VisualAge Pacbase

Character Mode User Interface

Version 3.5

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Contents

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Chapter 1. Introduction

Purpose of the Manual

This Manual intends to explain the implementation, in on-line mode and in the character-mode interface, of the principles described in 'The VisualAge Pacbase Metamodel and Repository' Manual.

These principles are supposed to be known here.

The implementation via the Developer workbench is described in the Developer workbench on-line help.

Use in On-line Mode

Several types of screens are available in on-line mode:
* An initial screen, where you set up your work context,
* A set of hierarchical 'MENUS' via which you can access the various screens of the System.
* A set of screens used to consult and to update the contents of the Database. Some may have several presentation options.

  Some are used for consultation only. These are the lists of instances and the lists of cross-references between entities.

  The instance's Definition and Description screens are used both for consultation and update.
* Comments screens.
* A screen used to request the printing or generation of instances contained in the Database.
* A screen used to execute searches on keywords.
* A screen used to view the Database update transactions and the Database logon and logoff transactions.

You can access all these screen via an input in the Choice (CH:) field located in the bottom left of the screen.

Principles of Description

This Manual decribes some of the entities managed by VisualAge Pacbase. For each, you will find;
* An introduction which explains the purpose and the general characteristics of the entity,

- A detailed description of all the entity's input fields. These fields are assigned order numbers in the screen map. These numbers are also used in the screen description that follows.

  >>>: If you use Developer workbench, refer to its on-line help.

Note: If you use the VisualAge Pacbase WorkStation, the graphical interface of the corresponding windows is described in the WorkStation User Interface Guide (formerly WorkStation Reference Manual).

Chapter 2. Initializing, Modifying and Ending Work Context

Initializing the Work Context

You initialize your work context on the sign-on screen, which is the first screen displayed once you have entered the transaction code of the Database you want to work in.

Note: This code is four characters long. It depends on the type of hardware you are working on. A transaction code is unique. You cannot connect to two different Databases with the same transaction code.

THE SIGN-ON SCREEN

- CONNECTION DATABASE

  The DATABASE field displays the logical code of the connection Database. To change your work context, use the PF12 function key or the equivalent function key and enter a new transaction code. (ref. to chapter ″Appendix″, subchapter ″Function keys″ and enter a new transaction code.

- USER IDENTIFICATION

  Each user must be identified by a personal user code and password.

  You may modify this password at any time by using the two fields located at the bottom of the sign-on screen (PASSWORD MODIFICATION and CONFIRMATION fields).

  CAUTION: the use of blank is forbidden within the user code.

  After a PF12 exit from VisualAge Pacbase, a reconnection displays the USER code and the message ′ENTER YOUR PASSWORD FOR CONVERSATION RETRIEVAL′.

  If the password is correct, the last-accessed screen is displayed in its context.

- LIBRARY SELECTION

  You must select a library in which to work. All the Libraries of the sub-network to which the selected Library belongs may be consulted, but only the selected Library can be updated.

  The value ′***′ (′Inter-Library′ mode) enables you to consult all the Libraries of the sub-network. However, it does not allow for any updates, except those of the Keyword Thesaurus, which is managed in the Inter-library mode by the Database Administrator. (Refer to the ′Data Dictionary′ Manual).

- SELECTION OF A SESSION

  If no session number is entered, the current session is selected by default.

If you want to work in a frozen session, enter the code of a frozen session followed by 'T' ('T'= Test version).

- DSMS CHANGE NUMBER

This selection is required only if the connection library is under the control of the DSMS function. If such is the case, you must enter a product code followed by a change number.

```
 -------------------------------------------------------------------
|
| 00    00 0               0   00
| 00    00                 0  0000
| 00    00 0 000 0  0 000  0 00  00  000 000
| 00    00 0 0   0  0    0 0 000000 0  0 0  0
|  00  00  0  0  0  0 0000 0 00   00 0  0 0000
|   000    0   0 0  0 0  0 0 00   00 0  0 0   00000              0
|    0     0 000 0000 0000 0 00  00  000  00 00  00             0
|                              0    00 00 000  000 0000 000  000 000
|                          00      00000    0 0   0 0    0 0    0 0
|                          00      0000 0   0  0 0 0000  0  0000
| Licensed Materials - Property of IBM    00    0 0 0   0 0 0 0   0 0
| (C) Copyright IBM Corp. 1983, 2001.     00    0000 000 0000 0000 000  00
| All Rights Reserved.                          3.0 V03    5655-F37
| * Trademarks of International Business Machines Corp.
| ----------------------- LICENSE GRANTED TO CGISTMRC 001 --------------------
|                                                           13/01/2004
|
|                   DATABASE........: VD03
|                   USER............: SG000 1   PASSWORD.....: 2
|                   LIBRARY.........: CIV   3   SESSION......: 2001T 4 5
|                   CHANGE NUMBER...: P 6  123456  7
|          PASSWORD MODIFICATION.:   8       CONFIRMATION.: 9
|
|
|  O: C1 CH:
 -------------------------------------------------------------------
```

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
1	8		USER CODE (REQUIRED)
			To access a database, each user must be given a user code and associated password.
			For each user code, the VA Pac Administrator defines the authorized Libraries, the actions allowed (read, update of current session, update of all sessions).
			The user code is memorized in the journal for update, logon, logoff transactions.
			The management of user codes and access authorizations is the responsibility of the VA Pac Administrator, who can be consulted for information on each user's access authorizations.
2	8		USER PASSWORD
			The password is associated with a user code. Using blanks between two characters is forbidden.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			NOTE: On sites using the Security Systems Interface (RACF or TOPSECRET), passwords are managed by the Security System, not by the VA Pac user code management function.
3	3		LIBRARY CODE (REQUIRED)
		lll	This code identifies a Library. The Library code is assigned at the time a Library is created and cannot be modified.
			Special characters are not allowed in a Library code but any alphabetic or numeric character can be used.
		***	This value is forbidden to define a library. It must be used only to select all the Libraries when viewing the Database.
			SESSION
4	4	NUMER.	SESSION NUMBER
			NUMERIC FIELD
			The session number represents the time scale of the Database.
			Its value is 0001 when the Database is created.
			It is incremented:
			. daily, when the first user logs on (batch or on-line for consultation, update, or program generation).
			. by certain utility procedures. See the individual utility descriptions.
5	1		VERSION OF THE SESSION
			There are two possible values:
		'blank'	Initial version of a frozen session (consultation only). This version will be in the same state as it was when it was frozen.
		T	Test version This is used to consult or update the test version of a previously frozen session.
			Note: Changes made to the test version of a particular frozen session do not affect any other session.
6	3		PRODUCT CODE/DSMS
			Input in this field is required when the connection Library is under the control of the DSMS (Development and Management System) function.
			It is the code of a Product whose development and follow-up is managed by the DSMS function.
			For further details, see the DSMS Reference Manual.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
7	6	NUMER.	CHANGE NUMBER/DSMS
			Input in this field is required when the Database is under the control of the DSMS (Development and Support Management System) function.
			It is the Change number of the Product indicated in the previous field.
			For further details, see the DSMS Reference Manual.
8	8		PASSWORD MODIFICATION
			Enter a new password in this field. Once changed, a password is valid until it is modified again. NOTE: At sites controlled by RACF, passwords cannot be modified on-line.
9	1		CONFIRMATION
			The new password entered in the PASSWORD MODIFICATION field must be reentered in the CONFIRMATION field for validation.

Defining and Initializing a Library

The creation of a new Library in the Database must be done by the Database Administrator, in two or three steps:

- First, the Database Administrator must create the Library, indicating its code, its hierarchical relationship to existing Libraries and its status (virtual or not initialized). This operation is performed by the PACS procedure (MLIB option).

  The Administrator creates a virtual Library for future development projects and is visible to Administrators only. Updates are not possible in this library.

- Second, the Administrator may change the virtual Library into a non-initialized Library (and change its code too) by entering a 'V' action code on the Library Definition (*) screen.

- Third, the Administrator must initialize the Library on the screen displayed by the '*' definition screen (a mere update is enough to initialize a library).

Only initialized Libraries can be updated.

Note: & Even if it is possible in character-mode, you should preferably use the Administration workbench.

GENERAL CHARACTERISTICS

The initialization of a Library includes:

- The Library name.
- General options for the presentation of printed documentation.
- General options regarding adaptation to the operating system in use. This includes: use of single or double quotes, conversion of Data Elements' internal usages, generated COBOL variants, etc. The same application can be generated for several operating systems.
- Options to remove a library protection so that the contents of its children libraries can be modified.

  Only the Database Administrator can update the Library Definition screen or delete a Library.

