      : -----
: *.Close        :
: *.Info (F4)    :          Lines      0 thru      0 of      0 Mode :
: 5.Exit (F3)    : Type              Model          Last access
: .....

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel

```

Once you have selected the OPEN action, a dialog box in which the file attributes can be specified is displayed.

```

File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
-----
PRfile :                               Mode :
Name : ..... Open PRFILE ..... : ss
: Name of PRFILE to open : :
: *STD ----->(1)
: link name : :
: Password : (if any) ----->(2)
: Open mode : 1 1.Read ----->(3)
:           2.Update :
: Comments :
: Command ==> :
: F1=Help F3=Exit F12=Cancel :
: ..... :
-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8= F10=Actions F12=Cancel

```

Explanations

- (1) Here you specify the name of the PRFILE: *STD.
- (2) If the file is password-protected, the appropriate password can be entered here. The system PRFILE is not protected.
- (3) You want to open the file in read mode.

The contents of the opened PRFILE are displayed on the screen and you can select the font that you wish to view by marking it.

```

File      Edit      View      Options
-----
                PRINT RESOURCES MANAGEMENT
-----
PRfile : :0:$SYSSPOOL.PRFILE                      Mode : READ
                Lines      1 thru      14 of      280 More :
Name        Type        Model        Last access
#AF         FONT        HP          1995-12-22
#CF         FONT        HP          1995-12-22
#8C         FONT        HP          1995-12-22
#8F         FONT        HP          1996-01-19
AA          FONT        HP          1996-01-16
A0          FONT        HP          1995-12-22
A2          FONT        HP          1995-12-22
X A3        FONT        HP          1995-12-22 ---->(1)
A4          FONT        HP          1995-12-22
A6          FONT        HP          1995-12-22
A8          FONT        HP          1995-12-22
A9          FONT        HP          1995-12-22
BC          LOOP        HP          1995-11-21
BJC         LOOP        LP          1995-11-21
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel

```

Explanation

(1) The font “A3” is selected by marking the appropriate line.

Now you have to hit the **[F10]** function key to position the cursor to the menu bar and press the tab key to position to the EDIT menu item. After hitting the ENTER key, enter “7” to select the SHOW action in the resultant pull-down menu.

```

File      Edit      View      Options
-----
                : 7 *.Insert... : NT RESOURCES MANAGEMENT
                : *.Convert... :
PRfile : : 3.Copy... :
                : *.Import... : Lines      1 thru      14 of      280 More :
Name        : *.Modify... : Model        Last access
#AF         : *.Delete... : HP          1995-12-22
#CF         : 7.Show...   : HP          1995-12-22
#8C         : .....      : HP          1995-12-22
#8F         :           FONT : HP          1996-01-19
AA          :           FONT : HP          1996-01-16
A0          :           FONT : HP          1995-12-22
A2          :           FONT : HP          1995-12-22
X A3        :           FONT : HP          1995-12-22
A4          :           FONT : HP          1995-12-22
A6          :           FONT : HP          1995-12-22
A8          :           FONT : HP          1995-12-22
A9          :           FONT : HP          1995-12-22
BC          :           LOOP  : HP          1995-11-21
BJC         :           LOOP  : LP          1995-11-21
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel

```

The attributes of the font selected earlier in the main menu are then displayed in the subsequently displayed dialog box.

```

File      Edit      View      Options
-----
: .....
: Show resource object : -----
PRfile : :0:$SYS : : Mode : READ
      : Object type : FONT ----->(1)
      : Printer model : HP ----->(2)
#AF : Object name : A3 ----->(3)
#CF : Access date : 1 1.Any ----->(4)
#8C : : 2.Today : 995-12-22
#8F : : 3.Interval... : 996-01-19
AA : Information : 1 1.All ----->(5)
A0 : : 2.Summary : 995-12-22
A2 : Implementation : : 995-12-22
X A3 : Output settings : 1 1.PRM desktop ----->(6)
A4 : : 2.Syslst... : 995-12-22
A6 : : 3.File... : 995-12-22
A8 : : : 995-12-22
A9 : Command ==> : 995-12-22
BC : F1=Help F3=Exit F6=List F12=Cancel : 995-11-21
BJC : : : 995-11-21
-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8= F10=Actions F12=Cancel

```

Explanations

- (1) You wish to view a resource of the type font.
- (2) The font in question is an HP font.
- (3) The name of the font is "A3".
- (4) The date on which this resource was last accessed is to be ignored.
- (5) All information on this resource is to be displayed.
- (6) Here you specify that the information is to be displayed on the screen.

The required information then appears on the screen.

```

Edit      Format
-----
Font Specifications
-----
A3          FONT          HP          1995-12-22
Number of characters : 64
Space code   : 40      Underscore code : 6D      Vertical density : 8
Code table  :          Lines 1 thru 12 of 16      More :
    .0 .1 .2 .3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.
1.
2.
3.
4. 12
5. 12
6. 12 12
7.
8.          12 12 12 12 12 12 12 12 12 12
9.          12 12 12 12 12 12 12 12 12
A.          12 12 12 12 12 12 12 12
B.
-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel

```

In order to see the rest of the information on the screen, hit the **F10** function key or enter **"** in the command line.

```

Edit      Format
-----
Font Specifications
-----
A3          FONT          HP          1995-12-22
Number of characters : 64
Space code   : 40      Underscore code : 6D      Vertical density : 8
Code table  :          Lines 12 thru 16 of 16      More : -
    .0 .1 .2 .3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
B.
C.
D.
E.
F. 12 12 12 12 12 12 12 12 12 12
-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8=+

```

In order to view detailed information on a specific character, you have to hit the **F10** function key to position the cursor to the menu bar and press the tab key to position to the EDIT menu item. After hitting the ENTER key, enter "5" to select the SHOW action in the resultant pull-down menu.

```

Edit      Format
-----
: 5 *.Insert... :                               Font Specifications
: *.Import... : -----
: *.Modify... :                               HP      1995-12-22
: *.Delete... : rs : 64
: 5.Show... : : 40      Underscore code : 6D      Vertical density : 8
: 6.Exit (F3) :                               Lines 1 thru 12 of 16      More :
:.....: 3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.
1.                               12
2.
3.
4. 12                               12 12 12 12 12 12
5. 12                               12 12 12 12 12 12
6. 12 12                             12 12 12 12 12
7.                               12 12 12 12 12 12
8.   12 12 12 12 12 12 12 12 12
9.   12 12 12 12 12 12 12 12 12
A.   12 12 12 12 12 12 12 12
B.
-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel

```


In the resultant dialog box you are requested to identify the resource you wish to view.

```

Edit      Format
-----
                          Font Specifications
-----
A3          FONT          HP          1995-12-22
Number of characters : 64
Space code   : 40      Underscore code : 6D      Vertical density : 8
Code table  :          Lines 1 thru 12 of 16      More :
.0 . : .....
0.   :          Show Character :
1.   : .....
2.   : Character code : 95 ----->(1)
3.   : .....
4. 12 : Command ==> :
5. 12 : F1=Help  F3=Exit  F12=Cancel :
6. 12 1 : .....
7.     :          12 12 12 12 12 12
8.    12 12 12 12 12 12 12 12
9.    12 12 12 12 12 12 12 12
A.    12 12 12 12 12 12 12
B.

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F7=-  F8=  F10=Actions  F11=Save  F12=Cancel

```

Explanation

- (1) The code of the character whose attributes you wish to view is “95”. You want to view a resource of the type font.

The attributes and the character matrix of the requested character are displayed on the screen.

```

Format
-----
                          Character Specification
-----
Character code 95 with 8 lpi and 12 cpi or 20 columns
Set / reset matrix :          Lines 28 thru 39 of 40      More : -
1234567890123456789012345678901234567890
28 .0000.....0000.....
29 .0000.....0000.....
30 .0000.....0000.....
31 .....
32 .....
33 .....
34 .....
35 .....
36 .....
37 .....
38 .....
39 .....
C:

-----
Command ==>
F1=Help  F3=Exit  F7=-  F8=  F10=Actions  F11=Save  F12=Cancel

```

8.5 Modifying a font

After using the font “A3” for your printout (see example 4), you now wish to modify certain attributes of this font, namely:

- set the character density
- move the underscore character downward
- add a new character

As a non-privileged user, you are not authorized to modify the font from the system PROFILE. So the first thing you have to do is copy this font into your own PROFILE.

Call PRM using START-PRM. The following screen is then displayed:

```

File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
-----
PRfile :
      Name              Type              Lines      0 thru      0 of      0 Mode :
                                Model1      Last access
      :
      : .....:
      : BS2000 Print Resources Management (PRM) Version 1.0 :
      : Copyright Fujitsu Siemens Computers GmbH 1999 :
      : All Rights Reserved :
      : :
      : F12=Remove :
      : .....:
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
    
```

In order to open your PRFILE, you have to press the **F10** function key to position the cursor to the menu bar. If the cursor is positioned on the menu item FILE (first item and therefore default value), hit the ENTER key and enter "2" to select the OPEN action in the pull-down menu that appears.

```

File      Edit      View      Options
-----
: 2 1.New...      :          PRINT RESOURCES MANAGEMENT
: 2.Open...      : -----
: *.Close        :
: *.Info (F4)    :          Lines      0 thru      0 of      0 Mode :
: 5.Exit (F3)    : Type              Model          Last access
: .....

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel

```

After you have selected the OPEN action, a dialog box in which the file attributes can be specified is displayed on the screen.

```

File      Edit      View      Options
-----
                                PRINT RESOURCES MANAGEMENT
-----
PRfile :                               Mode :
Name : ..... Open PRFILE ..... : ss
: Name of PRFILE to open : :
: MY.PRFILE ----->(1)
: link name : :
: Password : (if any) ----->(2)
: Open mode : 2 1.Read ----->(3)
:           2.Update
: Comments : :
: Command ==> : :
: F1=Help F3=Exit F12=Cancel : :
: ..... : :
-----
Command ==>
F1=Help F3=Exit F4=Comments F5=All F7=- F8= F10=Actions F12=Cancel

```

Explanations

- (1) Here you specify the name of the PRFILE: MY.PRFILE
- (2) If the file is password-protected, the appropriate password can be entered here. The file MY.PRFILE is not protected.
- (3) You want to open the file in update mode.

The contents of the opened PRFILE are displayed on the screen.

```
File      Edit      View      Options
-----
                PRINT RESOURCES MANAGEMENT
-----
PRfile : :K:$PRM.MY.PRFILE
                Lines      1 thru      2 of      2 More :
Name      Type      Model      Last access
B10      LOOP      HP      1996-01-20
FOB1      FORMS-OVERLAY-BUFFER      HP      1996-01-20

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
```

Now you have to hit the **[F10]** function key to position the cursor to the menu bar and press the tab key to position to the EDIT menu item. After hitting the ENTER key, enter “3” to select the COPY action in the resultant pull-down menu.

```

File      Edit      View      Options
-----
          : 3 1.Insert... : NT RESOURCES MANAGEMENT
          : 2.Convert... : -----
PRfile : : 3.Copy... :
          : 4.Import... : Lines      1 thru      2 of      2 More :
Name : : 5.Modify... :                               Model      Last access
B10 : : 6.Delete... :                               HP          1996-01-20
FOB1 : : 7.Show... : ERLAY-BUFFER HP          1996-01-20
          :.....:

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
    
```

In the dialog box that then appears you are requested to identify the resource that you wish to copy and to specify the source and target libraries.

```

File      Edit      View      Options
-----
: ..... Copy Print Resource Objects .....
: .....
: Object type      : FONT ----->(1)
: Printer model   : HP ----->(2)
Nam : Object name  : A3 ----->(3)
B10 : New name     : ----->(4)
FOB : Prfile       :                               : 0
: source :       :                               :
: *std ----->(5)
: target :       :                               :
: :K:$PRM.MY.PRFILE ----->(6)
: Write mode      : 1 1.Create ----->(7)
:                               : 2.Replace
: Dialog control: 1 1.Error
:                               : 2.Yes
: X Attached objects
: .....
: Command ==>
: F1=Help F3=Exit F6=List F12=Cancel
: .....
Command ==>
F1=Help F3=Exit F4=Comments F5=A11 F7=- F8= F10=Actions F12=Cancel

```

Explanations

- (1) You wish to copy a resource of the type font.
- (2) The font in question is an HP font.
- (3) The name of the font is "A3".
- (4) Here you can define a new name for the resource. If, as in this case, there are only blanks here, this means that the resource is to retain its name when copied.
- (5) The font comes from the system PRFILE (source library).
- (6) The font is to be copied into your PRFILE (target library).
- (7) Here you specify either that the resource is to be created or, if there is already a resource of this name in the PRFILE, that this resource is to be replaced.

Once the resource has been copied, it can be edited. First of all you must select it in the PRM main menu by marking it.

```

File      Edit      View      Options
-----
PRINT RESOURCES MANAGEMENT
-----
PRfile : :K:$PRM.MY.PRFILE
                                         Mode : UPDATE
                                         3 More :
Name      Type      Lines      1 thru      3 of      3
X  A3      FONT      HP          1996-01-20 ---->(1)
    B10     LOOP      HP          1996-01-20
    FOB1    FORMS-OVERLAY-BUFFER HP          1996-01-20
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
    
```

Explanation

- (1) You select the resource “A3” for editing.

Now you have to hit the **[F10]** function key to position the cursor to the menu bar and press the tab key to position to the EDIT menu item. After hitting the ENTER key, enter “5” to select the MODIFY action in the resultant pull-down menu.

```

File      Edit      View      Options
-----
: 5 1.Insert... : NT RESOURCES MANAGEMENT
-----
: *.Convert... :
PRfile : :K:$PRM.MY.PRFILE
                                         Mode : UPDATE
                                         3 More :
Name      Type      Lines      1 thru      3 of      3
X  A3      FONT      HP          1996-01-20
    B10     LOOP      HP          1996-01-20
    FOB1    ERLAY-BUFFER HP          1996-01-20
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel
    
```


In the dialog box that then appears you are requested to specify the attributes of the resource you wish to modify. Since the resource “A3” was preselected in the main menu, its attributes are now displayed.

```

File      Edit      View      Options
-----
PRINT RESOURCES MANAGEMENT
-----
PRfile : :K:$PRM.MY.PRFILE                               Mode : UPDATE
Name : ..... 3 More :
X A3      :      Modify resource object                   : ast access
B10      : ..... : 996-01-20
FOB1     : Object type   : FONT ----->(1)
        : Printer model  : HP ----->(2)
        : Object name    : A3 ----->(3)
        : New name      : A3 ----->(4)
        : Write mode    : 2 1.Create ----->(5)
        :               : 2.Replace
        : .....
        : Command ==>
        : F1=Help  F3=Exit  F6=List  F12=Cancel
        : .....
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F5=All  F7=-  F8=  F10=Actions  F12=Cancel

```

Explanations

- (1) You wish to modify a resource of the type font.
- (2) The font in question is an HP font.
- (3) The name of the font is “A3”.
- (4) If all you want to do is change the name of the resource, you can define a new name for it here.
- (5) Here you specify either that the resource is to be created or, if there is already a resource with this name in your PRFILE, that this resource is to be replaced.

The attributes of the selected resource are displayed in the subsequent screen. You can modify these attributes here, e.g. you can enter a (new) code for the underscore character or for the blank. After entering your changes, you have to store the global attributes of the modified resource by hitting the **F11** function key or by entering "Save" in the command line.