Note: The logical delete of a library is authorized only in a current session and if there is no more dependent libraries. The Database Administrator can visualize this library in older frozen sessions but it can no longer be visualized by other users. The physical delete of a library is made via the REOR procedure.

```
---------------------------------------------------------------------------
|                           APPLICATION DEVELOPMENT      SG000008.LILI.CIV.1583 |
| LIBRARY DEFINITION                       AN1                                  |
|                                                                              |
| LIBRARY NAME........................: 1 APPLI CICS/VSAM                       |
| GENERATED LANGUAGE..................: 2 C                                     |
| TYPE OF COBOL TO GENERATE...........: 3 0                                     |
| TP MONITOR AND MAP TYPE.............: 4 N                                     |
| MODE OF PROGRAMMING.................: 5 P                                     |
| CONTROL CARDS IN FRONT OF STREAM....: 6        BACK OF STREAM...: 7           |
| CONTROL CARDS IN FRONT OF PROGRAMS..: 8        BACK OF PROGRAMS.: 9           |
| COBOL FORMATTING OPTION.............: 10                                      |
| ALPHANUMERIC DELIMITER..............: 11                                      |
| COMMENTS INSERTION OPTION...........: 12 O                                    |
| DOCUMENTATION PAGE SKIP OPTION......: 13 O                                    |
| LINES PER PAGE IN DOCUMENTATION.....: 14 60                                   |
| VERTICAL CHARACTER OF DOC. FRAME....: 15 *                                    |
| HORIZONTAL CHARACTER OF DOC. FRAME..: 16 *                                    |
| MODIFICATION OF EXTRACTED LINES.....: 17 A                                    |
| PROTECTION OF EXTRACTED ENTITIES....: 18 A   DATES GENERATION OPTIONS..:      |
| SYSTEM DATE FORMAT INDICATOR........: 19 I    CENTURY SYSTEM DATE : N   20    |
| DATE FORMAT IN GENERATED PROGRAMS...: 21 E    WINDOWING YEAR VALUE: 61  22    |
| DECIMAL POINT PRESENTATION CHARACTER: 23 .                                    |
|                                                                              |
|                                                                              |
| O: C1 CH: *an1                          ACTION:                              |
---------------------------------------------------------------------------
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	36		Library name
2	1		GENERATED LANGUAGE
			This option indicates the program generation language, depending on the hardware in use.
		'C'	COBOL (default option).
		'D'	COBOL II, 85, or 370 (default value for the library initialization - from the 3.5 V03 VA Pac version).
3	1		TYPE OF COBOL TO GENERATE
			Automatically adapts extracted entities from higher- level libraries to the Cobol types specified. Extracted entities include the internal usage of Data Elements, Cobol literals, Programs and Data Structure calls, Reports with a "WRITE AFTER" mode specified (if the language variant recommends the WRITE BEFORE mode).
		0	Cobol/VS IBM MVS
		1	Cobol IBM VSE (COBOL II BATCH LANGUAGE only)
		3	Cobol IBM AIX-OS/2-Windows/NT, MICROFOCUS

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		4	Cobol BULL GCOS7
		5	Cobol BULL GCOS8
		7	Cobol HP-3000
		8	Cobol UNISYS Series A : this variant is required at the Library level to work in half-byte packed mode.
			IMPORTANT NOTE: If this value '8' is entered on the Library Definition after data element formats have been defined, the element formats on the Element definition and Segment/Screen Call of Elements, including FILLERS and undefined elements, will have to be re-entered so that the lengths are taken into account.
			This option can also be used with BULL GCOS8 hardware. In that case, the generation variant '5' must be completed in the programs and screens.
		C	Extraction of COBOL Source. See the 'STRUCTURED CODE' Reference Manual, chapter "Appendix", subchapter 'Source Code'.
		F	Cobol TANDEM
		I	Cobol DEC/VAX VMS
		K	Cobol ICL 2900
		M	Cobol BULL GCOS6
		N	No adaptation at any language variant (default option at definition level).
		O	Cobol AS/400
		R	Cobol TUXEDO (PACBENCH C/S module)
		U	Cobol UNISYS 2200 Series
		X	Cobol II IBM MVS or VSE (OLSD function or Pacbench C/S module).
		Q	ACUCOBOL
4	1		TP MONITOR VARIANT
		'blank'	Not valid on the Library Definition screen. For other screens: retrieval of default values
		'N'	No generation
			OLSD FUNCTION
			TP Monitor
		0	Variants 0, 1, X for CICS (IBM) (programs and BMS maps).

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			Variant 2 for IBM 36, monochrome map.
			Variant Q for UNIX, Windows (ACUCOBOL).
			Variant 3 for PC/MICROFOCUS (MS/DOS).
			Variants 4, 5, 6 for QUESTAR.
			Variant I for DEC/VAX.
			Variant U for UNISYS 2200 (programs and FLDP maps).
			Variant 8 for UNISYS Series A SDF format.
			Variant Y for IBM 38.
			Variant O for AS 400.
			Variant M for GCOS6-DTF-DFC-Vision.
			Variant 7 for VPLUS.
		1	Variants 0, X for IMS (IBM) (programs and MFS maps).
			IMS (IBM) (programs and MFS maps).
			Variant 2 for IBM 36, map in color.
			Variant 3 for PC/MICROFOCUS (OS2).
			Variants 4, 5, 6 for VIP TYPE.
		2	Variants 0, 1, X for CICS (IBM), BMS map in color.
			Variant 3 for MICROFOCUS (UNIX).
		3	Variants 0, X for IMS (IBM), MFS map in color.
		4	Variants 0, X for IMS (IBM) monitor.
			Variant 3 for IBM VISUALAGE COBOL program.
		5	Variants 0, X for CICS (IBM) monitor.
		C	Variants 4, 5, 6, U for MULTI-TERMINAL.
			Variants 0, 1, X for CICS MULTI-TERMINAL.
			Variant K for ICL.
			Variant 8 for UNISYS Series A Logical Screen.
		F	Variant 4 for TDS FORMS (BULL GCOS7).
			Variant M for DM6 TP FORMS.
			Variant R for 'TPSVRINIT service' type Program or 'TPSVRDONE service' type Program.
		R	Variant F for 'REQUESTER' type Program. or variant R for 'CLIENT' type program.

NUMLEN		CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		S	Variant F for 'SERVER' type program. or variant R for 'SERVICE' type program.
			PACBENCH CLIENT/SERVER
			TP MONITOR
		0	Variants 0, X for CICS (IBM) (Program and BMS map for the client).
			Variant Q for UNIX, Windows (ACUCOBOL).
			Variant 3 for MICROFOCUS MS/DOS.
			Variant F for TANDEM Pathway.
			Variant R for TUXEDO.
			Variant 7 for VPLUS.
			Variant U for UNISYS-2200.
			Variant 8 for UNISYS-A.
		1	Variants 0, X for IMS.
			(program and MFS map for the client).
			Variant 3 for MICROFOCUS OS/2.
			Variant F for TANDEM TUXEDO.
			Variant 8 for UNISYS-A Open/OLTP.
		C	Variant R for TUXEDO (from release 6.2 and TUXEDO (from release 6.2 and higher).
		2	Variant 3 for MICROFOCUS UNIX.
		3	Variant 3 for MICROFOCUS.
		4	Variant 3 for IBM VISUALAGE COBOL.
5	1		MODE OF PROGRAMMING
			Structured Code
		'P'	Default value when creating a Library. Programming in Structured Code on '-P' lines (Procedural Code).
			Cobol generator (in conjunction with the Reverse Engineering function)
		'S'	Specific procedures composed of Source Code (-SC) and Procedural Code (-P).
			With this value, the Type and structure of Program field must also be 'S'.
		'8'	Programming with '-8' type of lines.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			Used only to maintain applications written with former VisualAge Pacbase versions.
			The value entered on the Definition line of the Library is channeled down by default to the Definition line of a Program when it is created.
			At the Program level, the programming type can be modified.
			The combination of '-P' and '-8' lines called in the same Program, either directly, or via Macro-structures, is rejected.
6	1		CONTROL CARDS IN FRONT OF STREAM
			Option code of the set of job control cards to be inserted at the beginning of the generated stream.
			At the library level this option represents default options to assign to the programs when they are created.
7	1		CONTROL CARDS IN BACK OF STREAM
			Option code of the set of job control cards to be inserted at the end of the generated stream.
			At the library level this option represents default options to assign to the Programs when they are created.
8	1		Control cards in front of programs
			Enter the one-character code that identifies the job card to be inserted before the generated program.
			Default: Code entered on the Library Definition Screen
9	1		CONTROL CARDS IN BACK OF PROGRAMS
			Enter the one-character code that identifies the job card to be inserted after the generated program.
			Default: Code entered on the Library Definition Screen
10	1		COBOL FORMATTING OPTION
			This option specifies whether or not generated programs (batch or on-line) from a given Library will be formatted.
		'blank'	No formatting (Default option).
		'Y'	Formatting of generated COBOL requested. Programs will be formatted as follows:
			. Indentation of DATA DIVISION fields according to their hierarchical level.
			. One COBOL instruction per line in the PROCEDURE DIVISION.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			. 'IF' statements are indented within (sub-)functions.
			NOTE
			With the On-Line Systems Development Function or Pacbench C/S, this option can be modified for a given Dialogue. Refer to ON-LINE SYSTEMS DEVELOPMENT Manual, chapter 'Description of a Transaction', subchapter 'Dialogue Complement' and to the PACBENCH C/S Business Logic and TUI Clients Manuals, chapter 'TUI Clients', subchapter 'Dialogue Complement'.
			CAUTION: this function will not evolve with the generated programs.
11	1		ALPHANUMERIC DELIMITER
			This is the character used to delimit alphanumeric literals in COBOL programs generated by the system.
			Depending on the value in the TYPE OF COBOL TO
			GENERATE field, the default option will be: . (') a single quote for IBM variants type, . (") double quote for other variants.
			NOTE : If you keep these default options, the single and double quotes, if any, included in the Data Element clear names will appear as blanks in the Screen Call of Elements (-CE).
12	1		COMMENTS INSERTION OPTION
		'Y'	The titles and frames of (sub-)functions as well as the inserted comments ('*' operator) are present in the generated COBOL. Moreover punctuation is automatically calculated for comment lines which do not include a block type. The block type of the next processing is then taken into account for this calculation.
		S	The titles and frames of (sub-)functions as well as the inserted comments ('*' operator) are ignored at generation time.
			You can use the two following values but you are advised to use one of the two values presented above.
		O	Same as the 'Y' value, except for the Batch Function in which the punctuation of comments is not calculated ; it varies according to the block type present on these lines.
		N	Default option when the Library is created. Same as the 'S' value, except for the Pacbench C/S and OLSD Functions, in which the inserted comments lines ('*' operator) are included in the generated COBOL.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
13	1		DOCUMENTATION PAGE SKIP OPTION
			This option is used to suppress page breaks between sub-reports (groups of lines from same type) in a documentation.
			Especially in Reports, Data Structures, Programs descriptions, for page breaks inserted when the number of lines on a page is too important, or when a new Data Structure, Report or Program is dealt with.
		O	No page skip between sub-reports (Default option when a library is defined).
		N	Page skip: each sub-report will begin on a new page.
14	2	NUMER.	LINES PER PAGE IN DOCUMENTATION
			PURELY NUMERIC FIELD
			This field is used for all the System documentation, including User Manuals (U entity). It defines the number of lines edited on a page. Default option : 60 when a Library is defined.
15	1		VERTICAL CHARACTER OF DOC. FRAME
			Used to modify the frame that surrounds the documentation printed by the system.
			When the Library is created, the vertical character is set to blank.
			If you leave it to blank, it will be transformed into an asterisk ('*') when the document is printed.
			If you enter any other value different from blank, this value will be taken into account when the document is printed.
16	1		HORIZONTAL CHARACTER OF DOC. FRAME
			Used to modify the frame that surrounds the documentation printed by the system.
			When the Library is created, the horizontal character is set to blank.
			If you leave it to blank, it will be transformed, when the document is printed: . into an asterisk ('*') if the vertical character is an asterisk. . into a dash ('-') if the vertical character is neither an asterisk nor a blank.
			If you assign the horizontal character any value different from blank, this value will be taken into account when the document is printed.
17	1		MODIFICATION OF EXTRACTED LINES

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			As a default option, the modification of Definition or Description lines originating from higher-level Libraries is not allowed.
			However, when a single system runs in a multi-hardware environment, it may be useful to modify certain extracted entities.
		N	Default option No modification in this Library of entities in a higher-level library.
		A	Modification of entities in higher-level Libraries is authorized in this Library; the higher-level Library must have the value "A" in the PROTECTION OF EXTRACTED ENTITIES field.
			Deletion of higher-level entity lines is not possible.
			WARNING
			Once this field has been set to "A", it cannot be reset to "N".
18	1		PROTECTION OF EXTRACTED ENTITIES
		N	Modification is not authorized. Redefinition of entities in this Library is not allowed. Extracted entities are protected.
		A	Modification is authorized from lower-level Libraries as long as the Library concerned has the value "A" in the MODIFICATION OF EXTRACTED LINES field.
			NOTE: Changes made in the lower-level Library are not reflected in the higher-level Library.
			WARNING
			Once this field has been set to "A", it cannot be reset to "N".
19	1		SYSTEM DATE FORMAT INDICATOR
			For IBM hardware:
			This option is used to indicate the position of the day and month in the system date. It is used for date operations in the Structured Code function.
		'N'	Machine date obtained in the format 'day-month-year'.
		'I'	Machine date obtained in the format 'month-day-year'. (Default option when a Library is defined.)
			For other hardware:
			This option cannot be used. Date operations will be executed in a unique way.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			NOTE: This field cannot be used to indicate the position of day and month in the date field used for printed documentation; this is obtained with a parameter in the Database Restoration (REST) procedure.
20	1		CENTURY SYSTEM DATE
			This option enables you to make sure that the System Date indicates the century in the generated applications.
		'N'	USING COBOL II OR COBOL 85: Default value at the creation of the Library. If the year is smaller than the value entered in the WINDOWING YEAR VALUE field, it is prefixed by 20. If it is greater, it is prefixed by 19.
		'C'	USING COBOL II OR COBOL 85 COMPATIBLE YEAR 2000: Direct retrieval of the System Date including the century according to the COBOL capabilities.
		'W'	USING OTHER COBOLs: A value is set for the century as with the 'N' value.
21	1		Date format in generated programs
			When using the On-Line Systems Development function or the Pacbench C/S facility, this field specifies the date format to be used in generated programs.
		'E'	MM/DD/YY format.
		'F'	DD/MM/YY format.
22	2		WINDOWING YEAR VALUE
			Reference year for calculation of century during a Date transformation containing only the year.
			This calculation is done in the following cases: . The System Date does not include the century. The calculation is explained in the DATE GENERATION OPTIONS field and is performed with the 'N' or 'W' value in this same field. . Use of a date transformation operator The calculation mode depends on the operator used.
		'61'	Default value at the creation of the Library.
23	1		DECIMAL POINT PRESENTATION CHARACTER
			When using the On-Line Systems Development function or the Pacbench C/S facility, this field specifies the character to be used as the decimal separator.
		'.'	Period. Example: 1000.00.
		','	Comma. Example: 1000,00.

LIBRARY: ACCESS MODE

```
LIST OF LIBRARIES

CHOICE            SCREEN

LC*aaa            List of Libraries by code
                  (starting with Library 'aaa')

LN*aaa            List of Libraries by name
                  (starting with Library 'aaa')

CHARACTERISTICS OF LIBRARY 'aaa'

CHOICE            SCREEN

*aaa              Definition of Library 'aaa'.

*aaaGCbbb (UPD)   Comments on the 'aaa' Library (starting
                  with line number 'bbb').

*aaaGObbb (UPD)   Generation option on the 'aaa' Library
                  (starting with line number 'bbb').

*aaaXQbbbbbb      List of occurrences linked to the 'aaa'
                  Library through the 'bbbbbb' User Relation.

*aaaCRbbbbbb(UPD) Occurrences linked to the 'aaa'
                  Library through User Relations.
```

GENERATION OPTIONS AT LIBRARY LEVEL

In the generation options screen (-GO) of a Library, you can:

- Add the function/sub-function used for the change of date (F9520=Y or F9520=N).

- Enter the format of indices generated.

  If the format is not entered, it will depend on the Program's variant when it is generated.

  It must be entered in the following form: INDIC=.

  This character must be left alone on a line and it must be entered in the first column, as for the F99520 option.

```
    Example:
              A NLG : T DESCRIPTION
                100 : O INDIC=COMPUTATIONAL-3
```

NOTE: The options of a library can be modified by an Administrator only.

Sessions Management

The frozen sessions screen is displayed with the LCH choice. It displays the list of frozen sessions, but it allows you to produce frozen sessions too.

You need a sufficient authorization level to be able to do updates on this screen, otherwise it is available on read mode only.

On this screen, you find for each frozen session:

- a session number.

  By default, the number of the session to freeze is the session number of the day. But you may change the frozen session number providing that the number assigned is lesser than the session to freeze +100.

  Once frozen, the session of the day is equal to the frozen session +1.
- Session status.
- date of freeze.
- short label.
- session number before compression.
- code of the user who has launched the session freeze.
- long label.

IMPORTANT:

Any update in the session freeze screen must be made connected to the inter-library ('***') and in the current session.

ACCESS MODE TO THE SESSIONS LIST

LCHssss

List of frozen sessions sorted by session number (from the Session ssss).

LNH

List of frozen Sessions sorted by labels.

LRH

List of frozen Sessions sorted by short labels.