```

Edit      Format
-----
Font Specifications
-----
A3          FONT          HP          1996-01-20
Number of characters : 64 ----->(1)
Space code      : 40 - Underscore code : 6D- Vertical density : 6
Code table :          Lines 1 thru 12 of 16      More :
    .0 .1 .2 .3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
O.
1.
: .....:
: SPR0998 :
: Please set first the global attributes of the edited :
: font (space, underscore code and vertical density as :
: well). Confirm by F11 key or 'SAVE' in command line. :
: :
: F12=Remove :
: .....:
A.          10 10 10 10 10 10 10 10
B.
-----
Command ==> SAVE ----->(2)
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel
    
```

Explanations

- (1) You can make changes in this line and in the subsequent lines.
- (2) The attributes of the font are to be stored.

The contents of the font are displayed on the screen.

```

Edit      Format
-----
Font Specifications
-----
A3          FONT                HP      1996-01-20
Number of characters : 64
Space code   : 40      Underscore code : 6D      Vertical density : 6
Code table  :          Lines 1 thru 12 of 16      More :
    .0 .1 .2 .3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.
1.
2.
3.
4. 10
5. 10
6. 10 10
7.
8. 10 10 10 10 10 10 10 10 10
9. 10 10 10 10 10 10 10 10
A. 10 10 10 10 10 10 10
B.

-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel

```

First you want to bring the font into line with your requirements by modifying its character density and line density. To this end you have to hit the **[F10]** function key to position the cursor to the menu bar and press the tab key till it is positioned on the **FORMAT** menu item. After hitting the **ENTER** key, enter "2" to select the **BOX SIZE** action in the pull-down menu that appears.

```

Edit      Format
-----
: 2 1.Align... : Font Specifications
----- : 2.Box size... : -----
A3      : 3.Reverse   :          HP      1996-01-23
Number o : 4.Rotate    :
Space co : 5.Overlay... : Underscore code : 6D      Vertical density : 6
Co      : 6.Zoom...   :          Lines 1 thru 12 of 16      More :
:.....: .7 .8 .9 .A .B .C .D .E .F
0.
1.
2.
3.
4. 10
5. 10
6. 10 10
7.
8. 10 10 10 10 10 10 10 10 10
9. 10 10 10 10 10 10 10 10
A. 10 10 10 10 10 10 10
B.

-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel

```

In the dialog box that then appears you are requested to specify the new values for the character density and the line density. Fill in the fields as required and hit the ENTER key.

```

Edit      Format
-----
Font Specifications
-----
A3          FONT          HP          1996-01-23
Number of characters : 64
Space code : ..... ical density : 6
Code table : :          Box size :      More :
      .0 .1 .2 .3 :-----:
0.      : Vertical density set to 8 lpi ----->(1)
1.      : Horiz. density set to 12 cpi ----->(2)
2.      :          or set to col :
3.      : X Modify contents too ----->(3)
4. 10   :-----:
5. 10   : Command ==> :
6. 10 10 : F1=Help F3=Exit F12=Cancel :
7.      :-----:
8. 10 10 10 10 10 10 10 10
9. 10 10 10 10 10 10 10 10
A. 10 10 10 10 10 10 10 10
B.
-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel
    
```

Explanations

- (1) You define a new line density (8 lpi instead of 6 lpi).
- (2) You define a new character density (12 lpi instead of 10 lpi).
- (3) You specify that the characters enclosed by the frame are also to be modified accordingly.

Once the resource has been modified, the PRM main menu is displayed with its new contents.

```

Edit      Format
-----
Font Specifications
-----
A3          FONT          HP          1996-01-23
Number of characters : 64
Space code      : 40      Underscore code : 6D      Vertical density : 8
Code table :      Lines 1 thru 12 of 16      More :
.0 .1 .2 .3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.
1.
2.
3.
4. 12
5. 12
6. 12 12
7.
8. 12 12 12 12 12 12 12 12 12 12
9. 12 12 12 12 12 12 12 12 12
A. 12 12 12 12 12 12 12 12
B.
-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel

```

The next thing you want to do is change the shape of the character used as the underscore. To this end you have to hit the **F10** function key to position the cursor to the menu bar and then press the tab key until it is positioned on the EDIT menu item. After hitting the ENTER key, enter "3" in the resultant pull-down menu to select the MODIFY action.

```

Edit      Format
-----
: 3 1.Insert... :      Font Specifications
: 2.Import... : -----
: 3.Modify... :      HP          1996-01-20
: 4.Delete... : rs : 64
: 5.Show... : : 40      Underscore code : 6D      Vertical density : 8
: 6.Exit (F3) :      Lines 1 thru 12 of 16      More :
:.....: 3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.
1.
2.
3.
4. 12
5. 12
6. 12 12
7.
8. 12 12 12 12 12 12 12 12 12 12
9. 12 12 12 12 12 12 12 12 12
A. 12 12 12 12 12 12 12 12
B.
-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel

```

In the dialog box that then appears you are requested to specify the code of the character whose shape you wish to change.

```

Edit      Format
-----
Font Specifications
-----
A3          FONT          HP          1996-01-20
Number of characters : 64
Space code      : 40      Underscore code : 6D      Vertical density : 8
Code t .....:
.0 . :          Modify Character .....:
0.   : .....:
1.   : Character code : 6D ----->(1)
2.   : New code      : ----->(2)
3.   : .....:
4. 12 : Command ==> .....:
5. 12 : F1=Help  F3=Exit  F12=Cancel .....:
6. 12 1 : .....:
7.     : .....:          12 12 12 12 12 12
8.   12 12 12 12 12 12 12 12 12
9.   12 12 12 12 12 12 12 12 12
A.     12 12 12 12 12 12 12 12
B.

-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F7=-  F8=  F10=Actions  F11=Save  F12=Cancel
    
```

Explanations

- (1) You want to modify the character with the code “6D”.
- (2) Here you can define a new code for the character, if required.

The shape of the selected character is displayed on the screen.

```

Format
-----
Character Specification
-----
Character code 6D with 8 lpi and 12 cpi or 20 columns
Set / reset matrix :
Lines 28 thru 39 of 40      More : -
1234567890123456789012345678901234567890
28 .....:
29 .....:
30 .....:
31 .....:
32 000000000000000000000000...
33 000000000000000000000000...
34 000000000000000000000000...
35 000000000000000000000000...
36 .....:
37 .....:
38 .....:
39 .....:
C:

-----
Command ==>
F1=Help  F3=Exit  F7=-  F8=  F10=Actions  F11=Save  F12=Cancel
    
```

Now you have to hit the **F10** function key to position the cursor to the menu bar and press the tab key to position to the **FORMAT** menu item. After hitting the **ENTER** key, enter "1" to select the **ALIGN** action in the pull-down menu that appears.

```

Format
-----
: 1 1.Align...      :          Character Specification
: 2.Box size...   : -----
: 3.Reverse       : th 8 lpi and 12 cpi or 20 columns
: 4.Rotate        :
: 5.Overlay...   :          Lines 28 thru 39 of 40   More : -
: 6.Zoom...      : 890123456789012345678901234567890
: .....: .....
: 29 .....
: 30 .....
: 31 .....
: 32 oooooooooooooooooooooo...
: 33 oooooooooooooooooooooo...
: 34 oooooooooooooooooooooo...
: 35 oooooooooooooooooooooo...
: 36 .....
: 37 .....
: 38 .....
: 39 .....
: C:
-----
Command ==>
F1=Help  F3=Exit  F7=-  F8=  F10=Actions  F11=Save  F12=Cancel

```

Enter the new values for the character alignment and press the ENTER key.

```

Format
-----
                          Character Specification
-----
Character code 6D with 8 lpi and 12 cpi or 20 columns
Set / reset matrix .....: ore : -
      1234 :-----:
28 .... : Center Hor.    0 ----->(1)
29 .... :           Ver.  0 ----->(2)
30 .... : Shift up       0 ----->(3)
31 .... : Shift down     5 ----->(4)
32 oooo : Shift left     0 ----->(5)
33 oooo : Shift right    0 ----->(6)
34 oooo :-----:
35 oooo : Command ==>    :
36 .... : F1=Help  F3=Exit  F12=Cancel :
37 .... :-----:
38 .....:
39 .....:
      C:
-----
Command ==>
F1=Help  F3=Exit  F7=-  F8=  F10=Actions  F11=Save  F12=Cancel
    
```

Explanations

- (1) You want the character to be centered along its vertical axis of symmetry.
- (2) You want the character to be centered along its horizontal axis of symmetry.
- (3) The character is not to be moved upwards.
- (4) The character is to be moved 5 lines in a downward direction.
- (5) The character is not to be moved to the left.
- (6) The character is not to be moved to the right.

Once the character has been moved, it is displayed on the screen in its new form. You can save this new form by hitting the **F11** function key or by entering "Save" in the command line.

```

Format
-----
                        Character Specification
-----
Character code 6D with 8 lpi and 12 cpi or 20 columns
Set / reset matrix :
                        Lines 28 thru 39 of 40      More :  -
1234567890123456789012345678901234567890
28 .....
29 .....
30 .....
31 .....
32 .....
33 .....
34 .....
35 .....
36 .....
37 00000000000000000000000000000000....
38 00000000000000000000000000000000....
39 00000000000000000000000000000000....
   C:
-----
Command ==>
F1=Help  F3=Exit  F7=-  F8=   F10=Actions  F11=Save  F12=Cancel

```

Finally, you want to add a new character to the font. To this end you have to hit the **F10** function key to position the cursor to the menu bar and then press the tab key until it is positioned on the EDIT menu item. After hitting the ENTER key, enter "1" in the resultant pull-down menu to select the INSERT action.

```

Edit      Format
-----
: 1 1.Insert... :          Font Specifications
: 2.Import... : -----
: 3.Modify... :          HP          1996-01-23
: 4.Delete... : rs : 64
: 5.Show...   : : 40   Underscore code : 6D   Vertical density : 8
: 6.Exit (F3) :          Lines 1 thru 12 of 16   More :
:.....: 3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.
1.
2.
3.
4. 12
5. 12
6. 12 12
7.
8. 12 12 12 12 12 12 12 12 12 12
9. 12 12 12 12 12 12 12 12 12 12
A. 12 12 12 12 12 12 12 12
B.
-----
Command ==>
F1=Help  F3=Exit  F4=Comments  F7=-  F8=   F10=Actions  F11=Save  F12=Cancel

```

In the dialog box that then appears you are requested to specify the attributes of the new character. Hit the ENTER key to conclude your entries.

```

Edit      Format
-----
Font Specifications
-----
A3          FONT          HP          1996-01-23
Number of characters : 64
Space code   : 40      Underscore code : 6D      Vertical density : 8
Code table : ..... More :
  .0 .1 .2 .3 . : Insert New Character :
0. : .....
1. : Character code : 10 ----->(1)
2. : Horizontal density : 6 or ----->(2)
3. : number of column :
4. 12 : .....
5. 12 : Command ==> :
6. 12 12 : F1=Help F3=Exit F12=Cancel :
7. : .....
8. 12 12 12 12 12 12 12 12 12
9. 12 12 12 12 12 12 12 12 12
A. 12 12 12 12 12 12 12 12
B.
-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel
    
```

Explanations

- (1) Code "10" of the new character.
- (2) The new character is to be created with a density of 6 cpi.

After this you are offered a new, empty character matrix for editing.

```

Format
-----
                        Character Specification
-----
Character code 10 with 6 lpi and 6 cpi or 40 columns
Set / reset matrix :
                        Lines 1 thru 12 of 40      More :
1234567890123456789012345678901234567890
1 .....
2 .....
3 .....
4 .....
5 .....
6 .....
7 .....
8 .....
9 .....
10 .....
11 .....
12 .....
C:
-----
Command ==>
F1=Help F3=Exit F7=- F8= F10=Actions F11=Save F12=Cancel

```

You now have three choices:

1. If you want to create an entire line in the character matrix, enter a “1” before the appropriate line and confirm your entry by hitting the ENTER key.
2. If you want to create an entire column in the character matrix, enter a “1” before the appropriate column and confirm your entry by hitting the ENTER key.
3. If all you want to do is set a specific point within the character matrix, move the cursor to the appropriate position and enter a “0” there.

The following screens show a new character created in this way.

```

Format
-----
                        Character Specification
-----
Character code 10 with 6 lpi and 6 cpi or 40 columns
Set / reset matrix :
                        Lines 1 thru 12 of 40      More :
1234567890123456789012345678901234567890
1 .....0000000.....
2 .....000000000000.....
3 .....0000000000000000.....
4 .....00000000000000000000.....
5 .....0..0..0..0.....
6 .....00.....0.....00.....
7 .....0.....00000..0.....
8 .....000.....000.....
9 .....00000.....
10 .000.....000000000000.....000..
11 .00.....0.....000.....00.....
12 .000.....0.....0.....0.....000.....
C:
-----
Command ==>
F1=Help F3=Exit F7=- F8= F10=Actions F11=Save F12=Cancel
    
```

```

Format
-----
                        Character Specification
-----
Character code 10 with 6 lpi and 6 cpi or 40 columns
Set / reset matrix :
                        Lines 12 thru 23 of 40     More : -
1234567890123456789012345678901234567890
12 ...000.....0.....0.....0.....000.....
13 .....000.....0.....0.....0.....000.....
14 .....000..0.....0.....0.....000.....
15 .....0000.....0000.....
16 .....0.....0.....0.....
17 .....0.....0.....
18 .....000000000000.....
19 .....0.....0.....0.....
20 .....0.....000.....0.....
21 .....0.....0..0.....0.....
22 .....0.....0..0.....0.....
23 .....0.....0..0.....0.....
C:
-----
Command ==>
F1=Help F3=Exit F7=- F8= F10=Actions F11=Save F12=Cancel
    
```

Format

Character Specification
-----Character code 10 with 6 lpi and 6 cpi or 40 columns
Set / reset matrix :

```

                                Lines 19 thru 30 of 40   More : -
1234567890123456789012345678901234567890
19 .....0.....0.....0.....0.....
20 .....0.....000.....0.....
21 .....0.....0.0.....0.....
22 .....0.....0.0.....0.....
23 .....0.....0.....0.....0.....
24 .....0.....0.....0.....0.....
25 .....0.....0.....0.....0.....
26 .....0.....0.....0.....0.....
27 .....0.....0.....0.....0.....
28 .....0.....0.....0.....0.....
29 .....0.....0.....0.....0.....
30 .....0.....0.....0.....0.....
C:

```

Command ==>

F1=Help F3=Exit F7=- F8= F10=Actions F11=Save F12=Cancel

Format

Character Specification
-----Character code 10 with 6 lpi and 6 cpi or 40 columns
Set / reset matrix :

```

                                Lines 30 thru 40 of 40   More : -
1234567890123456789012345678901234567890
30 .....0.....0.....0.....0.....
31 .....0.....0.....0.....0.....
32 .....0.....0.....0.....0.....
33 .....0.....0.....0.....0.....
34 .....0.....0.....0.....0.....
35 .....0.....0.....0.....0.....
36 .....0.....0.....0.....0.....
37 .....0.....000.....000.....0.....
38 .....0000.....00000.....
39 .....0000000.....00000000.....
1 40 .....0.....0.....0.....0..... ----->(1)
C:

```

Command ==> save ----->(2)

F1=Help F3=Exit F7=- F8= F10=Actions F11=Save F12=Cancel

Explanations

- (1) Dots are to be set at every position in line 40.
- (2) The new character is to be stored in this form.

The newly stored character is added to the font and the font object menu is displayed.