```
 -----------------------------------------------------------------------
|                                                                       |
|  VA Pac          PURCHASING MANAGEMENT SYSTEM          P0*DOC.LURE.JIA.401 |
|  LIST OF FROZEN SESSIONS                                              |
|  1 2     3     4        5                               6     7       |
|  A SESSI STATE                                                       |
|              03/25/96 0742                                  GESQ5     |
|  . 0816 NAME 07/29/96*0816ORE INJECTION ORACLE TRANSACTIONS(03/25/GESQS** |
|    LONG NAME :   *** BEFORE INSTALLATION 1.6 (07/29/96) ***          |
|  . 1084      09/24/97 1084                                  GESK2     |
|    LONG NAME :  *** HISTORICAL ACCOUNT FOR PACX PB200V00             |
|  . 1232      05/12/98 1232                                  GESQ2     |
|    LONG NAME : *** PACX PB250V01****                                 |
|  . 1243      05/28/98 1243                                  GESQ2     |
|    LONG NAME :   *** BEFORE UPDATE TLO-TLC 28.05.98 ***              |
|                                                                       |
|  . 1251      06/03/98 1251                                  GESQ2     |
|    LONG NAME :    *** BEFORE PACTABLES TRANSFER(PTA) ***             |
|  . 1352      10/14/98 1352                                  GESQ2     |
|    LONG NAME : *** PACX FIX 2.5 ****                                 |
|  . 1355      10/15/98 1355                                  GESQ2     |
|    LONG NAME :   *** PACX FIX 2.5 ****                               |
|  . 1358      10/16/98 1358                                  GESQ2     |
|    LONG NAME : *** PACX FIX 2.5 ****                                 |
|                                                                       |
|  O: C1 CH: LCH                                                        |
|                                                                       |
 -----------------------------------------------------------------------
```

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
1	1		CODE ACTION
		'C'	Creation
		'M'	Modification
		'?'	Documentation request
		'E' ou '-'	Lockout of implicit update on the line
2	4		SESSION NUMBER
			NUMERIC FIELD
			The session number represents the time scale of the Database.
			Its value is 0001 when the Database is created.
			It is incremented:
			. daily, when the first user logs on (batch or on-line for consultation, update, or program generation).
			. by certain utility procedures. See the individual utility descriptions.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
3	1		Session Status
			When freezing a session, the session status must be set to blank. Then the following values may be assigned:
		Blanc	Updates are allowed in the session.
		'N'	Updates are not allowed in the session.
		'A' or 'D'	The session is logically deleted.
4	15		SHORT LABEL ON THE SESSION
			By default, it is the session number.
			The label must be unique.
			The choice LRH displays the list of frozen sessions sorted ascendingly on this short label.
5	60		LONG LABEL ON THE SESSION
			This label is required.
			The choice LNH displays the list of frozen sessions sorted ascendingly on this long label.

Modifying the Work Context

Once the work context has been initialized on the sign-on screen, the following data is displayed at the top of each accessed screen:

- The name of the selected library,
- The DSMS change number, if the Database is under the control of DSMS,
- The user code, preceded by an asterisk (*) or a plus sign (+) which indicates the user authorization level:
  - '*' if updating is authorized,
  - '+' for a Database Administrator.
  - ' ' Read-only data access.
- The transaction code,
- The code of the selected library,
- The session number, followed by:
  - 'H' when consulting a frozen session,
  - 'T' when consulting the test version of a frozen session.

You can modify the work context at any time of the conversation, within the limitations of your access authorizations.

To modify:

- the Library, enter N*bbb in the choice field ('bbb' is the code of the new Library). This choice can be entered simultaneously with the following one and/or can be followed by any choice.
- the session, enter NHssssv in the choice field ('ssss' is the session number and 'v' is the version of the session). This choice can be entered simultaneously with the preceding one.
- the Product code / Change number, enter NCpppnnnnnn ('ppp' is the Product code and 'nnnnnn' is the Change number).

  The Product code must be left-justified, with one or two "&" if it contains less than three characters. The Change number must also be entered left-justified but with no need to add some "0" if it contains less than six characters.

  EXAMPLE: if the Product code is P and the Change number is 2330, you must enter, in the choice field: NCp&&2330.

  If you enter the NC choice without any Product code or Change number, you can work in a Library / session environment which is not under DSMS control. Transactions will then be recorded in the Journal without any DSMS references.

Modifying the Display

MODIFYING THE DISPLAY

By default you can see the data coming from your connection Library and from its higher Libraries.

You can change the view of the sub-network, that is you can display the data which comes from lower Libraries, or all the Libraries of the sub-network, or only the selected Library.

You can change the view of the sub-network via the operation code (O:) located in the lower left-hand corner of the screen.

The OPERATION CODE is made up of two characters:

- The first character indicates which part of the sub-network (to which the selected Library belongs) will be viewed.
- The second character indicates the requested screen presentation option. There can be up to four options (numbered from 1 to 4) corresponding to four different presentations of the same screen.

The following table lists all the possible values for the first character of the OPERATION CODE.

OPERATION	MEANING
Cn*	Display of lines from the selected Library and from higher-level Libraries. If duplicate lines are found, those of the lower-level Library only are displayed. This is the normal view of a selected library. It is the Default value.
In*	Display of lines from all the sub-network Libraries.
Un*	Display of lines from the selected library only.
An*	Identical to 'Cn', with display of duplicate lines.
>1	Display of lines from higher-level libraries only.
<1	Display of lines from lower-level libraries only.
Zn*	Display of lines from the selected library and from lower-level libraries.

* n=1, 2, 3 or 4 (see the description of each entity).

Closing the Work Context

You close the work context, that is the transaction, by entering FT in the operation code. You will then return to the sign-on screen.

In this case, or if you clear the screen, the current conversation is NOT saved.

If the system is set up to use function keys, an exit with a save can be executed (refer to chapter 'Appendice', subchapter 'Function key available').

The message "CURRENT CONVERSATION IS SAVED" will be displayed.

To resume the 'saved' conversation, simply enter the transaction code and enter the password if necessary.

Chapter 3. Screen Branching

From the General Menu to the Entity Menu

You can access the screens directly through the CHOICE field if you know the explicit CHOICES ('expert' mode).

If not, you can browse through the System's hierarchical menus to access the various screens, and also become familiar with the explicit CHOICES for all entities, which are listed on the various menus.

Two levels of menus are available:

```
              ----------------
              ! GENERAL MENU !  CHOICE 'H'
              ----------------
                     !
        ------....------------------------------------
        !                      !                    !
        !                      !                    !
  ----------------      ------------------      -----------
  ! ENTITY type x !     ! SPECIAL CHOICES !     ! FUNCTION !
  !   MENU        !     !      MENU       !     !   KEYS   !
  ----------------      ------------------      !   MENU   !
     CHOICE 'Hx'       CHOICES 'HSC1' & 'HSC2   -----------
        !                                        Choice 'HP
        !
   Entity screens                               (cf. Appendice)
```
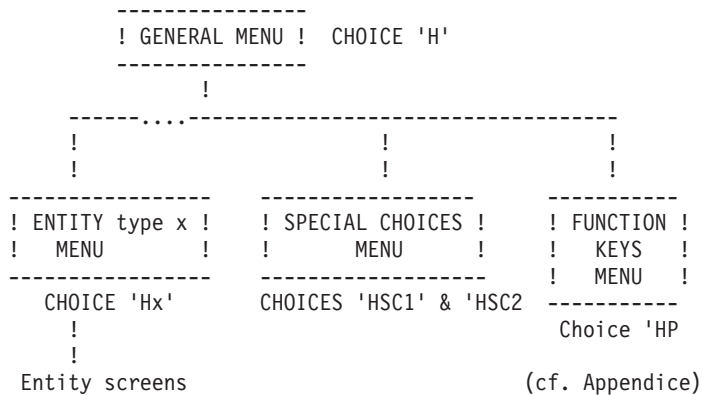
NOTE

There is sometimes a third level of menus. Generally, this level concerns the lists available for an entity type.

THE GENERAL MENU

You access the General Menu:
* by entering 'H' in the CHOICE field,
* from the sign-on screen, by pressing ENTER with no input in the CHOICE field,
* via a PFkey (PF5 is standard or CH: .5).
   (Assignment of PFkeys is site-dependent.)

The General menu displays the list of entities available at a site, and the corresponding CHOICE for access to each entity sub-menu.

Special sub-menus display the Program Function Key (PFkey) assignments and lists of Special Choices.

A sub-menu may be accessed by positioning the cursor on the desired sub-menu line and pressing ENTER. (An instance code may be indicated on the line; it will be displayed on the instance definition line on the sub-menu).

If the cursor position is not supported by the hardware in use, sub-menus may be accessed by entering a slash '/' in the input field of the corresponding line and pressing ENTER.

SUB-MENUS

Sub-menus can be accessed in two ways:
- by entering 'Hx'in the CHOICE field, 'x' being the entity type (Example: 'HT' will display the Text sub-menu),
- by positioning the cursor (or entering a '/') on the desired line of the General Menu (see above).

Each sub-menu displays a list of all the screens available for the entity, and the corresponding CHOICE for each screen.

A screen may be accessed by positioning the cursor (or entering a '/') on the desired line and pressing ENTER. The entity code must be entered in the input field if it was not entered at the (sub-)menu level; optional input of an additional key, such as a line number is also possible.

It can also be accessed by entering the corresponding choice.

Accessing the Definition of an Instance

You can access an entity type (ex: Text entity, Data Element entity...) or directly an instance (ex: text "TEXT1", Data Element "DELCO"...).

NOTE: To know how to find an instance which already exists in the Repository, refer to Chapter "Search for Instances".

To select an entity (in order to create an instance), you simply have to enter the character which represents the entity type in the choice field (ex: "T" for Text entity, "E" for Data Element entity...) and to validate. The empty Definition screen of the requested entity will then appear and you will have to fill it in.

To select an instance, you must enter, in the choice field, the entity type directly followed by the instance code (ex: "Ttexte1", "Edelco" ...). You will then access the instance Definition screen.

If a blank is included in an instance code (possible with a retrieval of old versions), you must replace the blank with a '&'.

From the Description screen of an instance, you simply have to enter "-" in the choice field to go back to the Definition screen.

Accessing the Description of an Instance

From the Definition screen, you can scroll through an entity's family of screens (if they are not empty).

Note: All the available choices are listed in the Pocket Guide.

You can also access the desired screen directly, by entering, in the choice field:
- entity type + instance code + specific choice (ex: Ttext1 D, Edelco D),
- or '-' + specific choice (ex: -D) if you have already accessed the instance. Entering just '-' in the CHOICE field returns to the entity Definition screen.

The CHOICE field is used to access the various screens of an entity.

Most CHOICEs branch to an entity's work screens. You can enter a simple or more detailed choice, for example:

entity type + instance code only or

entity type + instance code + Description + line number.

Once an entity has been selected, the combination 'entity type/instance code' can be replaced with a '-'.

The contents of the CHOICE field are validated one against the other, for example: if the entity type is 'S' (Segment entity), the entity code must be four characters.

Blanks may be used to separate the entries in the CHOICE field (at least one). A blank(s) is required if, for example, the entity code is less than its maximum length (a 5-character Data Element code, for example).

The most frequent choices are detailed below. It's assumed that the entity has already been accessed.

There are several types of descriptions:

Call of other entities:

CHOICE is '-Cx', where C = call and 'x' = type of entity to be called.

EXAMPLE: 'SsssCE' (or -CE, when the segment has already been accessed) is used to access the Call of Elements ('CE') screen of Segment 'ssss'.

NOTE: From this -Cx screen, you can access the Definition of one of the called entity instances by placing the cursor on the desired line and by using a function key (standard: PF10).

Description specific to the entity.

EXAMPLES: 'PpppppW' (or -W) is used to access the Work Areas of program 'pppppp'.

'EdateleD' (or -D) is used to access the Description screen of the data element 'datele'.

Comments.

Accessed via the choice -GC.

Cross-references.

Accessed via the choice -Xs (where x is the type of the cross-referenced entity).

Accessing Online Help

BRANCHING TO THE ON-LINE HELP

The on-line help makes the system easier to use in on-line mode.

Two types of HELP documentation are available:
- Screen HELP: Describes the purpose of the screen, general characteristics, and its uses;
- Input field HELP: Describes coding rules, possible values, and error messages.

A. SCREEN HELP:

Two methods may be used in order to request Screen HELP:
- Enter '?' in any ACTION CODE field on the screen,
  - Press the ENTER key.
- Press the PF4 key.

B. INPUT FIELD HELP:

Two methods may be used in order to request Input Field HELP:
- Enter '?' in the ACTION CODE of the line which contains the input field,
  - Enter '?' in the first position of the input field,
  - Erase end of field,
  - Press the ENTER key.
- Enter '?' in the first position of the input field,
  - Erase end of field,
  - Press the PF4 key.

  NOTES:: A '?' in the ACTION CODE field inhibits update of the line which contains it.

  If you want to request on-line HELP documentation on an input field located on the same line as an input field which already contains a '?', you must first erase this '?'. Since update is inhibited, this operation will not affect the Database.

HOW THE HELP WORKS

The text in the help screen is presented as it is in the manuals, it is justified, it includes line skips...

The edition of the help screens is made when you press the ENTER key.

On the last page, the word END is displayed in the choice field. If press ENTER, you return to the initial screen.

The field CHOICE allows you to:
- return to the initial help screen: CHOICE '-'
- return to the initial screen: CHOICE END or JP (if you have viewed only one help screen)
- return to the entity definition screen: CHOICE '_'

Other accesses

Besides the accesses presented previously, you can:

- Access the Journal (CH: JO). This is documented in chapter 'Journal Consultation'.
- Access the generation-print commands screen (CH: GP). This is documented in chapter 'Generation-print'.
- Access the screen previously displayed (CH: JP),
- Access the following screen (CH: JF),
- Access the same screen (CH: JI).

Screen memorization

You can store or 'memorize' screens and recall them when you need them. You can store up to nine screens.

The screen is stored until the end of the transaction or until a new screen is memorized using the same operation code.

The data actually stored is the 'key' of the screen, which means that a modification affecting the contents of the memorized screen is taken into account when the screen is recalled.

To memorize a screen in its current state, enter in the operation field:

O: Mx (x = 1 to 9).

You can simultaneously enter a choice in the choice field.

Then to recall the screen, enter in the operation field:

O: Rx.

You can also use function keys or choices from R1 to R3.

When a screen is recalled, the contents of the choice field are ignored.

If no screen has been memorized, the message: EMPTY SCREEN MEMORY is displayed.

Chapter 4. Search for Instances

Searching by Keywords

Keywords Management

Implicit and Explicit Keywords
The thesaurus groups all the existing keywords.

Implicit keywords are included in the thesaurus in the following way:
- Blanks within the NAME are considered as delimiters. All the characters other than digits or letters are replaced with blanks ;
- Works with more than 13 characters are truncated ;
- Only the first ten words are taken into account ;
- Words of only one characters are ignored ;
- A certain number of words are ignored (THE, AN, AND, OR OF, IS, ARE, OUT, IN, NOT, AT, BUT, IT, ON, NO et IF), and their French equivalents (LE, LA, LES, UN, UNE, DES, ET, OU, SUR, EST, DE, DU, NE, NI and EN).

    The Database Manager may define empty words by declaring them synonyms of the '*" keyword. No search can be done on these empty words.

Explicit keywords are assigned under the following conditions:
- Keywords must be separated by a blank ;
- Keywords cannot be longer than 13 characters ;
- A maximum of 10 keywords can be entered.

Note: Modifications made to explicit keywords (in the EXPLICIT KEYWORDS field on the Entity Definition screen) do not change the instance's last update session.

Updating the Thesaurus
You can create keywords and/or assign them synonyms in the 'K' screen, titled 'Keyword Enrichment of Thesaurus'.

You can view this screen in any Library but you can update it in inter-library mode (***) only.

Note: Uppercase is automatically applied to all keywords.

Keyword creation and definition

Once you have created a new keyword, you may give it a definition, which can then be consulted by users who need explanations. This may prove helpful in case of codes, abbreviations, or words specific to an application.

Also, keywords may be used as a tool to categorize instances according to your own criteria.

For example, you can define keywords which correspond to the various development phases of an application, such as "VAL" meaning "To be validated", "OK" meaning "Ready for Production", etc.

Synonym Assignment

When a keyword is assigned a synonym, it means that instances that have this synonym as keyword are found by a search using the principal keyword as only criterion.

For example, you can assign several synonyms to the keyword "VAL": "Validation", "Validate"... This eases the coding rules of keywords.

You can assign one or more synonyms to a keyword (maximum 9 synonyms per line).

Building a 'synonym chain' is not allowed. For example, if 'A' is a principal word, with words 'B' and 'C' as synonyms, it is not possible to use word 'B' or word 'C' as principal words, nor is it possible to attach 'B' or 'C' to another principal word.

```
--------------------------------------------------------------------------
|               PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 |
| KEYWORD ENRICHMENT OF THESAURUS                                            |
|                                                                            |
| 1 2          3  4 5                                                        |
| A KEYWORD    C : T SYNONYMS OR DEFINITION                                  |
|   *            : S REPORT SCREEN LIST PROGRAM                              |
|   PRODUCT      : S GOODS                                                   |
|   VENDOR       : S SUPPLIER PRODUCER MANUFACTURER                          |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
|                :                                                           |
| *** END ***                                                               |
| O: C1 CH: K                                                                |
--------------------------------------------------------------------------
```

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
1	1		ACTION CODE
		'C'	Creation of the line
		'M'	Modification of the line
		'D'	Deletion of the line
		'A'	Deletion of the line
		'T'	Transfer of the line
		'B'	Beginning of multiple deletion
		'G'	Multiple transfer
		'?'	Request for HELP documentation
		E or -	Inhibit implicit update
		'X'	Implicit update without upper/lowercase processing
2	13		KEYWORD
3	1		CONTINUATION LINE
			You must enter a continuation line if a line exists already for a keyword (even if the type of this line differs from that of the line you want to enter).

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			To enter a continuation line, enter the keyword to which it refers and then an alphabetic or a numeric character in this field. The lines will be sorted by this code, alphabetic characters preceding numeric characters.
4	1		TYPE OF LINE
		'D'	Definition.
		'S'	Synonym.
5	55		Synonym or definition
			With TYPE OF LINE = 'D': You may enter here a definition for the keyword, explaining its meaning.
			With TYPE OF LINE = 'S': Enter a synonym for the keyword (9 synonyms maximum per line).

Keywords List

Before carrying out a search by keyword, if you are not sure which keyword(s) to use, you can display the keywords list (LCKaaaaaaaa, choice, where aaaaaaaa is a keyword), sorted in alphabetical order.

The number of uses of each keyword is indicated in the 'USES' field.

The keywords and associated information entered on the 'Keyword Enrichment of Thesaurus' screen (accessed via the value 'K' in the choice field) are also displayed.

This list is for consultation only. To create or modify a keyword, go to the 'Keyword Enrichment of Thesaurus' scren.

```
--------------------------------------------------------------------------
|                   PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 |
| LIST OF KEYWORDS BY CODE                                               |
|                                                                       |
| USES KEYWORD            KEYWORD INFORMATION                            |
|      *                  *** INSIGNIFICANT KEYWORDS ***                 |
|    4 ----                                                              |
|    2 -NUMBER                                                           |
|    1 AADA10                                                            |
|    1 AAER                                                              |
|    1 AAOPF1                                                            |
|    1 ABEND                                                             |
|    1 ACCESS                                                            |
|    1 ACCOUNT                                                           |
|    3 ACTION                                                            |
|    1 ACTIVITY                                                          |
|    4 ACTUAL                                                            |
|   24 ADABAS                                                            |
|    4 ADD                                                               |
|    7 ADDRESS                                                           |
|   11 AGENCY                                                            |
|    1 AID                                                               |
|    2 ALTERNATE                                                         |
|                                                                       |
| O: C1 CH: LCK                                                          |
--------------------------------------------------------------------------
```

Word Search Screen

The WS screen enables you to search for instances via a search argument
which can be:

- Word(s) that make up the instance's name (i.e., implicit keywords), and
  their synonyms,
- Explicit keywords, and their synonyms.

GENERAL CHARACTERISTICS

A search by keyword is normally performed on all the entities of the Library
sub-network, selected via the OPERATION CODE (O:). The scope of the
search can be limited to a particular entity type, by entering the desired entity
type in the ENTITY TYPE "ENT:" field (for ex.: 'E' for Data Element).

The appropriate keyword or combination of keywords is indicated in the
SEARCH ARGUMENT field (third input field).

It is possible to restrict the search to either explicit or implicit keywords only,
using the following values in the SELECTION OF KEYWORD TYPE 'SEL:'
field:

- 'L' = Implicit keywords and synonyms,
- 'M' = Explicit keywords and synonyms.

Several keywords may be used as a search argument, using the operators 'AND' or 'OR' (any other operator between keywords is ignored).

- 'AND' Operator (represented by a 'blank')
- 'OR' Operator : (represented by the '=' sign)
- Both the 'AND' and 'OR' Operators:

No search is done on empty words.

Keywords' synonyms are included in the search.

If the character string used as the search argument ends with an asterisk (*), the search will look for all keywords starting with that character string.

EXAMPLE:: If 'PURCHAS*' is entered in the SEARCH ARGUMENT field, the word search will look for all instances which begin with these letters. For example: PURCHASING (policy), PURCHASE (order), PURCHASED (item), etc.

LIMITATION

If a child Data Element has no name (i.e. the name is indicated on the parent Data Element), a search on this name only gives the parent Data Element.

NOTE

From the search result screen, you can access the Definition of the found instances by placing the cursor on the desired line and by using a function key (standard: PF10).

```
--------------------------------------------------------------------------
                    PURCHASING MANAGEMENT SYSTEM        SG000008.LILI.CIV.1583
WORD SEARCH                                                  ENT:  1  SEL: 2
DATE   3

TYPE    CODE        CLEAR NAME AND EXPLICIT KEYWORDS                      LIBR.
ELEM.   DATEV       DATE VALIDATION                 X(8)                  *CEN
PROGR.  CVRSD       CONVERSION OF ONE DATE                                *CEN








|
|
|
*** END ***
CH: WS
--------------------------------------------------------------------------
```

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
1	3		ENTITY TYPE
			A keyword search can be done by entity type.
		'blank'	All entities.
		'B'	Database Block.
		'D'	Data Structure.
		'E'	Data Element.
		'F'	Meta Entity.
		'I'	Parameterized input aid.
		'M'	PACMODEL.
		'O'	Screen, C/S Screen, Business Component, Folder (View), Monitor (Pacbench C/S entities).
		'P'	Program.
		'Q'	User-Defined Relationship.
		'R'	Report.
		'S'	Segment, Logical View (Pacbench C/S).
		'T'	Text.
		'U'	User Manual.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
		'V'	Volume.
		'$'	User Entity.
		$tt	'tt'-type User Entity.
2	1		SELECTION OF KEYWORD TYPE
		'blank'	This generates a search through names (implicit keywords), explicit keywords, and synonyms.
		'L'	This search is limited to implicit keywords and their synonyms,
		'M'	This search is limited to explicit keywords and their synonyms.
3	79		SEARCH ARGUMENT
			This field is used to indicate the word or words to be used as the search argument (or criterion).
			A blank between two words indicates that the search will be done on the first word AND on the second, i.e., both words must appear for a match.
			The equal sign ('=') between two words indicates that the search will be done on the first word OR on the second, i.e., either word must appear for a match.
			The asterisk ('*') at the end of a character string allows a search of all words beginning with the same string of characters. For example, to search for all words beginning with 'AT', enter 'AT*'.
			NOTE: It is possible to combine logical operators AND (blank) and OR ('='). EXAMPLE: 'DATA BASE=ELEMENT'.

Access Modes

```
CHOICE              SCREEN                              UPD
LCKaaaaaaaaaaaaa List of keywords (starting with key-    NO
                 word 'aaaaaaaaaaaaa').
Kaaaaaaaaaaaaa   Enrichment of the Thesaurus            YES
WS               Word Search (using a search            NO
                 argument entered on the 'WS' screen).
```

Print Commands

LCK: List of keywords. You may limit the Keywords to explicit or implicit only.

The number of times each Keyword is used and its synonyms are also printed.

NOTE The maximum number of Keywords and Synonyms per list is 500.

.C1 OPTION: Only option.

DCK: This command provides the same list as above, plus the Keywords Definitions.

.C1 OPTION: Only option.

Search by Lists

All the instances which exist in the Database are referenced in lists.

According to the entity types, various lists are available.

To obtain a list, enter, in the CHOICE field:
* An 'L' as the first character of the CHOICE,
* A character specifying the type of list (by code, by type, by name, etc.),
* The entity type.