```

Edit      Format
-----
Font Specifications
-----
A3          FONT          HP          1996-01-23
Number of characters : 65
Space code   : 40      Underscore code : 6D      Vertical density : 8
Code table :          Lines 1 thru 12 of 16      More :
    .0 .1 .2 .3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.
1. 6
2.
3.
4. 12
5. 12
6. 12 12
7.
8.      12 12 12 12 12 12 12 12 12 12
9.      12 12 12 12 12 12 12 12 12
A.      12 12 12 12 12 12 12 12
B.

-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel
    
```

If you want to view the character that has just been created, you have to hit the **[F10]** function key to position the cursor to the menu bar and press the tab key until it is positioned on the EDIT menu item. After hitting the ENTER key, enter "5" to select the SHOW action in the pull-down menu that appears.

```

Edit      Format
-----
: 5 1.Insert... :          Font Specifications
: 2.Import... : -----
: 3.Modify... :          HP          1996-01-23
: 4.Delete... : rs : 65
: 5.Show... : : 40      Underscore code : 6D      Vertical density : 8
: 6.Exit (F3) :          Lines 1 thru 12 of 16      More :
: .....: 3 .4 .5 .6 .7 .8 .9 .A .B .C .D .E .F
0.
1. 6
2.
3.
4. 12
5. 12
6. 12 12
7.
8.      12 12 12 12 12 12 12 12 12 12
9.      12 12 12 12 12 12 12 12 12
A.      12 12 12 12 12 12 12 12
B.

-----
Command ==>
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel
    
```

In the dialog box that then appears you are requested to specify the code of the character. Hit the ENTER key to conclude your entries.

Edit	Format

Font Specifications	

A3	FONT HP 1996-01-23
Number of characters :	65
Space code :	40
Code table :	Underscore code : 6D Vertical density : 8
	Lines 1 thru 12 of 16 More :
0.	.0 :
1.	6 : Show Character :
2.	: Character code : 10 ----->(1)
3.	:
4.	12 : Command ==> :
5.	12 : F1=Help F3=Exit F12=Cancel :
6.	12 1 :
7.	12 12 12 12 12 12 12 12 12 12
8.	12 12 12 12 12 12 12 12 12
9.	12 12 12 12 12 12 12 12 12
A.	12 12 12 12 12 12 12 12
B.	

Command ==>	
F1=Help F3=Exit F4=Comments F7=- F8= F10=Actions F11=Save F12=Cancel	

Explanation

(1) The character with the code “10” is to be displayed.

After this, the character is displayed on the screen. If you want to see the whole character, you can scroll screen by screen by hitting the **[F8]** function key or by entering a plus sign (“+”) in the command line.

```

Format
-----
                        Character Specification
-----
Character code 10 with 6 lpi and 6 cpi or 40 columns
Set / reset matrix :
                        Lines 1 thru 12 of 40      More :
1234567890123456789012345678901234567890
1 .....0000000.....
2 .....00000000000.....
3 .....000000000000000.....
4 .....0000000000000000000.....
5 .....0...0...0...0.....
6 .....00...0...00.....
7 .....0...00000...0.....
8 .....000...000.....
9 .....00000.....
10 .000.....0000000000000.....000..
11 .00.....0.....0.....00...
12 ...000.....0.....0.....0.....000....
C:
-----
Command ==>
F1=Help F3=Exit F7=- F8= F10=Actions F11=Save F12=Cancel
    
```

```

Format
-----
                        Character Specification
-----
Character code 10 with 6 lpi and 6 cpi or 40 columns
Set / reset matrix :
                        Lines 5 thru 16 of 40      More : -
1234567890123456789012345678901234567890
5 .....0...0...0.....
6 .....00...0...00.....
7 .....0...00000...0.....
8 .....000...000.....
9 .....00000.....
10 .000.....0000000000000.....000..
11 .00.....0.....0.....0.....00...
12 ...000.....0.....0.....0.....000....
13 .....000...0.....000...000.....
14 .....000...0...00000...000...000.....
15 .....00000.....00000.....
16 .....0.....0.....0.....
C:
-----
Command ==>
F1=Help F3=Exit F7=- F8= F10=Actions F11=Save F12=Cancel
    
```


8.6 Creating an HP loop and an LP loop

For your printout you require an HP loop and an LP loop, both with the same attributes. There are two ways of creating these loops:

1. You create the two loops separately.
2. You create a general loop and then convert it into an HP loop and an LP loop. This enables you to be sure that both loops have the same attributes.

```

/MOD-JOB-SWITCHES ON=(1) ----- (1)
/START-PRM ----- (2)
% SPRO108 PROGRAM PRM VERSION '01.2A00' STARTED
//OPEN-PR-FILE FILE-NAME=GENERAL.LOOP.PRFILE,MODE=*CREATE ----- (3)
//ADD-PRINT-RESOURCES OBJECT=*GENERAL-LOOP(GENERAL-LOOP-NAME=A4,
    DEFAULT-LENGTH=*INCHES(INTEGER-PART=10)),
    COMMENTS=C'Model for loop A4 LP/HP : 6LPI 10 inches' ----- (4)
//ADD-PARAGRAPH PARAGRAPH-NAME=HEADER, LOCATION=*INCHES, NUM-OF-LINES=2 --(5)
//ADD-PARAGRAPH PARAGRAPH-NAME=BODY, NUMBER-OF-LINES=51, CHANNEL-NUM=1 ---(6)
//ADD-PARAGRAPH PARAGRAPH-NAME=FOOTER, NUMBER-OF-LINES=7, CHANNEL-NUM=2 --(7)
//CLOSE-GENERAL-LOOP ----- (8)
//SHOW-PRINT-RESOURCES OBJECT=*GENERAL-LOOP(GENERAL-LOOP-NAME=A4),
INFORMATION=*ALL ----- (9)
    
```

Resource	Type	Printer	Access date
A4	GENERAL-LOOP	NONE	1997-01-26

Comments :
Model for loop A4 LP/HP : 6LPI 10 inches

Attributes :

- General Loop Length : 10 0/6 inches
- Paragraph list :
- Name HEADER located at 0 0/6 inches
2 line(s) with vertical density 1/6 inches
- Name BODY located at 0 2/6 inches
reached by tabulator : C1
51 line(s) with vertical density 1/6 inches
- Name FOOTER located at 8 5/6 inches
reached by tabulator : C2
7 line(s) with vertical density 1/6 inches

```

//CONVERT-PRINT-RESOURCES OBJECT=*GENERAL-LOOP(GENERAL-LOOP-NAME=A4,
TO-OBJECT-TYPE=*LOOP(LOOP-NAME=A4, PRINTER-MODEL=(*HP,*LP))) ----- (10)
    
```

```
//SHOW-PRINT-RESOURCES OBJECT=*LOOP(*ALL),INFORMATION=*ALL ----- (11)
```

Resource	Type	Printer	Access date
A4	LOOP	HP	1997-01-26

Comments :

Attributes :

- Form length : 10 0/6 inches
- Preset Vertical Density : 6 LPI
- Number of lines : 60
- Line Descriptor :

line 1 to line	2	6 LPI		
line 3		6 LPI	Channel	1
line 4 to line	53	6 LPI		
line 54		6 LPI	Channel	2
line 55 to line	60	6 LPI		

Resource	Type	Printer	Access date
A4	LOOP	LP	1997-01-26

Comments :

Attributes :

- Form length : 10 0/6 inches
- Preset Vertical Density : 6 LPI
- Number of lines : 60
- Line Descriptor :

line 1 to line	2	6 LPI		
line 3		6 LPI	Channel	1
line 4 to line	53	6 LPI		
line 54		6 LPI	Channel	2
line 55 to line	60	6 LPI		

```
//END ----- (12)
```

```
% SPRO128 PRM NORMALLY TERMINATED
```

```
/MOD-JOB-SWITCHES OFF=(1) ----- (13)
```

Explanations

- (1) You set job switch 1 to enable you to work with SDF statements in interactive mode.
- (2) You call PRM; the SDF user interface is made available.
- (3) With this statement you create a new PRFILE.
- (4) You create a general loop with the name A4 and a length of 10 inches.
- (5) For the general loop you create a paragraph, HEADER, consisting of two lines with a line density of 1/6 lpi.
- (6) You create a paragraph, BODY, which follows on from the paragraph HEADER. BODY consists of 52 lines, each with a line density of 1/6 lpi, and can be addressed via channel number 1.
- (7) You create a paragraph, FOOTER, which follows on from the paragraph BODY. FOOTER consists of 7 lines, each with a line density of 1/6 lpi, and the channel number 1.
- (8) You conclude generation of the general loop and save your entries.
- (9) This statement enables you to display on the screen the attributes of the general loop you have just created.
- (10) With this statement you convert your general loop into an HP loop and an LP loop in a single step. Both loops have the name A4.
- (11) This statement enables you to display on the screen the attributes of the loops you have just created.
- (12) You terminate PRM. The generated PRFILE and all the entries created previously are closed automatically.
- (12) Finally you reset job switch 1.

8.7 Defining a PCL font

8.7.1 Definition by font characteristics

1. Create a BS2000 SAM file (e.g. with the name “xyz.fnt.char”), which has the letter “C” in the first column followed by the PCL escape sequence that describes the font characteristics:

```
C\e(8U\e(s0p10.00h12.0v0s0b3T
```

(for a font *Courier* with *pitch=10*, *height=12*, *style=upright*, *stroke weight=medium* and *symbol set=roman-8*)

2. Start PRM and select the name of the PRFILE in which you want to store your PCL font.
3. Use the following command to define the PCL font object in the PRFILE and assign it the character set name “XYZ”:

```
IMPORT-PRINTER-RESOURCES *FONT(XYZ),*PCLFILE(XYZ.FNT.CHAR)
```

4. Close the PRFILE and quit PRM.

8.7.2 Definition by PCL font ID

1. Create a BS2000 SAM file (e.g. with the name “xyz.fnt.id”), which has the letter “I” in the first column followed by the PCL font ID number:

```
I12 (for a font with the ID 12)
```

2. Start PRM and select the name of the PRFILE in which you want to store your PCL font.
3. Use the following command to define the PCL font object in the PRFILE and assign it the character set name “XYZ”:

```
IMPORT-PRINTER-RESOURCES *FONT(XYZ),*PCLFILE(XYZ.FNT.ID)
```

4. Close the PRFILE and quit PRM.

8.7.3 Definition by reference to a PCL softfont (for loading into a printer)

1. Create a BS2000 file (e.g. with the name “sftfnt.myfont”), which contains the complete PCL-coded softfont description (created on a PC with font editor tools and then transferred in binary to the BS2000 host). Make sure you select the CSSNAME of the BS2000 file according to the data format (ASCII / EBCDIC).
2. Create a BS2000 SAM file (e.g. with the name “xyz.fnt.ref”), which has the letter “R” in the first column followed by the PCL softfont object name (e.g. “myfont”):

```
RMYFONT
```

```
(for a PCL softfont called “MYFONT”)
```

3. Start PRM and select the name of the PRFILE in which you want to store your PCL font.
4. Use the following command to define the PCL softfont object in the PRFILE and assign it the name “MYFONT” and the PCL-coded softfont description data contained in the file “SFTFNT.MYFONT”:

```
IMPORT-PRINTER-RESOURCES *SOFT-FONT(MYFONT),*PCLFILE(SFTFNT.MYFONT)
```

5. Use the following command to define the PCL font object in the PRFILE and assign it the character set name “XYZ”:

```
IMPORT-PRINTER-RESOURCES *FONT(XYZ),*PCLFILE(XYZ.FNT.REF)
```

6. Close the PRFILE and quit PRM.

8.8 Defining a PCL overlay

8.8.1 Definition by PCL macro ID

1. Create a BS2000 SAM file (e.g. with the name “abcd.ovl.id”), which has the letter “I” in the first column followed by the PCL macro ID number:

I12

(for a macro with the ID 12)

2. Start PRM and select the name of the PRFILE in which you want to store your PCL overlay.
3. Use the following command to define the PCL overlay object in the PRFILE and assign it the overlay name “ABCD”:

```
IMPORT-PRINTER-RESOURCES *IMAGE(*OVERLAY(ABCD)),*PCLFILE(ABCD.OVL.ID)
```

4. Close the PRFILE and quit PRM.

8.8.2 Definition by reference to a PCL macro (for loading into a printer)

1. Create a BS2000 file (e.g. with the name “macro.mylogo”), which contains the PCL-coded macro description (created on a PC with font editor tools and then transferred in binary to the BS2000 host). Note that this file must not contain any macro ID assignments or start/stop commands. Make sure you select the CSSNAME of the BS2000 file according to the data format (ASCII / EBCDIC).
2. Create a BS2000 SAM file (e.g. with the name “abcd.ovl.ref”), which has the letter “R” in the first column followed by the name of the PCL macro (e.g. “mylogo”):

```
RMYLOGO
```

```
(for a PCL macro “MYLOGO”)
```

3. Start PRM and select the name of the PRFILE in which you want to store your PCL overlay.
4. Use the following command to define the PCL macro object in PRFILE and assign it the name “MYLOGO” and the PCL-coded macro description data contained in the file “MACRO.MYLOGO”:

```
IMPORT-PRINTER-RESOURCES *MACRO(MYLOGO),*PCLFILE(MACRO.MYLOGO)
```

5. Use the following command to define the PCL overlay object in the PRFILE and assign it the overlay name “ABCD”:

```
IMPORT-PRINTER-RESOURCES *IMAGE(*OVERLAY(ABCD)),*PCLFILE(ABCD.OVL.REF)
```

6. Close the PRFILE and quit PRM.

8.9 Importing print resources in the TRANS format into a PRFILE

8.9.1 Importing an HP font created with OFM

Under Windows NT and with OFM V2.0 or higher:

1. Select the menu item "Configuration>Output Format...".
2. Select "OMSLIB" as the format.
3. Set the print resolution in the "Configuration>Measuring System..." dialog box to 240 dpi.
4. Pick one of the installed fonts and create a bitmap instance of that font as usual. A Save dialog box appears containing a template "MXM?????" for an MS-DOS file name. Replace the "?????" characters by any four characters you want (e.g. "ARIA").
5. Check in the header information whether the TRANS format was selected.
6. Press the "Do It" button to generate the bitmap.
7. The file MXMARIA will now be available on your hard disk and contain the HP font in the TRANS format.
8. Copy the file with openFT or FTP (not a binary transfer!) under the user ID "\$UID" to BS2000: \$UID.MXMARIA

In BS2000:

1. Start PRM and open the target library "MY.PRFILE" into which you want to import the print resource:

```
/MODIFY-USER-SWITCH ON=1
/START-PRM
//OPEN-PR-FILE FILE-NAME=MY.PRFILE,MODE=*UPDATE
```

2. Import the print resource from the TRANSFILE "\$UID.MXMARIA" under the name "ABC" to the target library:

```
//IMPORT-PRINT-RESOURCES OBJECT=*FONT(ABC),FROM-PRINTER-CONTROL=
*TRANSFILE($UID.MXMARIA)
```

3. Exit PRM:

```
//END
/
```

8.9.2 Importing a PCL softfont created with OFM

Under Windows NT and with OFM V2.2 or higher:

1. Select the menu item "Configuration>Output Format...".
2. Select "PCL4" as the format.
3. Set the print resolution in the "Configuration>Measuring System..." dialog box to 300 or 600 dpi.
4. Pick one of the installed fonts and create a bitmap instance of that font as usual. A Save dialog box containing a template (SFP) for an MS-DOS file name appears. Enter any file name you want (e.g. "ARIAL.10.N.SFP").
5. Check in the header information whether the TRANS format was selected.
6. Press the "Do It" button to generate the bitmap.
7. The file "ARIAL.10.N.SFP" will now be available on your hard disk and contain a PCL softfont in the TRANS format.
8. Copy the file with openFT or FTP (not a binary transfer!) under the user ID "\$UID" to BS2000: \$UID.ARIAL.10.N.SFP

In BS2000:

1. Start PRM and open the target library "MY.PRFILE" into which you want to import the print resource:

```
/MODIFY-USER-SWITCH ON=1
/START-PRM
//OPEN-PR-FILE MY.PRFILE, ,*UPDATE
```

2. Import the print resource from the TRANSFILE "\$UID.ARIAL.10.N.SFP" under the name "ABC" to the target library:

```
//IMPORT-PRINT-RES *SOFTFONT(ABC), FROM-PRINTER-
CONTROL=*TRANSFILE($UID.ARIAL.SFP)
```

Note that a PCL font with the name "ABC" will have automatically been generated after the import.

3. Exit PRM:

```
//END
/
```

8.9.3 Importing FOBs created with FGL

Under Windows NT and with FGL V3.00.17 or higher:

1. After you have created your image, select the menu item "File>Choose Printer...".
2. Select "Overlay Printer" and "OPS FOB on File ???".
3. Select the menu item "File>Page Set up..." and enter "TRANS1" as the output format under the attributes of OPS FOB.
4. Select the "File>Write Overlay" menu to save the FOB in a file with the .FOB extension (e.g. "TEST.FOB").
5. Copy the file with openFT or FTP (not a binary transfer!) under the user ID "\$UID" to BS2000: \$UID.TEST.FOB

In BS2000:

1. Start PRM and open the target library "MY.PRFILE" into which you want to import the print resource:

```
/MODIFY-USER-SWITCH ON=1
/START-PRM
//OPEN-PR-FILE MY.PRFILE, ,*UPDATE
```

2. Import the print resource from the TRANSFILE "\$UID.TEST.FOB" under the name "ABCD" to the target library:

```
//IMPORT-PRINT-RES *IMAGE(*F-O-B(ABCD)), FROM-PRINTER-CONTROL=
*TRANSFILE($UID.TEST.FOB)
```

3. Exit PRM:

```
//END
/
```

8.9.4 Importing a PCL macro created with FGL

Under Windows NT and with FGL V3.00.02 or higher:

1. After you have created your image, select the menu item “File>Choose Printer...”.
2. Select “Overlay Printer” and “OPS PCLMacro on File ???”.
3. Select the menu item “File>Page Set up...” and enter “TRANS1” as the output format under the attributes of OPS PCL Macro.
4. Select the “File>Write Overlay” menu to save the macro in a file with the .PCL extension (e.g. “TEST.PCL”).
5. Copy the file with openFT or FTP (not a binary transfer!) under the user ID “\$UID” to BS2000: \$UID.TEST.PCL

In BS2000:

1. Start PRM and open the target library “MY.PRFILE” into which you want to import the print resource:

```
/MODIFY-USER-SWITCH ON=1
/START-PRM
//OPEN-PR-FILE MY.PRFILE, ,*UPDATE
```

2. Import the print resource from the TRANSFILE “\$UID.TEST.PCL” under the name “ABCD” to the target library:

```
//IMPORT-PRINT-RES *MACRO(ABCD), FROM-PRINTER-CONTROL=
*TRANSFILE($UID.TEST.PCL)
```

Note that a PCL overlay with the name “ABCD” will have automatically been generated after the import.

3. Exit PRM:

```
//END
/
```

9 Installing PRM

PRM is a mandatory subsystem and part of the basic BS2000 configuration. It comprises the components PRMMAN and PRMPRES, both of which perform different tasks:

- The privileged subsystem PRMMAN is responsible for handling all accesses to the print resources and their management. This subsystem is a mandatory component of the SPOOL configuration for SPOOL V3.0 and higher. SPOOL V3.0 and higher cannot run without PRMMAN. This dependency must be taken into account during installation.
- The non-privileged subsystem PRMPRES represents the part of PRM that is “visible” to the user and is responsible for presentation of data.
The system operator can control the availability of the PRMPRES subsystem as required using the START-SUBSYSTEM or STOP-SUBSYSTEM command.

Both subsystems are loaded into class 4 memory during activation. The activation of PRMMAN is linked to the activation of the SPOOL subsystem in the declaration.

PRM V1.2A can be run in the following software and hardware configurations:

On /390 machines:

BS2000/OSD-BC as of V1.0A
SPOOL-GA as of V4.1A
in combination with DPRINT V1.0G

On SR2000:

BS2000 OSD-BC ab V3.1B
SPOOL-GA as of V4.1A
in combination with DPRINT V1.0G

Under Windows:

OFM as of V2.00 for generating HP fonts in the TRANS format
OFM as of V2.02 for generating PCL softfonts in the TRANS format
FGL as of V3.00.17 for generating FOBs in the TRANS format
FGL as of V3.00.02 for generating PCL macros in the TRANS format

9.1 Installing the subsystems

This section lists the files supplied for the individual subsystems which are relevant for the use of PRM, and provides notes for installation.

PRMMAN subsystem

The following files are supplied with PRMMAN V1.2.

File		Contents
SYSSSC.PRMMAN.012.110	*	Subsystem declaration for OSD-BC V1
SYSSSC.PRMMAN.012.112	*	Subsystem declaration for OSD-BC V2
SYSSSC.PRMMAN.012.120	*	Subsystem declaration for OSD-BC V3
SRMSSC.PRMMAN.012.121	*	Subsystem declaration for OSD-SVP V1.0
SRMSSC.PRMMAN.012.130	*	Subsystem declaration for OSD-BC V4
SYSLNK.PRMPRES.012	*	Object module library for /390 computer
SRMLNK.PRMPRES.012	*	Object module library for SR2000
SYSREP.PRMMAN.012	*	REP file for PRMMAN V1.2A
SYSMSA.PRMMAN.012	*	Message file for PRMMAN V1.2A (for OSD-BC V1)
SYSMSR.PRMMAN.012	*	
SYSMSV.PRMMAN.012	*	
SYSMES.PRMMAN.012	*	Message file for PRMMAN V1.2A (as of OSD-BC V2)
SIPLIB.PRMMAN.012		Library type R GC
SYSLIB.PRMMAN.012		Library type U GC
SYSVRT.PRMMAN.012		Standard system PRFILE
SYSSII.PRMMAN.012		IMON information file
SYSFGM.PRMMAN.012.E		English version of the Release Notice
SYSFGM.PRMMAN.012.D		German version of the Release Notice

*: File must be installed (in accordance with the OSD version)

The following installations must be performed before system startup:

1. The IMON information file, which handles all the path definitions required for installation, must be made available on the system.
2. The subsystem declaration for PRMMAN must be entered in the subsystem catalog of the system.
3. The object module library and the REP file must be stored under the appropriate user ID.

- The standard system PRFILE (SYSPRT.PRMMAN.012) must be installed under the user ID \$SYSSPOOL with the file name PRFILE. This file must be shareable. If protection is required, then a write password must be used, but with ACCCES=WRITE, to ensure that time stamp entries in this file are possible.

Notes

In BS2000/OSD V1.0, SPOOLSYS remains a fixed component of BS2000. It is only available as a subsystem under DSSM as of BS2000/OSD V2.0.

Under DSSM, the SPOOLSYS subsystem can be replaced without interrupting availability. After replacement, the “old” SPOOLSYS version is unloaded as soon as all tasks have finished working with it.

PRMPRES subsystem

The following files are supplied with PRMPRES V1.2 .

File		Contents
SYSSSC.PRMPRES.012.110	*	Subsystem declaration for OSD-BC V1
SYSSSC.PRMPRES.012.112	*	Subsystem declaration for OSD-BC V2
SYSSSC.PRMPRES.012.120	*	Subsystem declaration for OSD-BC V3
SYSLNK.PRMPRES.012	*	Object module library for PRMPRES V1.2A
SYSSDF.PRMPRES.012	*	Syntax file for PRMPRES V1.2A
SYSREP.PRMPRES.012	*	REP file for PRMPRES V1.2A
SYSFHS.PRMPRES.012	*	FHS library for PRMPRES V1.2A
SYSMSA.PRMPRES.012	*	Message file for PRMPRES V1.2A (for OSD-BC V1)
SYSMSR.PRMPRES.012	*	
SYSMSV.PRMPRES.012	*	
SYSMES.PRMPRES.012	*	Message file for PRMPRES V1.2A (as of OSD-BC V2)
SYSPRC.PRMPRES.012.LP-EMUL		Procedure for adding standard preform objects
SYSSII.PRMPRES.012		IMON information file

*: File must be installed (in accordance with the OSD version)

Before PRMPRES is loaded, the following installations must be performed:

- The IMON information file, which handles all the path definitions required for installation, must be made available on the system.
- The subsystem declaration for PRMPRES must be entered in the subsystem catalog of the system.
- The syntax file, the object module library and the REP file must be stored under the appropriate user ID.

4. The FHS library must be installed and accessible under the user ID SYSSPOOL under the name SYSFHS.PRMPRES.012.

The FHS interface cannot be used by PRM unless the product VTSU V11.0 or higher is available. Of particular importance is the VTSU 11.0 message file: if this file is not activated, PRM will abort processing with message SPR0030. If the product OMNIS is used, especially in conjunction with VTSU 11.0, a number of other special features must be taken into account. These can be found in the manuals "VTSU 11.0" and "OMNIS V6.3".

The following additional files are supplied with PRM:

File	Form / contents
SYSPRC.PRMPRES.012.EXTRACT	Procedure for copying resources from a PRFILE to a BS2000 SAM file.
SYSPRC.PRMPRES.012.MIGRATE	Procedure for the migration of a complete PRFILE or parts of a PRFILE: <ul style="list-style-type: none"> – Conversion of HP fonts into PCL soffonts (bitmaps) and HP FOBs into PCL macros – Reintegration of these new resources into the PRFILE with corresponding PCL fonts and PCL overlays A conversion from 240 to 300 dpi takes place.
SYSSDF.PRMPRES.012.EXTRACT	Syntax file for EXTRACT command
SYSSDF.PRMPRES.012.MIGRATE	Syntax file for MIGRATE command
SYSPRG.PRMPRES.012.MIGRATE SYSPRG.PRMPRES.012.EXTRACT	Library with the object modules of "Migration & Refinement Utilities V1.0A"
SPCDAT.PRMPRES.012.EXTRACT	Self-extracting compressed file containing the PC refinement utilities. This file must be transferred to a PC (see description below)

All files except SPCDAT.PRMPRES.012.EXTRACT must be installed under the \$TSOS user ID.

The syntax files must be explicitly activated with the MODIFY-SDF-PARAMETER command:

```
/MODIFY-SDF-PARAM SYNTAX-FILE-TYPE=*SUBSYSTEM(NAME=
$TSOS.SYSSDF.PRMPRES.012.MIGRATE,SUBSYSTEM-NAME=PRMMIG)

/MODIFY-SDF-PARAM SYNTAX-FILE-TYPE=*SUBSYSTEM(NAME=
$TSOS.SYSSDF.PRMPRES.012.EXTRACT,SUBSYSTEM-NAME=PRMEXTR)
```


The following actions must be performed for the SPCDAT.PRMPRES.012.EXTRACT file:

- create a new directory on a PC
- transfer the file to this directory in binary form, e.g. with *openFT-PCD*
- rename the file to <name>.EXE
- call up the renamed file to perform the decompression. The following files are created: BIVBX12.DLL, CONVERT.DLL and IMGCV.EXE.
- Start the utility routine by double-clicking on IMGCV.EXE.

9.2 Managing the subsystems

Below is a list of the commands for the individual subsystems, together with the subsystem-specific operands for subsystem operation.

Loading subsystems

The subsystems are loaded via the START-SUBSYSTEM command. There are various operand specifications for the SPOOL subsystem and the PRM subsystems.

PRMMAN subsystem

```
/START-SUBSYSTEM SUBSYSTEM-NAME=PRMMAN
                  [,VERSION=01.2]
                  [,SYNCHRONOUS=YES]
```

SPOOL subsystem

```
/START-SUBSYSTEM SUBSYSTEM-NAME=SPOOL
                  [,VERSION=04.1]
                  [,SUBSYSTEM-PARAMETER=<string>]
                  [,SYNCHRONOUS=YES]
```

The following can be specified for <string>:

```
'[START=<start>][,RS0=<rso>][,SPS=<sps>]'
```

The following can be specified for the individual operands:

<start>: WARM or COLD or SELECTIVE

<rso>: NONE or STD or the defined RS0 version in 4 or 7 characters

<sps>: NONE or STD or the defined SPS version in 4 or 7 characters

PRMPRES subsystem

```
/START-SUBSYSTEM SUBSYSTEM-NAME=PRMPRES
                  [,VERSION=01.2]
                  [,SYNCHRONOUS=YES]
```

Interrupting subsystems

The subsystems are interrupted by means of the HOLD-SUBSYSTEM command. The operands for the various subsystems are the same.

```
/HOLD-SUBSYSTEM SUBSYSTEM-NAME=<subsystem>
```

The following can be specified for <subsystem>:

SPOOL, PRMMAN or PRMPRES

Resuming subsystems

The interrupted subsystems are resumed by means of the RESUME-SUBSYSTEM command. The operands for the various subsystems are the same.