```
EXAMPLES: LCD = List (by code) of Data Structures,
          LTT = List (by type) of Texts.
```

A list of instances sorted by code is available for any entity, with CHOICE: LCx (x = the entity type).

Entities with specific types or external names can be listed as follows:
* LTx = List (by type) of entity 'x',
* LNx = List (by external name) of entity 'x'.

The list by code (LCx) is available for all entities, the list by type (LTx), for all entities having a type.

From a list screen, you can access the Definition of one of the instances of the list by placing the cursor on the desired line and by using a function key (standard: PF10).

Search by Cross-References

Cross-references are accessed by entering '-Xx' where 'x' = entity type.

EXAMPLE: 'EdddddXP' (or -XP if you have already accessed the instance) displays the cross-references of Data Element 'ddddd' to Programs ('P').

CHOICE '-X' displays all the cross-references of the instance, beginning with the first cross-referenced entity.

From this screen, you can access the screen on which the reference was created by placing the cursor on the desired line and by using a function key (standard: PF10).

Chapter 5. Online Updating

Possible Update Actions

An instance is normally updated in the library where it is defined. (It is possible to modify an entity in a library other than the one in which it has been defined if the options for the modification/protection of extracted entities allow it.)

Any update of an instance is reflected in all of the uses of that instance. For example, if a Data Element format is modified, this will be reflected automatically in any Segment Call of Elements containing that Data Element.

Only users who have update authorization in a Library can do on-line updates, and in certain screen presentations only (usually with a C1 Operation Code).

Lines are updated directly on the screen. There are two different types of updatable screens:
- The DISPLAY type screen (entity definition),
- The LIST type screen, which displays several occurrences of the same line (entity descriptions).

UPDATING ACTIONS

Updating (creation, modification, deletion) is done by entering an ACTION CODE (optional) and then modifying the relevant fields.

On a DISPLAY type screen, there is a single ACTION CODE field located at the bottom of the screen. On LIST type screens, there is an ACTION CODE field in the left margin of each line (see paragraph 'Values of the Action Code').

However, the update can be implicit.

INHIBITING ALL UPDATES

A special CHOICE enables you to request that both implicit and explicit updates entered on a displayed screen be ignored by the System:

```
CH: .NT
```

UPDATE RESULT DISPLAYED ON THE SCREEN

The type of updates performed are indicated to the user (in the bottom righthand corner of the screen) when the updated screen is re-displayed, or even if another CHOICE was entered.

EXAMPLE

```
C 1   M 2   D 3
```

which indicates that there was One Creation, Two Modifications, and Three Deletions.

IMPLICIT UPDATE

The system default option is implicit update, in which case it is not necessary to enter an Action Code.

A screen line is considered to be an update transaction if the line received by the system is different from the one previously entered. In this case, the transaction is considered as a Creation or Modification depending on whether or not the key exists for the line concerned.

There is no implicit deletion.

In order to inhibit an implicit update on a screen line, enter "E" or "-" in the ACTION CODE field.

It is also possible to inhibit the implicit updates entered on the displayed screen lines by using a specific PFkey (standard: PF7 or CH: .7). In this case, only EXPLICIT Action Codes are taken into account, if entered.

EXPLICIT UPDATE

Explicit update can be chosen as a default option (refer to the Database Restoration (REST) procedure in chapter "DATABASE MANAGEMENT"). In this case it is necessary to enter an Action Code (see paragraph "ACTION CODE VALUES" below).

Explicit update can also be requested via the following CHOICE:

CH: .NU (NO update).

This option applies only to the terminal on which it has been entered. It remains valid as long as the terminal is connected to the System (exit other than 'CLEAR').

To return to Implicit update, enter the following CHOICE:

CH: .U (Update).

Values of the Action Code

```
.C       = Creation of the line

.M       = Modification of the line

.D or A = Deletion of the line

.T       = Transfer of the line

.B       = Beginning of multiple deletion

.G       = Multiple transfer

.L       = End of multiple deletion or multiple transfer

           (see paragraph "Multiple Deletion" below and
           Chapter "Text Editing Facilities", Subchapter
           "Line Transfer").

.?       = Request for HELP documentation

.E or - = Inhibit implicit update

.X       = Implicit update without upper/lowercase
           processing (on certain lines only)
```

There are other Action Codes which relate to the editing facility. They are
described in chapter "Text Editing Facilities".

MULTIPLE DELETION

On all updatable LIST type screens, it is possible to delete several lines
without having to enter a "D" in the ACTION CODE field of each line.

Multiple deletion begins on the first line with the value 'B' in the ACTION
CODE field, and ends on the line with the value 'L' in the ACTION CODE
field, or on the last line displayed on the screen if an 'L' is not entered.

Multiple deletion operates the same way either in Implicit or Explicit update
mode.

If there are lines that should not be deleted between the "B" and "L" lines, the
deletion must be inhibited by entering an "E" in the ACTION CODE field of
these lines. Creations or modifications can also be specified by entering a 'C'
or 'M', respectively, in the ACTION CODE field of the relevant lines.

ACTION CODES AUTOMATICALLY ASSIGNED BY THE SYSTEM

In some cases, the System automatically assigns Action Codes to some entity
description lines:
• Comment line indicating the 'parent' Data Element when viewing the
  'child' Data Element, Call of Macro- Structures when viewing procedure
  lines (Action Code: '*'),

- Lines that originate from a higher-level library (Action Code: '.'),
- Call of an entity description: Segment in a Segment, Screen in a Screen (numeric Action Code indicating the level of the call: 1, 2 or 3).

Since these lines do not belong to the displayed entity, they cannot be modified unless the MODIFICATION OF EXTRACTED LINES is authorized in both the library where these lines were created and in the library where they are displayed. In this case, an update is taken into account by changing the Action Code value, or by entering a 'blank' (for implicit update) in the ACTION CODE field.

Copying an Instance

Each type of line is identified by a logical key. The structure of this key varies, depending on the screen: for example, on an entity Definition, it is the instance code, on Description and Comments screens, it is the instance code plus a line number.

The System takes the contents of these keys into account in order to identify the lines to be updated. Thus, the indication of these key fields is required for updating.

Since the key is an updatable field, it is possible to copy lines from one instance to another instance of the same entity by overtyping the key. In so doing, lines can also be modified at the same time.

Displayed lines can only be copied one page at a time. After an update, you remain on the same screen, except if you have specified a choice.

It is only possible to copy process lines (-P) from a batch Program (P entity) to a Screen (O entity) and vice-versa.

Validation Processing and Error Messages

Two types of validations are executed:
- Intrinsic validations, which verify that the contents of a line are valid;
- Correspondence validations, which verify that the creation or deletion of a line does not conflict with the existence or absence of other lines when an explicit Action Code is used.

In particular, for each instance, the System checks for the existence of the instance in the current Library, and sends a warning if it already exists in a parallel Library.

Validation rules are enumerated in the detailed descriptions of each screen.

Validations and updates are processed line-by-line and stop at the first erroneous line. An error message and an 'E' or 'W' is displayed in the ACTION CODE field if the screen is a LIST type screen.

Modified lines which precede the erroneous line are taken into account, and there is a 'blank' in their ACTION CODE fields.

The 'E' ACTION CODE, which is generated by the system after the screen is received, inhibits the updating of the erroneous line. The system will process all the other lines as if they had an implicit ACTION CODE; therefore they can be modified.

Once the erroneous line is corrected, the 'E' in the ACTION CODE field must be deleted or replaced by an explicit ACTION CODE.

'WARNING TYPE' ERROR MESSAGE

When a 'warning type' error message is displayed, the letter 'W' appears in the ACTION CODE field. You may ignore the warning by pressing the ENTER key.

'W'-type error messages are specific to the List of Elements for Update (LUE) screen and to the Structured Code operators. For more details, refer to the corresponding manuals.

Priorities Among Update Actions

When working with the different update screens, you can perform different actions: update, request on-line help, exit from the transaction...

The System processes these various possibilities according to the priority assigned to each one. The following hierarchy applies in descending order of priority (the (END) indicates that processing ends with this command):
- Exits from the system (clearing the screen, exit) (END),
- Update (explicit or implicit),
- Text editing request (duplication or insertion of lines) (END),
- Help request (END),
- Processing screen 'recalls' (R1 to R9) (END),
- Explicit choice (via PFkeys or entry in the CHOICE field).
- Update of the modified fields,
- Display of updated screen with duplicated lines, re- maining requests are still displayed,
- Duplicated lines are updated,
- Processing of documentation request,

- After consultation of help, return to initial screen via 'END' in the CHOICE field,
- If you modified the line on which you requested help, this modification will NOT be taken into account.

Consultation of Session Discrepancies

One particular consultation mode allows for the direct display of differences between two sessions (MASTER/SLAVE) of a Database for a given instance.

It also enables you to align a SLAVE session with the MASTER session by updating the SLAVE session according to the differences detected in the MASTER session.

This facility is available on all LIST type updatable screens for all entities, except the Report Layout (R...L) and the Meta Entity Call of Elements (F......CE) screens.

IMPLEMENTATION

The SLAVE session is the session in which you are working (i.e., the logon session or the session obtained via CHOICE: NHnnnnv).

On the desired instance screen in the SLAVE session, the CHOICE:

CH: .D nnnnv ('nnnnv' = the MASTER session)

simply displays the differences between the two sessions.

With CHOICE:

CH: .M nnnnv ('nnnnv'= the MASTER session)

you can modify the SLAVE session based on the differences detected in the MASTER session.

It is possible to consult all entities, on all list-type update screens, with two restrictions (see notes below).

RESULTS

The resulting screen displays the lines which have been created, modified, or deleted in the MASTER session. (The screen display is identical for either '.D' or '.M'). Each line contains the corresponding ACTION CODE ('C', M', 'D') for subsequent update of the SLAVE session via the CHOICE '.M nnnnv'.

The display is identical for the two possible choices, '.M' or '.D', but updates are ignored if the choice is '.D'.

Differences are detected within lines corresponding to the secondary CHOICE of the entity. For example, '-W' and '-P' lines of a program will have to be processed separately by this on-line facility.

The OPERATION CODE is forced to 'U1', except on the 'O......L' (screen labels descriptions) screen with 'C2' in the OPERATION CODE field. In this case, it is forced to 'U2'.

When the last difference is displayed, the System displays the following message:

"END OF DIFFERENCES ON THE CRITERION..."

After the transmit, the System displays the Definition Screen.

When no difference is detected, it displays a blank screen.

NOTES

Options .M and .D are operational on screens called by the following choices:

```
Programs     : P......B, -CP, -CD, -SC, -W, -P, -8, -9, -GO
Screens      : O......B, -CP, -CS, -CE, -W, -P, -GE, -GG, -GO
Data El.     : E......D, -GE
Segments     : S....SS, -CE, -GE, -GG, -GO
DBD Blocks   : B......DH, -DC, -DR, -DT, -GG, -GO
Texts        : T......D
                  (Y-type lines are ignored)
Volumes      : V......D
Reports      : R......D, -L, -CE
PIAs         : I......D
All '-GC' Comments lines.
```

Instance Lock

Generally, each user is allowed to update entity instances. The changes are automatically taken into account everywhere the entity is used.

VisualAge Pacbase allows you to lock your instances (you are given the ownership of the instances) preventing thus other users from modidying them.

A locked instance can be modified only by:
* the user who has locked the instance,
* or the user who was transfered the instance ownership,

- or a Database Administrator. Moreover, an Administrator can unlock an instance or transfer its ownership to another user. However, he is not allowed to lock again a locked instance (a transfer of ownership is required).

Thus, other users are only allowed to read locked instances.

On the Definition of the locked instance, the LOCK field in the bottom right-hand corner of the screeen displays the lock type (see paragraph 'Lock Type' below), the code of the user who locked it and the code of the Library in which it is locked.

Instances can be locked via the LL screen, title 'LIST OF LOCKED ENTITIES'. This screen displays the list of the instances locked by only one user. It is accessed via the following CHOICE:

CH: LLuuuuuuuuuLttt

where uuuuuuuu = user code and ttt = entity type

Both codes are optional. If you do not enter them, the LL screen displays the instances that you locked. You can only update the LL screen which corresponds to your user code, except if you are the Database Administrator. The user code of the LL screen is displayed in the top right corner of the screen, in the USER field.

Note
- In the case where the MODIFICATION OF EXTRACTED LINES is authorized in a Library, the update lock is effective in dependent Libraries even if the instance is redefined in these Libraries.
- If a Data Structure is locked, the update lock is also effective in its dependent Segments.

Unlocking an instance or transfering its ownership

To unlock an instance or transfer its ownership, you must be:
- the lock owner or an Administrator,
- in the Library in which the instance was locked.

These operations are to be made in the LL screen of the user who has locked the instance.

```
-------------------------------------------------------------------------
| VA Pac          ENGLISH DOCUMENTATION              P0*DOC.LILI.DOA.1867 |
| LIST OF LOCKED ENTITIES                        UTILISATEUR : DOC         |
| 1 2   3                            4                        5            |
| A TY  CODE                         NAME            SE S NEW OWNER   LIBR |
|   O   CL0020                       CLIENT SCREEN                   1536  |
|   S   CL10                         CLIENT FILE                     1536  |
|   $1A FRGR1A                       COMMENTS                        1451  |
|   T   TEXCL3                       INVENTORY                       1451  |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|                                                                         |
|  *** FIN ***                                                            |
|  O: C1 CH: LL doc                                                       |
-------------------------------------------------------------------------
```

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
1	1		ACTION CODE
		'C'	Creation of the line
		'M'	Modification of the line
		'D'	Deletion of the line
		'A'	Deletion of the line
		'T'	Transfer of the line
		'B'	Beginning of multiple deletion
		'G'	Multiple transfer
		'?'	Request for HELP documentation
		E or -	Inhibit implicit update
		'X'	Implicit update without upper/lowercase processing
2	3		ENTITY TYPE
			Type of locked entity.
		'M'	Method.
		'T'	Text.
		'E'	Data Element.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
		'D'	Data Structure.
		'S'	Segment, Logical View.
		'I'	Parameterized Input Aid.
		'B'	Database Block.
		'O'	Screen, C/S Screen, Business Component, Folder (View), Monitor.
		'R'	Report.
		'P'	Program.
		'V'	Volume.
		'$tt'	User Entity.
		'Q'	User Relation.
		'F'	Meta Entity.
3	30		ENTITY CODE
			The user enters the code of the locked entity in this field.
4	36		ENTITY NAME/COMMENTS
			Default value: Name of the locked entity.
			Otherwise, this field can be used to enter the reason why the entity is being locked.
5	8		NEW OWNER
			This field is reserved for users with a level '4' authorization and the user who 'owns' the entity.
			These users can override the displayed User Code with another User Code. In this case, the overridden line will disappear from the screen; it will appear on the 'LL' screen of the User Code entered.

Chapter 6. Text Editing Facilities

Introduction

While working on-line, you may encounter some editing problems such as the following:

- Program maintenance very often implies insertion of many lines of Structured Code in a specific place within a program,
- The line numbering sequence initially adopted may not allow additional input of new data without having to renumber existing lines,
- When a new code is given to a Data Element, the old code must be overridden with the new one wherever it is used,
- When entering text lines, you may unintentionally omit a word(s). After proofreading, the word(s) will have to added.

All of these problems can be solved with a series of relatively simple manipulations, which could be time-consuming depending on the problem at hand.

In order to easily solve this type of problem, the System offers some 'global' on-line editing facilities which generally fall into two categories:

- The first involves character string processing (for example, search for global or step-by-step substitution). The automatic renumbering of all or part of an entity description and character insertion can also fall into this category. These text editing facilities generally involve a direct update of the database (except for searches) via a global command in the CHOICE field.
- The second category involves insertion of new lines starting from a given line number, either by duplication of existing lines or addition of blank pre-formatted lines, and the line transfer and delete operation. These text editing facilities generally involve an initial transmission with a command in the ACTION CODE field to obtain the screen to be updated.

Search / Replacement of character Strings

You can use the commands for the search / replacement of character strings on:

```
Text      :  T......D
Program   :  P......B, -CP, -P, -SC, -W, -9
Screen    :  O......B, -CP, -P, -SC, -W
```

On all the screens where text editing facilities can be used, the length of the CHOICE field is increased in order to allow input of often lengthy editing commands.

CHARACTER STRING SEARCH

In order to perform a character string search, the following command should be entered in the CHOICE field:

- '.S',
- followed by a delimiter character (this can be a 'blank'),
- the character string to be searched,
- a closing delimiter (identical to the initial one).

EXAMPLE: CH: .S STRING

(In this example, the 'blank' is the delimiter)

After ENTER is pressed, the character string on which the search is being executed appears on the first line of the screen returned by the system, if it is found. In this case, the command in the CHOICE field is not erased, and you simply have to press ENTER key again to continue the search.

If the character string is not found, a message is displayed on the same initial screen:

```
"CHARACTER STRING NOT FOUND".
```

Modifications can be made on the screen when the search command is being used, and they will be taken into account (refer to chapter 'On-Line Updating', subchapter 'Update Actions', paragraph 'Priority in the Update Actions').

It is possible to execute a search using beginning/ending keys. For more detailed information, see paragraph "USING LIMITS".

When beginning/ending keys are not specified, the search begins on the line following the top line of the screen and ends:

- For Text, with the last description line,
- For Programs ('P') and Screens ('O'):
  - On the Work Areas (-W) screen: with the last group of lines which have the same CODE FOR PLACEMENT,
  - On the Procedural Code (-P) screen: with the last line of the function,
- For the Program Pure COBOL Source Code (-9) screen: with the last '-9' line,

- For the Program Source Code (-SC) screen: with the last line of the function.

REPLACING A CHARACTER STRING

Two types of replacement are possible:

.Step-by-step replacement,

.Global replacement.

STEP-BY-STEP REPLACEMENT

In order to perform a step-by-step replacement, the following command should be entered in the CHOICE field:
- '.C1',
- followed by a delimiter (any character),
- the character string to be replaced,
- followed by another delimiter (use same character as above),
- the new character string,
- followed by a closing delimiter (same character).

EXAMPLE: CH: .C1/aaaaaaaaaa/bbbbbbbbbb/

(In this case, the slash ('/') is the delimiter).

After the ENTER key is pressed, the system displays the first occurrence of the character string to be replaced on the first line of the screen, and at the bottom of the screen the display is as follows:
- '>' as an implicit ACTION CODE followed by the modified line.
- The following message is also displayed:

  "PRESS 'ENTER' TO CONFIRM SUBSTITUTION"

  You can ENTER, change the line before ENTERing, or reject the substitution (with an 'E' in the ACTION CODE, or with a PFkey (standard: PF7 or CH: .7).

After ENTER is pressed:
- The substitution is performed,
- The next occurrence of the character string to be replaced is displayed at the bottom of the screen (if it exists),
- The CHOICE field is not erased: simply press the ENTER key to continue the substitution operation. When the screen is returned, the updated line does not appear, the display shows the next character string to be replaced.

If the character string is not found, the following message is displayed:

"CHARACTER STRING NOT FOUND".

A step-by-step replacement operation can be performed using beginning/ending keys. For more information, see paragraph "USING LIMITS".

When beginning/ending keys are not specified, a step-by-step replacement starts on line 2 of the display (the first line is reserved to display the preceding replacement) and ends:
- For Text, with the last description line,
- For Programs ('P') and Screens ('O'):
    - On the Work Areas (-W) screen, with the last '-W' line (replacement is possible only on text found in the WORK AREA DESCRIPTION field of the screen).
    - On the Procedural Code (-P) screen, with the last '-P' line,
    - On the Macro-structure calls (-CP) screen, with the last '-CP' line,
    - On the Program Beginning Insertion (-B) screen, with the last '-B' line,
- For the Program Pure COBOL Source Code (-9) screen, with the last '-9' line.
- For the Program Source Code (-SC) screen, with the last '-SC' line.

NOTE: No substitution is performed on Text Description lines of type "I" or "J".

GLOBAL REPLACEMENT

In order to perform a global replacement, you should enter in the CHOICE field:

.'.C2',

.followed by a delimiter (any character),

.the character string to be replaced,

.followed by another delimiter (use same character as

above),

.the new character string,

.a closing delimiter (same character).

EXAMPLE: CH: .C2/cccccc/dddddd/

After pressing ENTER, all substitutions are performed and the system displays a message specifying the number of substitutions and the number of lines affected:

'n SUBSTITUTIONS ON n LINES'.

When beginning/ending keys are not specified, a global replacement starts on the top line and ends:
- For Texts ('T'): with the last line of the paragraph;
- For Programs ('P') and Screens ('O'):
  - On the Work Areas screen ('-W'): with the last group of lines which have the same CODE FOR COBOL PLACEMENT (Replacement is possible only on text found in the WORK AREA DESCRIPTION field of the screen).
  - On the Procedural Code (-P) screen: with the sub-function to which the current line belongs.
  - On the Macro-structure calls (-CP) screen, with the paragraph mark,
  - On the Program Beginning Insertion (-B) screen, with the last '-B' line,
- For the Program Pure COBOL Source Code (-9) screen: with the last '-9' line,
- For the Program Source Code (-SC) screen, with the sub- function to which the current line belongs.

NOTE: With a .C3 choice, a global replacement may be performed on all -W, -P, -B, -CP, -9 and -SC.

REPLACEMENT OF A STRING BY A LONGER STRING

When the new character string is longer than the character string to be replaced and the replacement cannot be executed without truncating the line, the system displays the following message:

'WARNING: TRUNCATED LINE'

In the case of a global replacement, the system displays the first line on which the replacement would cause a truncation; the global replacement becomes a step-by-step replacement and the following message is displayed:

'WARNING: TRUNCATED LINE 0 SUB. ON 0 LINES'.

In this case, the global replacement procedure becomes a step-by-step replacement.

It is possible to execute a search (for a replacement operation) starting from a specific line identified by its key (beginning key) and/or ending with a specific line (ending key).

The beginning key is coded with a 'B' and the ending key is coded with an 'E'.

EXAMPLE: To perform a search on the character string 'TEST' within the '-P' lines of a Program, beginning with Function 05 and continuing through Sub-function 'DD' of Function 40, the command in the CHOICE field is coded as follows:

```
CH: .S TEST BP05 EP40DD
```

Renumbering / Inserting Lines

Line Renumbering

AUTOMATIC RENUMBERING

The automatic renumbering facility is available on the following entity screens:

Text : T......D

Program : P......P, -SC, -W, -9

Screen : O......-CE, -P, -W

Segment : S....CE

To perform an automatic renumbering operation enter the following command in the CHOICE field:

.'.R',

.followed by a renumbering interval (optional)

(default interval = 20).

EXAMPLE: CH: .R nn

Renumbering will start from the line following the top line on the screen, continuing up to and including the lowest level of an entity description, i.e., a

sub-function for a Program or On-Line Screen, the first two characters for '-W' lines, a paragraph for Text, the last '-CE' line for a Segment or On-Line Screen.

To perform the renumbering operation using beginning/ending keys, enter the following command in the CHOICE field:

.'.R',

.followed by a 'blank' as a delimiter character,

.a beginning key (optional),

.followed by another delimiter (a 'blank'),

.an ending key (optional),

.a renumbering interval (optional).

EXAMPLE: CH: .R Bkey Ekey nn

After renumbering the system displays the following message:

"n LINES RESEQUENCED".

In case of an error in the renumbering sequence because the maximum number of lines is exceeded, or an overlap with Macro-Structure lines or lines from another Library, the following message is displayed:

"IMPOSSIBLE RESEQUENCE: TOO LARGE INCREMENT"

Renumbering is performed on 100 lines at a time.

<u>EXAMPLES</u>

Renumbering of paragraph GG in a given text:
```
.r   ====>   renumbering of the whole paragraph (default =
             renumbering interval of '20')
.r 5 ====>   renumbering of the whole paragraph with  a re-
             numbering interval of '5'
.r Bdgg100 Edgg200 10
    ====>   renumbering  paragraph GG  beginning with line
            100 and ending with line 200 with a renumber-
            ing interval of '10'.
```

<u>RENUMBERING OF THE 'O......CE' AND 'S....CE' SCREENS</u>

Segment or On-line Screen Call of Elements lines can also be renumbered. The beginning/ending limits do not take into account Element calls, but only the line number.

EXAMPLE

CH: .R B100 E200

This command will renumber the Segment or On-line Screen Call of Elements lines beginning with line 100 and ending with line 200, with a renumbering interval of '20' by default.

Line Insertion

After the ENTER key is pressed, these commands call a pre- formatted screen which is entered for update.

Modifications to entity description screens other than through the above-mentioned commands are processed as standard implicit/explicit update transactions (refer to paragraph "Priorities in update actions", chapter "Screen updating").

LINE INSERTION

To insert line, you must enter:
- An 'I' (INSERT) in the ACTION CODE field of the line after which line insertion will begin.
- The number of lines to be inserted in the LINE NUMBER field. For lines without a line number, you indicate the number of lines to be inserted in the first field following the ACTION CODE.

After ENTER is pressed, the system displays a screen containing as many 'blank' lines as the number of lines requested.

Each inserted line contains a '>' in the ACTION CODE field followed by a line number. The maximum numbering interval is '20'; this interval is calculated automatically by the system according to the initial numbering interval. This interval can be modified (see paragraph "MODIFICATION OF THE INTERVAL" in this subchapter).

If there isn't enough space to insert the number of lines requested, only the lines corresponding to the available numbers in that interval will be created.

Only the inserted lines which contain user input will be created after ENTER is pressed; all "empty" inserted lines will disappear from the screen display.

LINE DUPLICATION

Line repetition/duplication is executed as follows:

- An 'R' (REPEAT) is entered in the ACTION CODE field,
- The number of times the line is to be repeated is entered in the LINE NUMBER field. For lines without a line number, the number of times the line is to be repeated is indicated in the first field following the ACTION CODE.

After ENTER is pressed, the system displays a screen containing the number of 'repeated' lines requested.

Each repeated line contains a '>' in the ACTION CODE field followed by a line number. The maximum numbering interval is '20'; this interval is calculated automatically by the system according to the initial numbering interval. This interval can be modified (see paragraph "MODIFICATION OF THE INTERVAL" in this subchapter).

Each repeated line is identical to the initial line.

If the available interval is insufficient, VA Pac assigns the line number of the initial line to all the repeated lines. You must manually modify these line numbers.

Only the repeated lines which contain user input will be created after ENTER is pressed; all "empty" repeated lines will disappear from the screen display.

THE LINE SPLIT

The line split is used to 'split' a line in two at the point where the cursor is positioned.

This facility is only operational on hardware where cursor positioning can be established.

The line split operation is executed as follows:

- An 'S' ('Split') is entered in the ACTION CODE field,
- The cursor is positioned where the line split is to occur.

After ENTER is pressed, the system returns a screen with the initial line split at the cursor position, and a new line, with a '>' in the ACTION CODE field, which contains the rest of the split line. The line number increment is automatically calculated by the system according to the initial numbering interval.

If the available interval is insufficient, the System assigns the line number of the initial line to the new line. You must modify the line number manually.

MODIFICATION OF THE INTERVAL

Modifying the numbering interval involves the special ACTION CODES 'R', 'I' and 'S'.

These ACTION CODES generate automatic line numbering incrementation. The default numbering interval is '20'.

This default can be modified as follows:
- By entering a 'J' in the ACTION CODE field of any line on the screen (other than the I, R, or S line),
- And coding the numbering interval in the LINE NUMBER field on the same line.

Line Transfer

You can transfer line(s) on all full-page updatable screens with one command.

This facility is executed as follows:
- Enter a 'T' in the ACTION CODE field of the line to be transferred,
- Enter a 'G' in the ACTION CODE field of the first line if a group of lines is to be transferred,
- And enter an 'L' on the last line to be transferred.
  NOTES
- The ACTION CODES "G" and "B" cannot be used in the first title line of a text.
- Complete identifiers are taken into account. For example, '-P' lines can be copied from Function FF, Sub-function SF to Function GG, Sub-function TT.
- The "B" ACTION CODE, used for mulitple deletes, can also end the line transfer and delete. The 'B' line is not transferred, but deleted.
- If an "L" is not entered in the ACTION CODE field, the last line transferred is the last line of the screen, provided that all lines have a new identifier.

Update via the LINE TRANSFER AND DELETE facility follows the rules of implicit update: lines are modified or created depending on whether or not the line containing a new identifier already exists.

If there are lines between the "G" and "L" lines that should not be transferred, you must inhibit their transfer by entering an "E" in the ACTION CODE field of each such line.

It is also possible to create or modify lines by entering the "C" and "M" ACTION CODES respectively.

REMINDER: Lines are DELETED if their identifier is not modified.

NOTES
- The EXPLICIT UPDATE mode (CH: .NU) does not inhibit the LINE TRANSFER AND DELETE facility; the lines between two ACTION CODES are transferred although the ACTION CODE field of each line is 'blank'.
- Only the displayed part of Report Layout lines (CH: R...L) is transferred; the part not displayed is deleted. The initial lines are completely deleted.

Line Deletion

When you delete a line, it is instantly deleted in the Database.

This facility is executed as follows:
- Enter a 'D' in the ACTION CODE field of the line to be deleted,
- Enter a 'B' in the ACTION CODE field of the first line if a group of lines is to be deleted,
- And enter an 'L' on the last line to be deleted.
  NOTES
- The ACTION CODES 'D' and 'B' cannot be used in the first title line of a text if dependent lines exist.
- The EXPLICIT UPDATE mode (CH: .NU) does not inhibit the DELETE facility ; the lines between two ACTION CODES are deleted although the ACTION CODE field of each line is 'blank'.

Chapter 7. Documentary Facilities

Text Entity

The Text entity is used to document applications, throughout their whole life-cycle.

For example, if we use the MERISE terminology :

- During the Analysis and Design Phases, it is used to describe processes, procedures, operations, tasks...

  You can reference a Data Element code on each Text Description line, thus creating a link between them. Such Data Element does not have to be defined in the Repository, which enables you to reference -- while in the design phase -- properties to be created later on.

- During the Development Phase, it is used to document Screens, Programs, Reports...

  Also, Texts (or sections) may be assigned to occurrences of all entity types. A cross-reference is created, which facilitates the maintenance of both the occurrence and its assigned Text.

Texts can be:

- Called in Volumes to make documentation available to maintenance teams and end-users.
- Assigned to instances.
- Used to create online help for generated online applications (OLSD function and Pacbench C/S TUI client).

You can also assign a Data Element code on each Text line ; this creates a cross-reference between both. The Data Element does not necessarily exist in the Repository ; this enables you, for example, to reference elements to be defined later.

The Text entity includes:

- A Definition screen (required), for entry of general characteristics, such as name, type, keywords.
- A Description screen, grouping text by 'paragraphs' or 'sections', where you enter the text contents.

  References to occurrences of all entity types may be entered in Text Description lines.

- A Comments screen used to enter any kind of technical information about the text (e.g. author's name, date, targeted readership, etc.).

Definition

The Text Definition screen is called by the letter T. Each Text is defined by a 6-character TEXT CODE and a TEXT NAME (required) and is constituted of sections.

A TYPE OF TEXT can be used to define the nature of a given Text. For example, TYPE OF TEXT can be 'PR' for a Text describing a procedure, 'SC' to describe a screen, etc.

EXAMPLE: It is possible to get a list of the Texts of the same type (for instance, to list all Texts of type 'PR', use Choice LTTpr).

In the same manner, a type is assigned to sections of a Text in order to specify their nature.

For example, a procedure can be broken down into operations (type 'OP').

NOTE: Labels and associated codes of Text and paragraph types are managed by the VA Pac Administrator.

Sections are called in Volumes, not Texts. In other words, to call a Text in a Volume, you need enter the Text code AND the relevant section code(s).

NOTE: The word 'section' mentioned above stands for the old 'paragraph'. This new word allows a clear discrimination between the Va Pac paragraph of the Text entity and the paragraphs as understood in classical word processing.