```
/RESUME-SUBSYSTEM SUBSYSTEM-NAME=<subsystem>
```

The following can be specified for <subsystem>:

SPOOL, PRMMAN or PRMPRES

Unloading subsystems

The subsystems are unloaded by means of the STOP-SUBSYSTEM command. The operands specified here for the SPOOL subsystem and the DPRINT subsystems are different.

SPOOL subsystem

```
/STOP-SUBSYSTEM SUBSYSTEM-NAME=SPOOL  
[ ,SUBSYSTEM-PARAMETER=<string>]
```

The following can be specified for <string>:

```
'[CALL=<call>]'
```

The following can be specified for <call>:

WAIT or EJECT

PRM subsystems

```
/STOP-SUBSYSTEM SUBSYSTEM-NAME=<prm>
```

The following can be specified for <prm>:

PRMMAN or PRMPRES

Dependencies

For the dependencies between the SPOOL, PRMMAN and PRMPRES subsystems to be observed, these subsystems must be

– loaded in a certain order:

1. /START-SUBSYSTEM SUBSYSTEM-NAME=PRMMAN,VERSION=01.2,SYNCHRONOUS=YES
2. /START-SUBSYSTEM SUBSYSTEM-NAME=SPOOL,VERSION=04.1,SYNCHRONOUS=YES
3. /START-SUBSYSTEM SUBSYSTEM-NAME=PRMPRES,VERSION=01.2,SYNCHRONOUS=YES

The **SYNCHRONOUS** operand guarantees that SPOOL is not started until PRMMAN is loaded, and that PRMPRES is not started until SPOOL and PRMMAN are loaded.

– unloaded in a certain order:

1. /STOP-SUBSYSTEM SUBSYSTEM-NAME=PRMPRES,VERSION=01.2,SYNCHRONOUS=YES
2. /STOP-SUBSYSTEM SUBSYSTEM-NAME=SPOOL,VERSION=04.1,SYNCHRONOUS=YES
3. /STOP-SUBSYSTEM SUBSYSTEM-NAME=PRMMAN,VERSION=01.2,SYNCHRONOUS=YES

The **SYNCHRONOUS** operand guarantees that PRMMAN is not interrupted until PRMPRES is unloaded, and that PRMMAN is not interrupted until SPOOL is unloaded.

10 Appendix

10.1 SDF syntax representation

Below is an example of the syntax representation of a command in a manual. The command format consists of a field with the command name. This is followed by a list of all operands, accompanied by their possible values. Operand values which introduce structures and the operands dependent on these operands are listed separately.

HELP-SDF	Alias: HPSPDF
GUIDANCE-MODE = *NO / *YES	
,SDF-COMMANDS = *NO / *YES	
,ABBREVIATION-RULES = *NO / *YES	
,GUIDED-DIALOG = *YES (...)	
*YES(...)	
SCREEN-STEPS = *NO / *YES	
,SPECIAL-FUNCTIONS = *NO / *YES	
,FUNCTION-KEYS = *NO / *YES	
,NEXT-FIELD = *NO / *YES	
,UNGUIDED-DIALOG = *YES (...) / *NO	
*YES(...)	
SPECIAL-FUNCTIONS = *NO / *YES	
,FUNCTION-KEYS = *NO / *YES	

Syntax representation of the user command HELP-SDF

This syntax description is valid for SDF Version 4.1A. The syntax of the SDF command/statement language is explained in the following three tables.

“Notational conventions” table

The meanings of the special characters and the notation used to describe command and statement formats are explained in the table on 399ff.

“Data types” table

Variable operand values are represented in SDF by data types. Each data type represents a specific set of values. The number of data types is limited to those described in the table on page 401ff.

The description of the data types is valid for the entire set of commands/statements. Therefore only deviations (if any) from the attributes described here are explained in the relevant operand descriptions.

“Suffixes for data types” table

Data type suffixes define additional rules for data type input. They contain a length or interval specification and can be used to limit the set of values (suffix begins with *without*), extend it (suffix begins with *with*), or declare a particular task mandatory (suffix begins with *mandatory*). The following short forms are used in this manual for data type suffixes:

cat-id	cat
completion	compl
correction-state	corr
generation	gen
lower-case	low
manual-release	man
odd-possible	odd
path-completion	path-compl
separators	sep
temporary-file	temp-file
underscore	under
user-id	user
version	vers
wildcard-constr	wild-constr
wildcards	wild

The description of the ‘integer’ data type in the table on page 407ff contains a number of items in italics; the italics are not part of the syntax and are only used to make the table easier to read.

For special data types that are checked by the implementation, the table contains suffixes printed in italics (see the *special* suffix) which are not part of the syntax.

The description of the data type suffixes is valid for the entire set of commands/statements. Therefore only deviations (if any) from the attributes described here are explained in the relevant operand descriptions.

Notational conventions

Representation	Meaning	Examples
UPPERCASE LETTERS	Uppercase letters denote keywords. The keywords for constant operand values begin with *	HELP-SDF
UPPERCASE LETTERS in boldface	Uppercase letters printed in boldface denote guaranteed or suggested abbreviations of keywords.	SCREEN-STEPS = *NO
=	The equals sign connects an operand name with the associated operand values.	GUIDANCE-MODE = *YES
< >	Angle brackets denote variables whose range of values is described by data types and suffixes (see tables starting on pages 401 and 407).	GUIDANCE-MODE = *NO
<u>Underscoring</u>	Underscoring denotes the default value of an operand.	SYNTAX-FILE = <filename 1..54>
/	A slash serves to separate alternative operand values.	GUIDANCE-MODE = *NO
(...)	Parentheses denote operand values that initiate a structure.	NEXT-FIELD = *NO / *YES
[]	Square brackets denote operand values which introduce a structure and are optional. The subsequent structure can be specified without the initiating operand value.	,UNGUIDED-DIALOG = *YES (...)/ *NO
Indentation	Indentation indicates that the operand is dependent on a higher-ranking operand.	SELECT = [*BY-ATTRIBUTES](...)
		,GUIDED-DIALOG = *YES (...) *YES(...) | SCREEN-STEPS = *NO / *YES

Metasyntax (part 1 of 2)

Representation	Meaning	Examples
<p style="text-align: center;">|</p> <p>,</p> <p>list-poss(n):</p> <p>Alias:</p>	<p>A vertical bar identifies related operands within a structure. Its length marks the beginning and end of a structure. A structure may contain further structures. The number of vertical bars preceding an operand corresponds to the depth of the structure.</p> <p>A comma precedes further operands at the same structure level.</p> <p>The entry “list-poss” signifies that a list of operand values can be given at this point. If (n) is present, it means that the list must not have more than n elements. A list of more than one element must be enclosed in parentheses.</p> <p>The name that follows represents a guaranteed alias for the command or statement name.</p>	<p>SUPPORT = *TAPE(...)</p> <p style="padding-left: 20px;">*TAPE(...)</p> <p style="padding-left: 40px;">VOLUME = *ANY(...)</p> <p style="padding-left: 60px;">*ANY(...)</p> <p style="padding-left: 80px;">...</p> <p>GUIDANCE-MODE = *NO / *YES</p> <p>,SDF-COMMANDS = *NO / *YES</p> <p>list-poss: *SAM / *ISAM</p> <p>list-poss(40): <structured-name 1..30></p> <p>list-poss(256): *OMF / *SYSLST(...) / <filename 1..54></p> <p>HELP-SDF Alias: HPSDF</p>

Metasyntax (part 2 of 2)

Data types

Data type	Character set	Special rules
alphanum-name	A...Z 0...9 \$, #, @	
cat-id	A...Z 0...9	Not more than 4 characters; must not begin with the string PUB
command-rest	freely selectable	
composed-name	A...Z 0...9 \$, #, @ hyphen period catalog ID	Alphanumeric string that can be split into multiple substrings by means of a period or hyphen. If a file name can also be specified, the string may begin with a catalog ID in the form :cat: (see data type filename).
c-string	EBCDIC character	Must be enclosed within single quotes; the letter C may be prefixed; any single quotes occurring within the string must be entered twice.
date	0...9 Structure identifier: hyphen	Input format: yyyy-mm-dd yyyy: year; optionally 2 or 4 digits mm: month dd: day
device	A...Z 0...9 hyphen	Character string, max. 8 characters in length, corresponding to a device available in the system. In guided dialog, SDF displays the valid operand values. For notes on possible devices, see the relevant operand description.
fixed	+, - 0...9 period	Input format: [sign][digits].[digits] [sign]: + or - [digits]: 0...9 must contain at least one digit, but may contain up to 10 characters (0...9, period) apart from the sign.

Data types (part 1 of 6)

Data type	Character set	Special rules
filename	A...Z 0...9 \$, #, @ hyphen period	<p>Input format:</p> $[:cat:][\$user.] \left\{ \begin{array}{l} \text{file} \\ \text{file(no)} \\ \text{group} \\ \text{group} \left\{ \begin{array}{l} (*abs) \\ (+rel) \\ (-rel) \end{array} \right\} \end{array} \right\}$ <p>:cat: optional entry of the catalog identifier; character set limited to A...Z and 0...9; maximum of 4 characters; must be enclosed in colons; default value is the catalog identifier assigned to the user ID, as specified in the user catalog.</p> <p>\$user. optional entry of the user ID; character set is A...Z, 0...9, \$, #, @; maximum of 8 characters; first character cannot be a digit; \$ and period are mandatory; default value is the user's own ID.</p> <p>\$. (special case) system default ID</p> <p>file file or job variable name; may be split into a number of partial names using a period as a delimiter: name₁[.name₂[...]] name_i does not contain a period and must not begin or end with a hyphen; file can have a max. length of 41 characters; it must not begin with a \$ and must include at least one character from the range A...Z.</p>

Data types (part 2 of 6)

Data type	Character set	Special rules
filename (continued)		<p>#file (special case) @file (special case) # or @ used as the first character indicates temporary files or job variables, depending on system generation.</p> <p>file(no) tape file name no: version number; character set is A...Z, 0...9, \$, #, @. Parentheses must be specified.</p> <p>group name of a file generation group (character set: as for "file")</p> <p>group $\left\{ \begin{array}{l} (*abs) \\ (+rel) \\ (-rel) \end{array} \right\}$</p> <p>(*abs) absolute generation number (1-9999); * and parentheses must be specified.</p> <p>(+rel) (-rel) relative generation number (0-99); sign and parentheses must be specified.</p>
integer	0...9, +, -	+ or -, if specified, must be the first character.
name	A...Z 0...9 \$, #, @	Must not begin with 0...9.

Data types (part 3 of 6)

Data type	Character set	Special rules
partial-filename	A...Z 0...9 \$, #, @ hyphen period	Input format: [:cat:][\$user.][partname.] :cat:see filename \$user.see filename partname optional entry of the initial part of a name common to a number of files or file generation groups in the form: name ₁ . [name ₂ . [...]] name _i (see filename). The final character of “partname” must be a period. At least one of the parts :cat:, \$user. or partname must be specified.
posix-filename	A...Z 0...9 special characters	String with a length of up to 255 characters; consists of either one or two periods or of alphanumeric characters and special characters. The special characters must be escaped with a preceding \ (backslash); the / is not allowed. Must be enclosed within single quotes if alternative data types are permitted, separators are used, or the first character is a ?, ! or ^. A distinction is made between uppercase and lowercase.
posix-pathname	A...Z 0...9 special characters structure identifier: slash	Input format: [/]part ₁ /.../part _n where part _i is a posix-filename; max. 1024 characters; must be enclosed within single quotes if alternative data types are permitted, separators are used, or the first character is a ?, ! or ^.

Data types (part 4 of 6)

Data type	Character set	Special rules
product-version	A...Z 0...9 period single quote	Input format: $[[C]'][V][m].naso[']$ <div style="margin-left: 150px;"> $\begin{array}{c} | \\ \text{Correction status} \\ | \\ \text{Release status} \end{array}$ </div> <p>where m, n, s and o are digits and a is a letter. Whether the release and/or correction status may/must be specified depends on the suffixes to the data type (see suffixes without-corr, without-man, mandatory-man and mandatory-corr).</p> <p>product-version may be enclosed within single quotes (possibly with a preceding C). The specification of the version may begin with the letter V.</p>
structured-name	A...Z 0...9 \$, #, @ hyphen	Alphanumeric string which may comprise a number of substrings separated by a hyphen. First character: A...Z or \$, #, @
text	freely selectable	For the input format, see the relevant operand descriptions.
time	0...9 structure identifier: colon	Time-of-day entry: Input format: $\left. \begin{array}{l} hh:mm:ss \\ hh:mm \\ hh \end{array} \right\}$ $\left. \begin{array}{l} hh:\text{hours} \\ mm:\text{minutes} \\ ss:\text{seconds} \end{array} \right\}$ Leading zeros may be omitted
vsn	a) A...Z 0...9 b) A...Z 0...9 \$, #, @	a) Input format: pvsid.sequence-no max. 6 characters pvsid: 2-4 characters; PUB must not be entered sequence-no: 1-3 characters b) Max. 6 characters; PUB may be prefixed, but must not be followed by \$, #, @.

Data types (part 5 of 6)

Data type	Character set	Special rules
x-string	Hexadecimal: 00...FF	Must be enclosed in single quotes; must be prefixed by the letter X. There may be an odd number of characters.
x-text	Hexadecimal: 00...FF	Must not be enclosed in single quotes; the letter X must not be prefixed. There may be an odd number of characters.

Data types (part 6 of 6)

Suffixes for data types

Suffix	Meaning
<i>x..y unit</i>	<p>With data type “integer”: interval specification</p> <p><i>x</i> minimum value permitted for “integer”. <i>x</i> is an (optionally signed) integer.</p> <p><i>y</i> maximum value permitted for “integer”. <i>y</i> is an (optionally signed) integer.</p> <p><i>unit</i> with “integer” only: additional units. The following units may be specified:</p> <p><i>days</i> <i>byte</i> <i>hours</i> <i>2Kbyte</i> <i>minutes</i> <i>4Kbyte</i> <i>seconds</i> <i>Mbyte</i></p>
<i>x..y special</i>	<p>With the other data types: length specification For data types <i>catid</i>, <i>date</i>, <i>device</i>, <i>product-version</i>, <i>time</i> and <i>vsn</i> the length specification is not displayed.</p> <p><i>x</i> minimum length for the operand value; <i>x</i> is an integer.</p> <p><i>y</i> maximum length for the operand value; <i>y</i> is an integer.</p> <p><i>x=y</i> the length of the operand value must be precisely <i>x</i>.</p> <p><i>special</i> Specification of a suffix for describing a special data type that is checked by the implementation. “special” can be preceded by other suffixes. The following specifications are used:</p> <p><i>arithm-expr</i> arithmetic expression (SDF-P) <i>bool-expr</i> logical expression (SDF-P) <i>string-expr</i> string expression (SDF-P) <i>expr</i> freely selectable expression (SDF-P) <i>cond-expr</i> conditional expression (JV)</p>
<i>with</i>	<p>Extends the specification options for a data type.</p> <p><i>-compl</i> When specifying the data type “date”, SDF expands two-digit year specifications in the form <i>yy-mm-dd</i> to:</p> <p> 20yy-mm-dd if <i>yy</i> < 60 19yy-mm-dd if <i>yy</i> ≥ 60</p> <p><i>-low</i> Uppercase and lowercase letters are differentiated.</p> <p><i>-path-compl</i> For specifications for the data type “filename”, SDF adds the catalog and/or user ID if these have not been specified.</p>

Data type suffixes (part 1 of 7)

Suffix	Meaning												
with (contd.) -wild(n)	<p>Parts of names may be replaced by the following wildcards. n denotes the maximum input length when using wildcards. Due to the introduction of the data types posix-filename and posix-pathname, SDF now accepts wildcards from the UNIX world (referred to below as POSIX wildcards) in addition to the usual BS2000 wildcards. Since not all commands currently support POSIX wildcards, their use for data types other than posix-filename and posix-pathname can lead to semantic errors.</p> <p>Only POSIX wildcards or only BS2000 wildcards should be used within a search pattern. Only POSIX wildcards are allowed for the data types posix-filename and posix-pathname. If a pattern can be matched more than once in a string, the first match is used.</p> <table border="1"> <thead> <tr> <th>BS2000 wildcards</th> <th>Meaning</th> </tr> </thead> <tbody> <tr> <td>*</td> <td>Replaces an arbitrary (even empty) character string. If the string concerned starts with *, then the * must be entered twice in succession if it is followed by other characters and if the character string entered does not contain at least one other wildcard.</td> </tr> <tr> <td>Terminating period</td> <td>Partially-qualified entry of a name. Corresponds implicitly to the string ".*", i.e. at least one other character follows the period.</td> </tr> <tr> <td>/</td> <td>Replaces any single character.</td> </tr> <tr> <td><S_x:S_y></td> <td> Replaces a string that meets the following conditions: <ul style="list-style-type: none"> – It is at least as long as the shortest string (S_x or S_y) – It is not longer than the longest string (S_x or S_y) – It lies between S_x and S_y in the alphabetic collating sequence; numbers are sorted after letters (A...Z0...9) – S_x can also be an empty string (which is in the first position in the alphabetic collating sequence) – S_y can also be an empty string, which in this position stands for the string with the highest possible code (contains only the characters X'FF') </td> </tr> <tr> <td><S₁,...></td> <td>Replaces all strings that match any of the character combinations specified by s. s may also be an empty string. Any such string may also be a range specification "S_x:S_y" (see above).</td> </tr> </tbody> </table>	BS2000 wildcards	Meaning	*	Replaces an arbitrary (even empty) character string. If the string concerned starts with *, then the * must be entered twice in succession if it is followed by other characters and if the character string entered does not contain at least one other wildcard.	Terminating period	Partially-qualified entry of a name. Corresponds implicitly to the string ".*", i.e. at least one other character follows the period.	/	Replaces any single character.	<S _x :S _y >	Replaces a string that meets the following conditions: <ul style="list-style-type: none"> – It is at least as long as the shortest string (S_x or S_y) – It is not longer than the longest string (S_x or S_y) – It lies between S_x and S_y in the alphabetic collating sequence; numbers are sorted after letters (A...Z0...9) – S_x can also be an empty string (which is in the first position in the alphabetic collating sequence) – S_y can also be an empty string, which in this position stands for the string with the highest possible code (contains only the characters X'FF') 	<S ₁ ,...>	Replaces all strings that match any of the character combinations specified by s. s may also be an empty string. Any such string may also be a range specification "S _x :S _y " (see above).
BS2000 wildcards	Meaning												
*	Replaces an arbitrary (even empty) character string. If the string concerned starts with *, then the * must be entered twice in succession if it is followed by other characters and if the character string entered does not contain at least one other wildcard.												
Terminating period	Partially-qualified entry of a name. Corresponds implicitly to the string ".*", i.e. at least one other character follows the period.												
/	Replaces any single character.												
<S _x :S _y >	Replaces a string that meets the following conditions: <ul style="list-style-type: none"> – It is at least as long as the shortest string (S_x or S_y) – It is not longer than the longest string (S_x or S_y) – It lies between S_x and S_y in the alphabetic collating sequence; numbers are sorted after letters (A...Z0...9) – S_x can also be an empty string (which is in the first position in the alphabetic collating sequence) – S_y can also be an empty string, which in this position stands for the string with the highest possible code (contains only the characters X'FF') 												
<S ₁ ,...>	Replaces all strings that match any of the character combinations specified by s. s may also be an empty string. Any such string may also be a range specification "S _x :S _y " (see above).												

Data type suffixes (part 2 of 7)

Suffix	Meaning														
with-wild(n) (continued)	<p>-s</p> <p>Replaces all strings that do not match the specified string <i>s</i>. The minus sign may only appear at the beginning of string <i>s</i>. Within the data types full-filename or partial-filename the negated string -s can be used exactly once, i.e. -s can replace one of the three name components: cat, user or file.</p> <p>Wildcards are not permitted in generation and version specifications for file names. Only systems support may use wildcards in user IDs. Wildcards cannot be used to replace the delimiters in name components cat (colon) and user (\$ and period).</p> <table border="1"> <thead> <tr> <th>POSIX wildcards</th> <th>Meaning</th> </tr> </thead> <tbody> <tr> <td>*</td> <td>Replaces any single string (including an empty string). An * appearing at the first position must be duplicated if it is followed by other characters and if the entered string does not include at least one further wildcard.</td> </tr> <tr> <td>?</td> <td>Replaces any single character; not permitted as the first character outside single quotes.</td> </tr> <tr> <td>[c_x-c_y]</td> <td>Replaces any single character from the range defined by c_x and c_y, including the limits of the range. c_x and c_y must be normal characters.</td> </tr> <tr> <td>[s]</td> <td>Replaces exactly one character from string <i>s</i>. The expressions [c_x-c_y] and [s] can be combined into [s₁c_x-c_ys₂]</td> </tr> <tr> <td>[!c_x-c_y]</td> <td>Replaces exactly one character not in the range defined by c_x and c_y, including the limits of the range. c_x and c_y must be normal characters. The expressions [!c_x-c_y] and [!s] can be combined into [!s₁c_x-c_ys₂]</td> </tr> <tr> <td>[!s]</td> <td>Replaces exactly one character not contained in string <i>s</i>. The expressions [!s] and [!c_x-c_y] can be combined into [!s₁c_x-c_ys₂]</td> </tr> </tbody> </table>	POSIX wildcards	Meaning	*	Replaces any single string (including an empty string). An * appearing at the first position must be duplicated if it is followed by other characters and if the entered string does not include at least one further wildcard.	?	Replaces any single character; not permitted as the first character outside single quotes.	[c _x -c _y]	Replaces any single character from the range defined by c _x and c _y , including the limits of the range. c _x and c _y must be normal characters.	[s]	Replaces exactly one character from string <i>s</i> . The expressions [c _x -c _y] and [s] can be combined into [s ₁ c _x -c _y s ₂]	[!c _x -c _y]	Replaces exactly one character not in the range defined by c _x and c _y , including the limits of the range. c _x and c _y must be normal characters. The expressions [!c _x -c _y] and [!s] can be combined into [!s ₁ c _x -c _y s ₂]	[!s]	Replaces exactly one character not contained in string <i>s</i> . The expressions [!s] and [!c _x -c _y] can be combined into [!s ₁ c _x -c _y s ₂]
POSIX wildcards	Meaning														
*	Replaces any single string (including an empty string). An * appearing at the first position must be duplicated if it is followed by other characters and if the entered string does not include at least one further wildcard.														
?	Replaces any single character; not permitted as the first character outside single quotes.														
[c _x -c _y]	Replaces any single character from the range defined by c _x and c _y , including the limits of the range. c _x and c _y must be normal characters.														
[s]	Replaces exactly one character from string <i>s</i> . The expressions [c _x -c _y] and [s] can be combined into [s ₁ c _x -c _y s ₂]														
[!c _x -c _y]	Replaces exactly one character not in the range defined by c _x and c _y , including the limits of the range. c _x and c _y must be normal characters. The expressions [!c _x -c _y] and [!s] can be combined into [!s ₁ c _x -c _y s ₂]														
[!s]	Replaces exactly one character not contained in string <i>s</i> . The expressions [!s] and [!c _x -c _y] can be combined into [!s ₁ c _x -c _y s ₂]														

Data type suffixes (part 3 of 7)

Suffix	Meaning										
with (contd.) -wild- constr(n)	<p>Specification of a constructor string that defines how new names are to be constructed from a previously specified selector (i.e. a selection string with wildcards). See with-wild. n denotes the maximum input length when using wildcards.</p> <p>The constructor may consist of constant strings and patterns. A pattern (character) is replaced by the string that was selected by the corresponding pattern in the selector.</p> <p>The following wildcards may be used in constructors:</p> <table border="1"> <thead> <tr> <th>Wildcard</th> <th>Meaning</th> </tr> </thead> <tbody> <tr> <td>*</td> <td>Corresponds to the string selected by the wildcard * in the selector.</td> </tr> <tr> <td>Terminating period</td> <td>Corresponds to the partially-qualified specification of a name in the selector; corresponds to the string selected by the terminating period in the selector.</td> </tr> <tr> <td>/ or ?</td> <td>Corresponds to the character selected by the / or ? wildcard in the selector.</td> </tr> <tr> <td><n></td> <td>Corresponds to the string selected by the n-th wildcard in the selector, where n is an integer.</td> </tr> </tbody> </table> <p>Allocation of wildcards to corresponding wildcards in the selector: All wildcards in the selector are numbered from left to right in ascending order (global index). Identical wildcards in the selector are additionally numbered from left to right in ascending order (wildcard-specific index). Wildcards can be specified in the constructor by one of two mutually exclusive methods:</p> <ol style="list-style-type: none"> 1. Wildcards can be specified via the global index: <n> 2. The same wildcard may be specified as in the selector; substitution occurs on the basis of the wildcard-specific index. For example: the second “/” corresponds to the string selected by the second “/” in the selector 	Wildcard	Meaning	*	Corresponds to the string selected by the wildcard * in the selector.	Terminating period	Corresponds to the partially-qualified specification of a name in the selector; corresponds to the string selected by the terminating period in the selector.	/ or ?	Corresponds to the character selected by the / or ? wildcard in the selector.	<n>	Corresponds to the string selected by the n-th wildcard in the selector, where n is an integer.
Wildcard	Meaning										
*	Corresponds to the string selected by the wildcard * in the selector.										
Terminating period	Corresponds to the partially-qualified specification of a name in the selector; corresponds to the string selected by the terminating period in the selector.										
/ or ?	Corresponds to the character selected by the / or ? wildcard in the selector.										
<n>	Corresponds to the string selected by the n-th wildcard in the selector, where n is an integer.										

Data type suffixes (part 4 of 7)

Suffix	Meaning
with-wild- constr (continued)	<p>The following rules must be observed when specifying a constructor:</p> <ul style="list-style-type: none"> – The constructor must include at least one wildcard of the selector. – If the string selected by the wildcard <...> or [...] is to be used in the constructor, the index notation must be selected. – The index notation must be selected if the string identified by a wildcard in the selector is to be used more than once in the constructor. For example: if the selector “A/” is specified, the constructor “A<n><n>” must be specified instead of “A/”. – The wildcard * can also be an empty string. Note that if multiple asterisks appear in sequence (even with further wildcards), only the last asterisk can be a non-empty string, e.g. for “*****” or “*//*”. – Valid names must be produced by the constructor. This must be taken into account when specifying both the constructor and the selector. – Depending on the constructor, identical names may be constructed from different names selected by the selector. For example: “A/*” selects the names “A1” and “A2”; the constructor “B*” generates the same new name “B” in both cases. To prevent this from occurring, all wildcards of the selector should be used at least once in the constructor. – If the selector ends with a period, the constructor must also end with a period, and vice versa. The string that is selected via the period at the end of the selector cannot be specified in the constructor via the global index.

Data type suffixes (part 5 of 7)

Suffix	Meaning																				
with-constr (continued)	Examples:																				
	<table border="1"> <thead> <tr> <th>Selector</th> <th>Selection</th> <th>Constructor</th> <th>New name</th> </tr> </thead> <tbody> <tr> <td>A//*</td> <td>AB1 AB2 A.B.C</td> <td>D<3><2></td> <td>D1 D2 D.CB</td> </tr> <tr> <td>C.<A:C>/<D,F></td> <td>C.AAD C.ABD C.BAF C.BBF</td> <td>G.<1>.<3>.XY<2></td> <td>G.A.D.XYA G.A.D.XYB G.B.F.XYA G.B.F.XYB</td> </tr> <tr> <td>C.<A:C>/<D,F></td> <td>C.AAD C.ABD C.BAF C.BBF</td> <td>G.<1>.<2>.XY<2></td> <td>G.A.A.XYA G.A.B.XYB G.B.A.XYA G.B.B.XYB</td> </tr> <tr> <td>A//B</td> <td>ACDB ACEB AC.B A.CB</td> <td>G/XY/</td> <td>GCXYD GCXYE GCXY.¹⁾ G.XYC</td> </tr> </tbody> </table>	Selector	Selection	Constructor	New name	A//*	AB1 AB2 A.B.C	D<3><2>	D1 D2 D.CB	C.<A:C>/<D,F>	C.AAD C.ABD C.BAF C.BBF	G.<1>.<3>.XY<2>	G.A.D.XYA G.A.D.XYB G.B.F.XYA G.B.F.XYB	C.<A:C>/<D,F>	C.AAD C.ABD C.BAF C.BBF	G.<1>.<2>.XY<2>	G.A.A.XYA G.A.B.XYB G.B.A.XYA G.B.B.XYB	A//B	ACDB ACEB AC.B A.CB	G/XY/	GCXYD GCXYE GCXY. ¹⁾ G.XYC
	Selector	Selection	Constructor	New name																	
	A//*	AB1 AB2 A.B.C	D<3><2>	D1 D2 D.CB																	
	C.<A:C>/<D,F>	C.AAD C.ABD C.BAF C.BBF	G.<1>.<3>.XY<2>	G.A.D.XYA G.A.D.XYB G.B.F.XYA G.B.F.XYB																	
C.<A:C>/<D,F>	C.AAD C.ABD C.BAF C.BBF	G.<1>.<2>.XY<2>	G.A.A.XYA G.A.B.XYB G.B.A.XYA G.B.B.XYB																		
A//B	ACDB ACEB AC.B A.CB	G/XY/	GCXYD GCXYE GCXY. ¹⁾ G.XYC																		
1) The period at the end of the name may violate naming conventions (e.g. for fully-qualified file names).																					
without	Restricts the specification options for a data type.																				
-cat	Specification of a catalog ID is not permitted.																				
-corr	Input format: [[C]'][V][m]m.na['] Specifications for the data type product-version must not include the correction status.																				
-gen	Specification of a file generation or file generation group is not permitted.																				
-man	Input format: [[C]'][V][m]m.n['] Specifications for the data type product-version must not include either release or correction status.																				
-odd	The data type x-text permits only an even number of characters.																				
-sep	With the data type "text", specification of the following separators is not permitted: ; = () < > _ (i.e. semicolon, equals sign, left and right parentheses, greater than, less than, and blank).																				
-temp-file	Specification of a temporary file is not permitted (see #file or @file under filename).																				
-user	Specification of a user ID is not permitted.																				

Data type suffixes (part 6 of 7)

Suffix	Meaning
without (contd.) -vers	Specification of the version (see “file(no)”) is not permitted for tape files.
-wild	The data types posix-filename and posix-pathname must not contain a pattern (character).
mandatory -corr -man -quotes	<p>Certain specifications are necessary for a data type.</p> <p>Input format: <code>[[C]'][V][m]m.naso[']</code> Specifications for the data type product-version must include the correction status and therefore also the release status.</p> <p>Input format: <code>[[C]'][V][m]m.na[so][']</code> Specifications for the data type product-version must include the release status. Specification of the correction status is optional if this is not prohibited by the use of the suffix without-corr.</p> <p>Specifications for the data types posix-filename and posix-pathname must be enclosed in single quotes.</p>

Data type suffixes (part 7 of 7)

10.2 The standard character sets of the resource library PRFILE

Name of the character set	Line density	Character density	Code for blanks	No. of characters in the character set	Font type
CHARS 001	LPI: 24	CPI: 20	SPACE: 40	# OF CHARS: 058	
CHARS 002	LPI: 06	CPI: 06	SPACE: 40	# OF CHARS: 059	
CHARS 100	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR-B1
CHARS 101	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 128	OCR-B1
CHARS 102	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR-B1
CHARS 103	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR-B1
CHARS 104	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 127	OCR-B1
CHARS 105	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 127	OCR-B1/OCR-A1
CHARS 106	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 063	OCR-B1
CHARS 108	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR-B1
CHARS 109	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 127	OCR-B1
CHARS 110	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 127	OCR-B1
CHARS 111	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR-B1
CHARS 112	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 127	OCR-B1
CHARS 124	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR-B1
CHARS 125	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR-B1
CHARS 126	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 096	OCR-B1
CHARS 127	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 094	OCR-B1
CHARS 128	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR-B1/OCR-A1
CHARS 129	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 062	OCR-B1
CHARS 130	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR-B1
CHARS 131	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR-B1
CHARS 132	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 063	OCR-B1
CHARS 133	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 095	OCR-B1
CHARS 134	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 094	OCR-B1
CHARS 200	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR-A1
CHARS 201	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 063	OCR-A1
CHARS 202	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 249	GOTHIC T12
CHARS 203	LPI: 08	CPI: 15	SPACE: 40	# OF CHARS: 249	GOTHIC T15

continued ➡

Name of the character set	Line density	Character density	Code for blanks	No. of characters in the character set	Font type
CHARS 204	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 249	GOTHIC B10 BOLD
CHARS 205	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 249	GOTHIC B12 BOLD
CHARS 206	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 249	GOTHIC INVERSE
CHARS 207	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 249	GOTHIC 12 ITALIC
CHARS 208	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 249	GOTHIC L12
CHARS 209	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 249	GOTHIC L12 BOLD
CHARS 210	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 249	ORATOR