```
 ---------------------------------------------------------------------------
|                    PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 |
|                                                                            |
|                                                                            |
|  COMMENTS     BA1ABA                                                       |
|                                                                            |
|                                                                            |
|  NAME...............: 2 SYSTEM INTRODUCTION                                |
|  TYPE...............: 3 CM                                                 |
|                                                                            |
|  PARAGRAPH TYPE.....: 4 PA PARAGRAPH                                       |
|                                                                            |
|                                                                            |
|                                                                            |
|  EXPLICIT KEYWORDS..: 5                                                    |
|                                                                            |
|                                                                            |
|                                                                            |
|  SESSION NUMBER.....: 0059        LIBRARY......: CIV   LOCK....:           |
|                                                                            |
|                                                                            |
|  O: C1 CH: Tbababa                        ACTION:                          |
 ---------------------------------------------------------------------------
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		TEXT CODE (REQUIRED)
			One character, at least, must not be BLANK. Alphabetic or numeric characters only are recommended for this field.
2	36		TEXT NAME (REQUIRED IN CREAT)
			This name should be as explicit as possible. Words used here become implicit keywords (subject to the limitations specified in the 'Character Mode User Interface' Manual).
3	2		TYPE OF TEXT
			The TYPE OF TEXT field is used for documentation purposes only, and allows the user to:
			.obtain the list of texts sorted by type (CHOICE: LTT),
			.have explicit titles including the labels corresponding to the chosen type of text, on screens and reports which contain the text.
			The coding of types and labels depends on an external parameter handled by the Database Administrator.
		'T'	Default value.
4	2		PARAGRAPH (OR SECTION) TYPE

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			The Paragraph (or Section) Type has a documentary value only.
			Its associated label is displayed on the Text Description (-D..) screen.
			Types and their labels are managed by the VA Pac Database Administrator.
		U	Text (default value).
5	55		Explicit keywords
			This field allows you to enter additional (explicit) keywords. By default, keywords are generated from the instance's name (implicit keywords).
			Keywords must be separated by at least one space. Keywords have a maximum length of 13 characters which must be alphanumeric. However, '=' and '*' are reserved for special usage and are therefore ignored in keywords.
			Keywords are not case-sensitive: uppercase and lower-case letters are equivalent.
			NOTE: Accented and special characters can be declared as equivalent to an internal value in order to optimize the search of instances by keywords (Administrator workbench, 'Window' menu, 'Parameters browser' choice, in 'Special Characters' tab).
			A maximum of ten explicit keywords can be assigned to one entity. For more details, refer to the 'Character Mode User Interface' guide, chapter 'Search for Instances', subchapter 'Searching by Keywords'.

Description

The description lines (-D) of a Text are used to create the body of the text in the form of Sections. They also allow:

- Assignment to an instance of any other entity (Program, Screen, Data Structures...) for documentation,
- Activity calculation, when using the PACMODEL function (for details, refer to the PACMODEL Reference Manual),
- Cross-referencing Data Elements or Properties,
- Cross-referencing other Texts or sections of Text,
- Description of entries and selection criteria used to build a volume index (see the PERSONALIZED DOCUMENTATION MANAGER Manual).

GENERAL CHARACTERISTICS

A text is subdivided into sections referenced by a 2-character SECTION CODE. Text lines are numbered within each section. A title line is mandatory (see field TYPE OF TEXT LINE).

The text summary is given by the list of section titles (Choice -LT).

Line and page skips are indicated in the TYPE OF TEXT LINE, and will be effective when the text is printed in a manual or volume, or in a simulation for a volume.

However, the spacing of the titles and the paragraph indentations may be included in the writing of the text, either by leaving the necessary blanks for a User Manual or by using symbolic parameters for a Volume (See the PERSONALIZED DOCUMENTATION MANAGER Manual).

ASSIGNED TEXTS

Text lines may be used to document other entities' instances. The number of lines in an assigned text is controled when you set specific types of lines which are used as delimiters. The type and code of instances being documented must be entered after the type of lines.

Type of line	Meaning
'I'	This code is used to assign text lines to instances displayed on this line (8 instances maximum). Text assignment starts at the beginning of the section where the 'I'-type line is inserted and ends implicitly at the end of the last section, or if a 'J'-type line is explicitly encountered.
'J'	End of explicit assignment on a VA Pac entity, on User Entity instances whose code does not exceed six characters, or on instances of any other entity types. If a text line was empty, text assignment would end for all the instances. You can choose to end text assignment for some given entity types/instance codes or for any instances of a given entity type.
'B'	It is the same as for a 'I'-type line but here it can contain only one entity code, knowing that the length of the code can reach up to 30 characters for User entities.
'E'	It is the same as for a 'J'-type line, but here it can contain only one entity code, knowing that the length of the code can reach up to 30 characters for User Entities.
'Y'	This type of line allows you to refers to another Text and/or to another section. It is possible to cross-reference another section of the Text.

Assigned texts may be consulted by using the '-AT' choice for each entity (with the C1 option, the lines of text are displayed with the cross-referenced data elements; with the C2 option, the source of each text line is displayed).

CALLING TEXT

A text or a section may be called in the Error Messages - Help screen (-GE) of Data Elements, Segments, Screens and Data Structures to create a built-in HELP function.

For more details about on-line help, refer to the OLSD Manual and to the 'Pacbench C/S: Business Logic and TUI Clients', Chapter 'Error Messages - Help Function'.

CROSS-REFERENCES TO DATA ELEMENTS

A Text which describes an application often refers to individual Data Elements. A cross-reference between a Text line and a Data Element is created by entering the Data Element code in the DATA ELEMENT CODE REFERENCED field (labeled ELEM.).

NOTE:: Data Element cannot be cross-referenced to I-, J-, B-, E-, and Y-type lines.

Since there is no existence validation on this ELEM. field's contents, codes of Data Element instances NOT defined in the Specifications Dictionary can be entered. If so, the List of Undefined Data Elements (LFE) will display them.

CROSS-REFERENCES TO DATA ELEMENTS IN VA PAC WORKSTATION-UPLOADED TEXT OCCURRENCES:

References to Data Element occurrences present in VA Pac WorkStation-uploaded Text occurrences have a specific presentation: Codes of the cross-referenced Data Element occurrences are not displayed in the ELEM. field but in the TEXT CONTENTS field, preceded by the '$.E=' characters.

The complete references ($.E=occcod) are not printed when called in a Volume nor are they displayed in Text Simulation.

The ELEM. field may still be used, knowing that after a download, and all the more so after a subsequent upload from the VA Pac WorkStation, its values are transferred to the TEXT CONTENTS field preceded by '$.E='.

PREREQUISITES

A Text Definition screen must be created before any text description lines may be entered.

A section title on the Text Description (-D) screen must be created before any other section description line.

OPERATION FIELD

Three operation codes are possible on the Text Description screen:

C1: Default value. All fields on the screen can be accessed, and the 'ELEM' field on the right side of each line links a Data element to the Text line.

C2: The 'ELEM' field is replaced by the 'LIBR' field, which displays, for each line, the session in which the line was last modified or the code for the Library in which it was defined. The 'LIBR' field is for display only.

C3: Same display as C2, but after a request to insert, repeat or split a line (action codes 'I,' 'R' or 'S'), only the 'DESCRIPTION' field can be input for lines with '>' in the action field.