CHARS 211	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 249	ORATOR BOLD
CHARS 212	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 249	PICA
CHARS 213	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 249	ELITE
CHARS 214	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 249	SERIFA
CHARS 215	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 249	SERIFA 12
CHARS 216	LPI: 08	CPI: 15	SPACE: 40	# OF CHARS: 249	SERIFA 15
CHARS 217	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 249	SERIFA 12 BOLD
CHARS 218	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 249	SERIFA ITALIC
CHARS 219	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 249	SERIFA 12 ITALIC
CHARS 221	LPI: 24	CPI: 20	SPACE: 40	# OF CHARS: 249	VIRUS 20 LIGHT
CHARS 222	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 249	ELITE BOLD
CHARS 224	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 249	COURIER
CHARS 225	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 249	COURIER 12
CHARS 229	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 248	SCRIPT 12
CHARS 230	LPI: 08	CPI: ¹⁰ ₁)	SPACE: 40	# OF CHARS: 243	GOTHIC PROP
CHARS 231	LPI: 06	CPI: ¹⁰ ₁)	SPACE: 40	# OF CHARS: 243	BELINDA PROP
CHARS 232	LPI: 06	CPI: ¹⁰ ₁)	SPACE: 40	# OF CHARS: 248	BELINDA ITALIC PROP
CHARS 238	LPI: 12	CPI: 15	SPACE: 40	# OF CHARS: 243	GOTHIC 15/12
CHARS 297	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 129	GEMADA KYR 12/6
CHARS 298	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 249	OCR-B1/OCR-A1
CHARS 299	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 249	GOTHIC T10
CHARS 300	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	GOTHIC T10
CHARS 304	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 063	GOTHIC T10
CHARS 305	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 127	GOTHIC T10

continued →

Name of the character set	Line density	Character density	Code for blanks	No. of characters in the character set	Font type
CHARS 309	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	G10 UNDERSCORE
CHARS 310	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	GOTHIC B10 BOLD
CHARS 311	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 116	GOTHIC B10 BOLD
CHARS 312	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 121	GOTHIC T10
CHARS 313	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 063	GOTHIC B10 BOLD
CHARS 315	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 121	GOTHIC 12 ITALIC
CHARS 316	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 064	GOTHIC 12 ITALIC
CHARS 318	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 063	GOTHIC 12 ITALIC
CHARS 320	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 064	GOTHIC T12
CHARS 322	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 121	GOTHIC T12
CHARS 323	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 064	GOTHIC B12 BOLD
CHARS 324	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 063	GOTHIC B12 BOLD
CHARS 325	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 115	GOTHIC B12 BOLD
CHARS 326	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 063	GOTHIC T12
CHARS 331	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 127	GOTHIC T12
CHARS 332	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 063	GOTHIC T12
CHARS 334	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 117	GOTHIC T12
CHARS 335	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 127	GOTHIC 12 ITALIC
CHARS 336	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 127	GOTHIC 12 ITALIC
CHARS 344	LPI: 06	CPI: 15	SPACE: 40	# OF CHARS: 064	GOTHIC 15/12
CHARS 350	LPI: 08	CPI: 15	SPACE: 40	# OF CHARS: 064	GOTHIC 15/10
CHARS 351	LPI: 08	CPI: 15	SPACE: 40	# OF CHARS: 121	GOTHIC 15/10
CHARS 352	LPI: 08	CPI: 15	SPACE: 40	# OF CHARS: 063	GOTHIC 15/10
CHARS 359	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 127	GOTHIC 15/10 GOTHIC B10 BOLD
CHARS 370	LPI: 06	CPI: 15	SPACE: 40	# OF CHARS: 064	GOTHIC 15/12
CHARS 371	LPI: 06	CPI: 15	SPACE: 40	# OF CHARS: 121	GOTHIC 15/12
CHARS 372	LPI: 06	CPI: 15	SPACE: 40	# OF CHARS: 063	GOTHIC 15/12
CHARS 500	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	OCR B1/OCR-A1
CHARS 520	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 111	OCR-A1
CHARS 530	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 127	GOTHIC B10 BOLD

continued ➡

Name of the character set	Line density	Character density	Code for blanks	No. of characters in the character set	Font type
CHARS 531	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 128	COSIMA
CHARS 601	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 127	OCR-B1 GEMADA KYR 12/6
CHARS 621	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 127	GEMADA ARAB
CHARS 700	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	PICA
CHARS 701	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 114	PICA
CHARS 702	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	TEXT
CHARS 703	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 063	PICA
CHARS 704	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 063	TEXT
CHARS 705	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 114	PICA
CHARS 722	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 095	COSIMA
CHARS 791	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	BOLD
CHARS 796	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	BOLD
CHARS 830	LPI: 08	CPI: 12	SPACE: 40	# OF CHARS: 075	SERIFA 12 ITALIC
CHARS 840	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 086	CONTURA
CHARS 848	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 064	COURIER
CHARS 856	LPI: 06	CPI: 10	SPACE: 80	# OF CHARS: 127	APL CAROLINE ITALIC
CHARS 900	LPI: 06	CPI: 10	SPACE: 40	# OF CHARS: 037	FORMAT 10 B2/4/6
CHARS 920	LPI: 06	CPI: 12	SPACE: 40	# OF CHARS: 037	FORMAT 12/6 B2/4/6
CHARS 950	LPI: 06	CPI: 15	SPACE: 40	# OF CHARS: 037	FORMAT 15/6 B2/4/6
CHARS 980	LPI: 06	CPI: 15	SPACE: 40	# OF CHARS: 027	FORMAT 15/12 B3

- 1) This character set contains three different densities: 10/12/15 cpi.



Because the cpi value for the widest character of a character set is stored in the PRFILE, the message LINE TRUNCATION might appear without justification because the line was calculated according to the widest character.

10.3 EBCDIC table

	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	
0	NUL	DLE			SP	&	-									0	0
1	SOH	DC1					/		a	i			A	J		1	1
2	STX	DC2		SYN					b	k	s		B	K	S	2	2
3	ETX	DC3							c	l	t		C	L	T	3	3
4									d	m	u		D	M	U	4	4
5	HT		LF						e	n	v		E	N	V	5	5
6		BS	ETB						f	o	w		F	O	W	6	6
7	DEL		ESC	EOT					g	p	x		G	P	X	7	7
8		CAN							h	q	y		H	Q	Y	8	8
9		EM							i	r	z		I	R	Z	9	9
A					'	!	^	:									A
B	VT				.	\$	,	#				[				{	B
C	FF	FS		DC4	<	*	%	@				\					C
D	CR	IS3	ENQ	NAK	(	)	_	'				]				}	D
E	SO	RS	ACK		+	;	>	=									E
F	SI	IS1	BEL	SUB	|		?	"								~	F
	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F	

Glossary

active environment group

Component of a logical page. An active environment group contains environment parameters, e.g. map-coded fonts, page segments, the size of a page (or of an overlay) and control data for composed text blocks.

AFPDS

see *SPDS*

APA

Abbreviation for All Points Addressable. Printing technique based on the principle that every pixel on the print page can be freely addressed.

application program

Program which creates an APA print file in structured fields format or line data format.

band ID entry

A band ID entry contains a conversion table that determines which character the respective input character is to be converted to.

The loop currently required and the band ID entry are loaded into the hardware buffer of the line printer before printing begins in accordance with user requirements.

barcode data object

Object of a page segment or an overlay that contains information on the structure of a barcode. SPS uses this information to create the barcode.

The size, positioning, rotation etc. of the barcode can be specified.

baseline axis

Line print axis. This is the axis along which the text lines are arranged.

bitmap format

Format for graphics or pictures in which the image structure is determined by the number and arrangement of dots which are set or not set.

cell

Part of a complex image.

channel

Historical name for vertical tabulator. Each “channel” represents a line position on the form.

character density

An attribute of a font; measured in characters per inch (cpi).

character set

See font.

code page

Print resource which assigns a 1-byte code to each character of the font character set.

coded font

Print resource which links the code page to the font character set.

cold start

A cold start is necessary in the event of serious problems in the SPOOL queue. For a cold start the job queues must be completely recreated. A cold start means that all SPOOL jobs still in the job queue and which were not processed in the previous session are deleted without being processed.

Selective processing is possible, i.e. only specific queues are taken over. A cold start of SPOOL is also possible if the system was loaded with a warm start (i.e. only SPOOL jobs are deleted).

complex image

Special form of an image in which the entire picture is made up of cells. The advantage over a simplex image is that unnecessarily large amounts of “white” pixels do not need to be saved as well because the cell borders can be pulled much closer around the actual “black” image.

composed text page

Logical page made up exclusively of structured fields.

copy group

see *medium map*.

cpi

Abbreviation for characters per inch. Unit of measurement for the character density of a font.

data stream

A distinction is made between the input data stream (SPDS) and the output data stream (SNIPDS). The former is passed from the applications to SPOOL, while the latter is passed by the appropriate printer driver (SPS) to the printers.

device parameter file

Contains parameters for an APA printer. See *parameter file*.

document

Component of an APA print file. A document is made up of logical pages.

dpi

Abbreviation for dots per inch. Unit of measurement for the resolution capability of a printer.

duplex mode

Double-sided printing, i.e. printing on the front and back of a sheet of paper (in contrast to simplex mode).

duplex normal

Duplex option.

duplex option

Options available with double-sided printing of listing paper on twin printers. Eight variations are possible, which differ in their layout of the front and back page. The following duplex options are available:

- Duplex-Normal
- Duplex-Tumble
- R-Duplex-Normal
- R-Duplex-Tumble
- Zig-Zag-Normal
- Zig-Zag-Tumble
- R-Zig-Zag-Normal
- R-Zig-Zag-Tumble

enhanced N-UP

N-UP print procedure in which the following additional functions are supported:

- logical pages can be placed anywhere on the front or back of a sheet, with any angle of rotation and in any size
- the partition occupied by a logical page on a sheet of paper can differ in size for each logical page
- different overlays, offsets and rotations can be selected for each logical page
- overlays can be positioned relative to each partition origin
- page feed is possible on a new partition or on a new sheet.

You define the enhanced N-UP procedure in a form definition.

FGL

Forms Generation Language. A Windows-based tool with which forms can be created in the TRANS format. These forms can be imported with PRM as print resources into a PRFILE.

flip function

Function for printing on twin printers. The flip function swaps the output of the first printer with the output of the second printer, i.e. the fronts of the pages are printed on the second printer and the backs of the pages on the first printer.

floppy disk

The floppy disk is a volume. For types Falcon FJ and 3171 it has a standard memory capacity of 1924 records of 128 characters each. All other types have a standard capacity of 1898 records of 128 characters each. A single disk can store up to 19 files, and these can be defined by an individual label on the index track (track 0). An add-on for variable block length enables records to be written in lengths of 128, 256, 512, 1024 or 2048 characters, equivalent to 26, 15, 8, 4 sectors per track.

Floppy disks are read and written using a floppy disk input/output unit with byte multiplex or block multiplex channel interface adapter.

font

Fonts (character sets) are print resources used by the printer to represent text. Font resources are normally available in three different types:

- font character set: contains the pixels for every character of the font
- code page: assigns a 1-byte code to each character in the font character set
- coded font: links the code page to the character set

font character set

Print resource which contains the pixels for every character of a font.

font list

List for the printout of line data via which TRCs are assigned to the actual font to be used for printing. You can specify font lists in a page definition or in the PRINT-DOCUMENT command.

font type

Style in which the individual letters of a font are represented, e.g. Helvetica, Times, Courier.

font size

Specified in dots (1/72").

form

Entry in the SPOOL parameter file.

form definition (Formdef)

Print resource which establishes the connection between the logical page and the physical page for composed text. You use the form definition to specify how each logical page of the document is to be reproduced on the physical page.

graphic object

Object of a page segment or an overlay. A vector graphic which creates the graphic commands contained in the graphic object from the printer and is automatically adjusted to the resolution of the printer.

hard page segment

A page segment which is loaded into the printer and remains resident there until the print file is processed.

header page

Cover sheet for a listing.

high-speed printer

A particularly powerful printer. All local printers used under BS2000 are high-speed printers.

HP printer

Abbreviation in BS2000 for high-performance laser printer.

HPFILE

Control character file for high-performance laser printers (HP printers).

I axis

see *inline axis*.

image

see *image data object*.

image data object

Object of a page segment or an overlay. Image data objects (images) are raster images as they typically result from scanning, digitization or by way of a pixel-oriented “painting program”. Depending on how the image data objects are recorded, a distinction is made between:

- IM image data object: recording in bitmap format
- IO image data object: recording in SAA image format

inch

1 inch \equiv 2.54 cm.

inline axis

Character print axis. This is the axis along which the text characters are arranged.

inline resource group

Component of a print file; contains inline resources.

inline resources

Print resources which are integrated into the print file (within the inline resource group).

IPDS

see SNIPDS

job parameter file

Contains parameters for a print job; see parameter file.

landscape

A page format in which the height is shorter than the width.

line format page

Logical page made up of line data. The page is defined by data lines which are headed by a print control character. The page can also contain structured fields.

line merge

HP and HP90 printer procedure in feed suppression.

line printer

Line printers are used to output data. Unlike laser printers they print line by line.

local font identifier

Local name of a font as it is used within a logical page.

logical page

Component of a print file; an area defined by the user for each print page, which contains everything that will later be printed. A logical page is made up of objects.

logo

Graphical emblem of a company, institution etc., which can be represented, for example, by an image.

loop

A loop is loaded to control paper feed in the vertical format buffer (VFB) of a printer.

Each byte in the loop corresponds to a line on the form and contains information on the current line height and the number of the vertical tabulator (see also *channel*).

The loop can either be accessed directly using the LOOP operand or indirectly using the FORM-NAME operand in the PRINT-DOCUMENT or ASSIGN-SYSLST command.

LP-EMUL printer

Printer that is emulated as printer type 3338 and addressed via BUS through appropriate SINIX software.

lpi

Abbreviation for lines per inch. Unit of measurement for the line density of a font.

map-coded font

Reference within the print file to a font resource. The map-coded font is defined in the active environment group of the logical page and is a list of assignments between local font identifiers and font resources. Two types of assignment list are permitted:

- static: local font identifier - code page - font character set
- dynamic: local font identifier - coded font

medium map

Element of a form definition; specifies how logical pages of a document are to be reproduced on the physical page (synonym: copy group).

microline

A microline is the finest possible line. It depends on the resolution of which the printer is capable. The nonimpact printers supported by SPOOL (laser and LED printers) are capable of a resolution of 240 dots per inch. A microline is therefore 1/240 of an inch thick.

MULTIPLE-UP

Print procedure for line data which is equivalent to the N-UP procedure. The appearance of several pages on one sheet is achieved by groups of print lines being grouped on one logical page. The output, however, is still one logical page per front or back of a sheet. You define the MULTIPLE-UP procedure in a page definition.

nonimpact printer

Printers in which the characters are not created by mechanical impact (e.g. inkjet, thermal or laser printers).

N-UP

Print procedure in which one, two, three or four logical pages can be printed on a physical page on both sides of a sheet of paper. The partition occupied on the sheet by each logical page is always the same size and has the same appearance. You define the N-UP procedure in a form definition. See also enhanced N-UP.

object

Component of a logical page. Within the logical page, objects can be present more than once and in any order. The following APA objects are distinguished: text, image, page segment and overlay.

OFM

OPS Font Manager. A Windows-based tool with which forms can be created in the TRANS format. These forms can be imported with PRM as print resources into a PRFILE.

output medium

Medium on which the logical page is output. Can be listing paper or single sheets.

overlay

Overlays are prefabricated modules which are merged with the variable print data at the time of printing. They are the electronic version of a preprinted form. Overlays have their own environment definition and therefore represent an independent, unchangeable unit, in contrast to the logical page with which they are merged.

overprint

Print procedure using suppressed line feed (except HP printers, see *line merge*)

page definition (Pagedef)

Print resource which establishes the connection between logical and physical page for the line data. You use the page definition to specify how line data is to be printed.

page format

see *data map*.

page overlay

An overlay which is loaded into the printer, where it remains stored. It is defined in the page definition (synonym: hardcoded overlay).

page printer

Before they print, these printers set up at least one complete print page in the internal page memory from the data stream that comes from the computer.

page segment

Page segments are prefabricated modules which are merged with the variable print data at the time of printing. They do not have their own environment definition, but instead use the one which is active at the time the page segment is accepted. Inserted text can no longer be distinguished optically from the variable text. A distinction is made between hard page segments and soft page segments:

- a hard page segment is loaded into the printer long-term
- a soft page segment, on the other hand, is loaded into the printer only for one page to be printed and is then released again.

parameter file

Parameter files contain parameters which modify the behavior and the preset values of PRM and which are not fully supported on the user interface. Depending on whether a parameter file refers to the printer definition or the print job, we distinguish between:

- device parameter files - in which you specify parameters for a PRM printer
- job parameter files - in which you specify parameters for a print job.

PCL file

Internal file for the LP65 printer (printer type 3365) on floppy or hard disk. It contains the page definition and pointers to character sets, overlays etc.

physical page

A real page on the output medium. A physical page can contain several logical pages.

pixel

Smallest unit that can be blacked out by a printer. A pixel is 0.11 mm or 1/240 inch in size (synonyms: pel, picture element).

portrait

A page format in which the height is longer than the width.

PRFILE

Standard library which is supplied with PRM and contains a number of standard print resources. If these standard definitions do not meet your requirements, you can create your own print resources and store them in user PRFILES.

print job

A print job is initiated in BS2000 via the PRINT-DOCUMENT command and consists of

- the print file
- the specifications in the PRINT-DOCUMENT command
- the definitions in the PRFILES
- the definitions in the SPOOL parameter file
- the definitions in the device parameter files and job parameter files

print file

File which is to be output on a printer.

printer driver

System program for controlling a printer. It translates the commands of the user program into printer-specific statements and is responsible for the exchange of information between the operating system and the printer.

printer resolution

see *resolution*

print resources

Resources for font and page design to give the print file the layout and appearance the user requires. Print resources can either be integrated into the print file (inline resources) or stored in libraries (SPSLIBs). The following print resources are available:

- form definition (Formdef)
- page definition (Pagedef)
- font
- page segment
- overlay

resolution

Number of pixels in a given area. Measured in dots per inch (dpi).

resource

A component of the inline resource group or a file in a resource library; see *print resources*.

RSO

REMOTE SPOOL OUTPUT (RSO) is an unbundled software product. IT controls output to remote printers. These printers can be operated in bypass mode on data display terminals or directly on the appropriate controllers or communication computers in the TRANSDATA network.

R-Zig-Zag-Normal

Duplex option

R-Zig-Zag-Tumble

Duplex option

section record

Record which delimits a data section. This record is used for the restart procedure when there are printing problems.

SIEMPL

Conversion program which converts the print files into structured fields format. SIEMPL runs under the operating systems BS2000, UNIX, MVS and VSE.

simple image

Image in which the entire picture is an oblong area.

simplex mode

Single-sided printing, i.e. only one side of a page is printed (opposite of duplex mode).

SNIPDS

Abbreviation for Siemens Nixdorf Intelligent Printer Data Stream. Device-oriented data stream. Synonym: IPDS data stream (Intelligent Printing Data Stream).

soft page segment

A page segment that is loaded into the printer for the printing of one page only, and is then released.

SPDS

Abbreviation for Siemens Nixdorf Printer Data Stream. Data stream in the structured fields format. Synonym: AFPDS data stream (Advanced Function Printing Data Stream).

SPOOL

Abbreviation for Simultaneous Peripheral Operation OnLine. Subsystem of BS2000 which is responsible for the input and output of print data.

SPOOL parameter file

The entries in the SPOOL parameter file `$$SYSSPOOL.SPOOL.PARAMETERS` essentially include those necessary for device identification and definition.

spoolin

Data is entered into the system as a background process.

spoolout

Data is output as a background process. This is done on printers, floppy disks or tapes. Local or remote printers can be used.

SPS

Abbreviation for SPOOLAPA Print System. Printer driver for APA printers that can be run as an additional component for BS2000-SPOOL. SPS is implemented as a subsystem and linked to SPOOL; however, the actual interface for the BS2000 user is still SPOOL.

SPSERVE

BS2000 utility routine for editing the SPOOL parameter file.

SPSLIB

Abbreviation for SPOOLAPA PRINT SYSTEM LIBRARY. Standard library which is supplied with SPS and contains a number of standard print resources: form definitions, page definitions, some page segments and overlays as well as the character sets taken from the HPFILES and converted. A standard SPSLIB is supplied together with SPS for each printer resolution (240, 300, 600 dpi).

If these standard definitions do not meet your requirements, you can create your own print resources and store them in user SPSLIBs.

subline

A subline consists of five consecutive microlines (cf. microline) and is fully defined by the following four pieces of information:

1. Contents of the subline
2. Position of the subline on the print page
3. Frequency with which the subline is printed
4. Number of the first page copy and number of following page copies on which the subline is to be printed.

subsystem

To reduce the complexity of BS2000 operation, the operating system comprises functional units (subsystems). Depending on their type and function, subsystems have the following characteristics:

- Each subsystem forms a self-contained unit.
- Subsystems can be activated, stopped, continued and deactivated in the course of the session.
- Each subsystem has a name and a version number.
- A newer version of a subsystem can be exchanged for an older one.
- Subsystems are administered using dynamic subsystem management (DSSM).

system files

Every job in BS2000 is handled using logical files (= system files). The following logical files are important for SPOOL: SYSOUT, SYSLST, SYSLSTnn, SYSOPT

table reference character

or TRC. One-byte value, which can be entered in the data records of a print file and serves to select the font for line data. Each value represents the font in which the data record is to be printed. The value in the TRC is assigned to the actual font via a font list.

text

Object of a logical page, a page segment or an overlay which contains only text. A distinction is made here between text and presentation. The contents are defined by data, while the presentation can be varied very flexibly through different character sets, pitches and line spacing as well as different positions and rotations.

trace file

File in which the trace areas of the extended I/O trace are logged.

trailer page

The trailer page of a listing.

TRANS format

Format for print resources created under Windows. Print resources in the TRANS format can be transferred to BS2000 and imported into a PRFILE with PRM.

TransLib dialog

Utility routine for the management of print resources in BS2000.

TRC

see table reference character.

twin mode

Printing on twin printers.

twin printers

Two APA printers working as one unit. The overriding objective in supporting twin printers is the duplex option, i.e. double-sided printing of listing paper by turning the paper path.

TWO-UP

Print procedure in which two logical pages are printed adjacently on one sheet (tandem printing). These can be either two consecutive logical pages (mode 1), one logical page in duplicate (mode 2) or, in connection with double-sided printing, pages staggered appropriately (mode 1 in conjunction with duplex). You define the TWO-UP procedure and its mode in a form definition.

user PROFILE

Library containing user-defined print resources. See also *PROFILE*.

user SPSLIB

Library containing user-defined print resources. See also *SPSLIB*.

vector graphic

Graphic which is created by the printer itself from graphics commands in the data stream of a graphic object.

warm start

All (SPOOL) jobs still in the job queue and which were not processed in the previous session are now readied for processing.
(A SPOOL warm start is possible only after a system warm start).

X-TWO-UP

Print procedure in which two logical pages are printed adjacently on one sheet, but not from left to right as in the TWO-UP procedure, but from right to left (inverted tandem printing). You define the X-TWO-UP procedure in a form definition.

Abbreviations

APA	All Points Addressable
AFP	Advanced Function Printing
BCAM	Basic Communication Access Method
cpi	Characters Per Inch
DCM	Data Communication Management
DPA	Document Printing Architecture
DSSM	Dynamic SubSystem Management
FGL	Forms Generation Language
FGS	Form Generation System
GIP	Global Interchange Protocol
HP	High Performance
IP	Internet Protocol
ISO	International Organization for Standardization
LAN	Local Area Network
LP	Line Printer
lpi	Lines Per Inch
NEA	network input/output (German acronym)
OCR-B	Optical Character Recognition; one of the font types which was designed for automatic font recognition.
OFM	OPS Font Manager
OPS	Océ Printing Systems
PCL	Printer Communication Language
PDN	program system for remote data processing and network control
PDL	Page Description Language
PRM	Print Resource Management
RSO	Remote Spool Output
SAM	Sequential Access Method

Abbreviations

SPOOL	Simultaneous Peripheral Operation OnLine
SPS	SPOOLAPA Print System
TCP	Transmission Control Protocol
TSN	Task Sequence Number
VFB	Vertical Format Buffer; storage for feed control characters.
WAN	Wide Area Network

Related publications

Distributed Print Services V1.0B (BS2000/OSD)

Printing in Computer Networks

User Guide

Target group

This manual is intended for nonprivileged users, device administrators and systems support of BS2000/OSD.

Contents

The manual provides descriptions of the principles, use and administration of Distributed Print Services for each of these user groups. Possible uses of Distributed Print Services are illustrated by examples.

FHS (TRANSDATA)

User Guide

Target group

Programmers

Contents

Program interfaces of FHS for TIAM, DCAM and UTM applications. Generation, application and management of formats.

JV (BS2000/OSD)

Job Variables

User Guide

Target group

The manual addresses both nonprivileged users and systems support.

Contents

The manual describes management and possible uses of job variables. The command descriptions are divided according to function areas. The macro calls are described in a separate chapter.

OMNIS (TRANSDATA)

User Guide

Target group

- BS2000 users
- Software developers
- DB/DC users and operators
- System administrators and operators

Contents

- Description of the BS2000 software product OMNIS for the functional scope of Version V6.1B for establishing and clearing connections to communication computers of different types, and working concurrently with more than one application.
- Description of the functions and commands, an application interface for functional extensions and utilities for log editing and defining configurations.

RSO V3.1A (BS2000/OSD)

Remote SPOOL Output

User Guide

Target group

This manual is directed at nonprivileged users, RSO device administrators, SPOOL administrators and systems support of BS2000/OSD.

Contents

The manual describes the functions and options of the user groups with respect to utilizing and controlling decentralized printers (RSO printers) and deals with the technical characteristics of all RSO printers.

SDF (BS2000/OSD)

Introductory Guide to the SDF Dialog Interface

User Guide

Target group

BS2000/OSD users

Contents

This manual describes the interactive input of commands and statements in SDF format. A Getting Started chapter with easy-to-understand examples and further comprehensive examples facilitates use of SDF. SDF syntax files are discussed.

SPCONV V1.0A (BS2000/OSD)

User Guide

Target group

This manual is intended for systems support staff and RSO device administrators.

Contents

The manual describes the SPCONV subsystem. Use of SPCONV is mandatory when working with SPOOL as of Version 3.2A. The manual describes the structure of the filter system and the use of filters.

SPOOL V4.1A (BS2000/OSD)

User Guide

Target group

This manual is intended for nonprivileged users, Spool & Print administrators, RSO device administrators and systems support staff.

Contents

The manual describes the operation of SPOOL.

Spool & Print - Commands (BS2000/OSD)

User Guide

Target group

This manual is intended for nonprivileged users, device administrators, cluster administrators, SPOOL administrators and system support staff.

Contents

The commands available for SPOOL, Dprint, RSO, SCSIPCL and SPS are described, but not those for subsystem management and job control.

Spool & Print - Messages

User Guide

Target group

This manual addresses systems support, RSO device administrators and nonprivileged users.

Contents

Messages for SPOOL, RSO, SPSERVE, PRM, SCSIPCL, SPCONV, SPS, SPOOLSYS and Distributed Print Services. The English message texts and meaning and response texts are included in the manual. Guaranteed messages are marked.

SPS/BS2000-APA

Version 3.0

User Guide

Target group

The manual addresses SPOOL users and systems support.

Contents

This manual describes printing on APA printers with the SPOOL subsystem SPS. Installation of SPS and APA printers, creation and provision of print file and print resources, printing and page presentation methods, and error handling are described.

SPSERVE (BS2000/OSD)

User Guide

Target group

This manual is addressed to nonprivileged users, RSO device administrators, Dprint cluster administrators and those responsible for BS2000/OSD system operation.

Contents

The manual describes the SPSEERVE utility routine with all its statements. It takes account of all extensions to SPOOL, RSO, SPCONV, PRM, Distributed Print Services, SCSIPCL and SPS.

VTSU V11.0A

Virtual Terminal Support

User Guide

Target group

Users of the DCAM and TIAM access methods and of UTM, and also the system and network administrator.

Contents

VTSU (Virtual Terminal Support) is a software product of the BS2000 operating system. It implements a virtual line terminal. A virtual terminal permits programming that is independent of the physical characteristics of the terminal in question.

Ordering manuals

Please apply to your local office for ordering the manuals.

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PRM V1.2A (BS2000/OSD)

User Guide

Target group

The manual addresses SPOOL users, systems support and RSO device administrators.

Contents

This manual describes the PRM utility routine for creating and managing print resources for BS2000 SPOOL. The manual deals with the description of the two PRM user interfaces: the SDF statements for interactive and batch mode, and the FHS-based menu interface for interactive mode.

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Submitted by

Comments on PRM V1.2A
Print Resource Management



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