In this case, be sure that there is not twice the same line number because only the last one will be kept.

```
 ----------------------------------------------------------------------------
|                 PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 |
| COMMENTARY  1   BADBAD Company Background                 PARAGRAPH    2 BB  |
| 3 4    5 6                                                             7     |
| A LIN : T TEXT CONTENTS                                              ELEM.   |
|   000 : L Company Background                                                 |
|   005 : I PPGM1  OSCR01 SSG01  SSG02  EELEM01.        .        .             |
|   010 : * Aztech Laboratories, Inc. is a $25 million per year       AZTCOM   |
|   020 :   research and engineering firm specializing in biomedical          |
|   030 :   engineering.  The firm does a considerable amount of work          |
|   040 :   under contract to various federal agencies, such as the           |
|   050 :   National Institute of Health (NIH), and the Departments of        |
|   060 :   Defense (DOD) and Health and Human Services (HHS).                 |
|   070 : 2 The company spends several millions of dollars each year  HHSORG   |
|   080 :   purchasing equipment for use by its scientists and                |
|   090 :   engineers.  It has always been felt by management that            |
|   100 :   there has been a laxity in purchasing management procedures       |
|   110 :   which has resulted in a substantial waste of resources by         |
|   120 :   paying too much for equipment, not buying in quantity and         |
|   130 : Y TEXT01   AZTECH FIGURES                                            |
|   135 : J OSCR01 S      EELEM01.        .        .       .       .           |
|   140 : Y TEXTSGPP PURCHASING POLICY                                         |
|                                                                             |
| O: C1 CH: TbadbadDbb                                                         |
 ----------------------------------------------------------------------------
```

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
1	6		TEXT CODE (REQUIRED)
			One character, at least, must not be BLANK. Alphabetic or numeric characters only are recommended for this field.
2	2		SECTION CODE
		'blank'	Default value prior to the creation of a section.
			Alphabetic or numeric characters only are recommended for this field.
3	1		ACTION CODE (REQUIRED)
		'C'	Creation of the line
		'M'	Modification of the line
		'D'	Deletion of the line
		'A'	Deletion of the line
		'T'	Transfer of the line
		'B'	Beginning of multiple deletion
		'G'	Multiple transfer
		'?'	Request for HELP documentation
		E or -	Inhibit implicit update

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
		'X'	Implicit update without upper/lowercase processing
4	3		Line number
			Numeric.
			It is advisable to begin with line number '100' and then number in intervals of 20. This facilitates subsequent line insertions, as necessary.
5	1		Type of Text line
			Section title:
			A section must always contain a title. The choice TtttttttLT is used to consult the list of titles.
		'L'	Section title. It will NOT appear in a Volume.
		'K'	Section title. This line will appear in a Volume.
		'-'	Section title. This line will be underlined with the '-' (dash) character when a Volume is printed.
		'_'	Section title. This line will be underlined with the '_' (underscore) character when a Volume is printed.
		'='	Section title. This line will be underlined with the '=' character when a Volume is printed.
		'+'	Section title. This line will be underlined with the '+' character when a Volume is printed.
			Text Description line:
		'blank'	Description line printed without additional skip (default option).
			Line/Page skip:
			Taken into account when the text is printed in a User Manual or a Volume, or in Text simulation.
		'1'	New line.
		'1-9'	Skip of 1-8 lines before the given line is printed.
		'*'	PAGE skip before the given line is printed.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			Text Assignment: Text can be assigned to instances of other entities called in the TEXT DESCRIPTION LINE field. The assignment starts at the beginning of the section which contains the I-type line and terminates at the end of the text or after a J-type line. The assignment for one instances, all instances of a given entity or of all entities can be terminated. The '-AT' choice is used to visualize the texts assigned to the instance of an entity. Texts can be assigned to the following entities: 'B' (Database block), 'D' (Data structure), 'E' (Data element), 'F' (Meta-entity), 'I' (Input Aid), 'M' (Model entity), 'O' (Screen), 'P' (Program), 'Q' (User relation), 'R' (Report), 'S' (Segment), 'T' (Text), 'V' (Volume), '$' (User entity).
		'I'	Beginning of assignment. It starts at the beginning of the section which contains this line.
		'J'	Explicit end of assignment.
		'Y'	This code is used to create a link between this section of text and another text or section, i.e. 'refer to..'. The System displays the title of this text or section.
			For the referenced text:
			Choice -XT gives the list of texts referring to the whole text, Choice -LT gives the list of sections, each followed by the sections referring to it.
			Note: The L, I, J, B, E and Y Type lines are not printed in Volumes.
6	60		TEXT CONTENTS
			The content of this field depends on the input entered in the TYPE OF TEXT LINE field.
			With TYPE OF TEXT LINE = 'blank', '1' to '9' or '*', enter text.
			With TYPE OF TEXT LINE = 'L', 'K', '-', '_', '=', '+', enter paragraph titles.
			USE WITH PERSONALIZED DOCUMENTATION MANAGER
			Refer to the PERSONALIZED DOCUMENTATION MANAGER Manual.
			ASSIGNED TEXT
			The 'I'- or 'J'-type lines may contain up to 8 instances of the set entity type/instance code:

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			ENTITY TYPE: 1 character, INSTANCE CODE: 6 characters (8 characters for a User Entity).
			The fields type of entities are identified with periods in the on-line mode and they are specified on the last line of the batch form T.
			Lines of type J: if this field is set to blank, the assignment process is stopped for all entities. If only the type is filled in, the assignment process is terminated for all entities whose type is specified.
			On lines of type B and E, this field includes only one entity instance, with a code that can reach up to 30 characters for a User entity.
			With TYPE OF TEXT LINE = 'Y', enter the TEXT CODE
			followed by the PARAGRAPH CODE in columns 1 to 8 of this field.
			If all sections should be selected, the 7th and 8th characters are '**'. To refer to a section whose code is blank, simply enter '&&' after the TEXT CODE.
			With TYPE OF TEXT LINE = 'Y', enter the TEXT CODE
			followed by the PARAGRAPH CODE in columns 1 to 8 of this
7	6		DATA ELEMENT CODE REFERENCED
			Establishes a cross-reference between text sections and data elements. One data element may be indicated on each line. The data elements need not have been previously defined in the Specifications Dictionary.
			The System produces:
			- the list of Data Elements used, whether they are defined in the Dictionary or not.
			- the list of uses of a Data Element in Texts.

TP Access Mode

```
LISTS
CHOICE          SCREEN                              UPD
------          ------                              ---
LCTaaaaaa       List of Texts by code (starting      NO
                with Text 'aaaaaa').

LNTaaaaaa       List of Texts by name (starting      NO
                with Text named 'aaaaaa').
```

```
LTTaaTbbbbbb      List of Texts by type (starting      NO
                  with type 'aa' and with Text 'bbbbbb').
```

DESCRIPTION OF TEXT 'aaaaaa'

CHOICE	SCREEN	UPD
Taaaaaa	Definition of Text 'aaaaaa'.	YES
TaaaaaaCR	Instances linked to Text 'aaaaaa' via User Relations.	YES
TaaaaaaGCbbb	Comments on Text 'aaaaaa' (starting with line number 'bbb').	YES
TaaaaaaATbbbbbbcc	Text assigned to Text 'aaaaaa' (starting with Text 'bbbbbb', paragraph 'cc').	NO
TaaaaaaX	X-references to Text 'aaaaaa'.	NO
TaaaaaaXGbbb	X-references of Text 'aaaaaa' to Comments lines (starting with line 'bbb').	NO
TaaaaaaXVbbbbbb	X-references of Text 'aaaaaa' to Documents (starting with Document 'bbbbb').	NO
TaaaaaaXTbbbbbbcc	X-references of Text 'aaaaaa' to Texts (starting with Text 'bbbbbb' and paragraph 'cc').	NO
TaaaaaaLTbb	List of paragraph titles of the Text 'aaaaaa' (starting with paragraph 'bb').	NO
TaaaaaaXQbbbbbb	List of occurrences linked to Text 'aaaaaa' through User Relations (starting with Relation 'bbbbbb').	NO
TaaaaaaDbbccc	Description of Text 'aaaaaa' (starting with paragraph 'bb' and line number 'ccc').	YES

PRINT PREVIEW

TaaaaaaSIMbbbDcc Print Preview of Text 'aaaaaa' using NO Report Layout 'bbb', starting with Paragraph/Section 'cc'. (To use the Standard Layout, enter '&&&' for the Layout code).

NOTE: After the first choice of type 'Taaaaaa', 'Taaaaaa' can be replaced with '-'.

All notations between parentheses are optional.

```
--------------------------------------------------------------------------------
|                   PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 |
| ELEMENT ASSIGNED TEXT                    ELEM01                                |
|                                                                               |
| ----- TEXT CMT1 --------------------------------------------------- D.ELEM     |
| BB  000  L  Company Background                                                 |
| BB  005  I  PPGM1  OSCR01 SSG01  SSG02  EELEM01.        .        .             |
| BB  010  *  Aztech Laboratories, Inc. is a $25 million per year      AZTCOM    |
| BB  020     research and engineering firm specializing in biomedical          |
| BB  030     engineering.  The firm does a considerable amount of work         |
| BB  040     under contract to various federal agencies, such as the           |
| BB  050     National Institute of Health (NIH), and the Departments           |
| BB  060     of Defense (DOD) and Health and Human Services (HHS).             |
| BB  070  2  The company spends several millions of dollars each year HHSORG    |
| BB  080     purchasing equipment for use by its scientists and                |
| BB  090     engineers.  It has always been felt by management that            |
| BB  100     there has been a laxity in purchasing management proce-           |
| BB  110     dures which has resulted in a substantial waste of re-            |
| BB  120     sources by paying too much for equipment, not buying in           |
| BB  230     quantity and the purchase of redundant equipment.                 |
|                                                                               |
|                                                                               |
|                                                                               |
|                                                                               |
| *** END ***                                                                   |
| O: C1 CH: Eelem01AT                                                           |
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
|             PURCHASING MANAGEMENT SYSTEM        SG000008.LILI.CIV.1583 |
|    TEXT     ASSIGNED    TO     TEXT :TEXT01                            |
|                                                                        |
| TEXT      TITLE                                          LIN LIBR.     |
| BADBAD BB Company Background                             130 1513      |
|                                                                        |
|                                                                        |
|                                                                        |
|                                                                        |
|                                                                        |
|                                                                        |
|                                                                        |
|                                                                        |
|                                                                        |
|                                                                        |
|                                                                        |
|                                                                        |
|                                                                        |
| *** END ***                                                           |
| O: C1 CH: Ttext01XT                                                    |
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
|              PURCHASING MANAGEMENT SYSTEM           SG000008.LILI.CIV.1583 |
| TREATMENT       TEXTSG PURCHASING POLICY                          SUMMARY  |
|                                                                           |
| TASK                                                              LIBR.   |
| BB INTRODUCTION                                                           |
| DE PLANNING                                                              |
| FF BUDGET PLANNING                                                       |
| GG BUYER TRAINING                                                        |
| PP FORECASTS                                                             |
|      -> BADBAD BB Company Background                              0688    |
| QR DEPARTMENT ORGANIZATIONAL STRUCTURE                                   |
|                                                                           |
|                                                                           |
|                                                                           |
|                                                                           |
|                                                                           |
|                                                                           |
|                                                                           |
|                                                                           |
|                                                                           |
| *** END ***                                                              |
| O: C1 CH: TtextsgLT                                                       |
--------------------------------------------------------------------------------
```

```
-------------------------------------------------------------------------------
|                PURCHASING MANAGEMENT SYSTEM        SG000008.LILI.CIV.1583 |
| LIST OF TEXTS BY TYPE                                                      |
|                                                                           |
| TYPE                   TEXT       NAME                              LIBR. |
| CM COMMENTARY          BABABA     System Introduction              0059   |
|                        BADBAD     Company Background               0059   |
|                        BAFBAF     System Objectives               0059   |
|                        BAHBAH     System Overview                 0059   |
| DD DATA                GADGAD     Vendor and Product Data          0059   |
|                        GAFGAF     Purchase Order Data             0059   |
| OP OPERATION           DADDAD     Purchase Order Receipt          0059   |
|                        DAFDAF     Shipment Receipt                0059   |
|                        DAHDAH     Purchase Order Update           0059   |
|                        FADFAD     Vendor Master List Maintenance  0059   |
|                        FAFFAF     Product Catalogue Maintenance   0059   |
|                        FAHFAH     Vendor Performance Analysis     0059   |
| PC PROCESS             DADADA     Purchase Order Management       0059   |
|                        FAFAFA     Vendor Information Management   0059   |
| T  TREATMENT           GAGAGA     Physical Data Structure Specificatns 0059 |
|                        XOAXOA     On-line systems devel.guide appendix *CEN |
|                        XOEXOE     Journal extraction              *CEN   |
|                        XOSXOS     On-line systems devel.guide examples *CEN |
|                                                                           |
| O: C1 CH: LTT                                                             |
-------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
|           PURCHASING MANAGEMENT SYSTEM        SG000008.LILI.CIV.1583       |
| LIST OF TEXTS BY CODE                                                      |
|                                                                           |
| TEXT     NAME                                      TYPE            LIBR.   |
| BABABA   System Introduction                       CM COMMENTARY   0059    |
| BADBAD   Company Background                         CM             0059    |
| BAFBAF   System Objectives                         CM             0059    |
| BAHBAH   System Overview                           CM             0059    |
| DADADA   Purchase Order Management                 PC PROCESS      0059    |
| DADDAD   Purchase Order Receipt                    OP OPERATION    0059    |
| DAFDAF   Shipment Receipt                          OP             0059    |
| DAHDAH   Purchase Order Update                     OP             0059    |
| FADFAD   Vendor Master List Maintenance            OP             0059    |
| FAFAFA   Vendor Information Management              PC PROCESS      0059    |
| FAFFAF   Product Catalogue Maintenance             OP OPERATION    0059    |
| FAHFAH   Vendor Performance Analysis               OP             0059    |
| GADGAD   Vendor and Product Data                   DD DATA         0059    |
| GAFGAF   Purchase Order Data                       DD             0059    |
| GAGAGA   Physical Data Structure Specificatns      T  TREATMENT    0059    |
| XOAXOA   On-line systems devel.guide appendix      T              *CEN    |
| XOEXOE   Journal extraction                        T              *CEN    |
| XOSXOS   On-line systems devel.guide examples      T              *CEN    |
|                                                                           |
| O: C1 CH: LCT                                                             |
--------------------------------------------------------------------------------
```

Print Commands

LISTS

LCT: List of all texts, sequenced by their codes.

C1 OPTION: Without explicit keywords,

C2 OPTION: With explicit keywords.

LKT: List of all texts by keywords.

After typing LKT, a selection field (SEL:) enables the user to choose implicit
('L') or explicit ('M') keywords, or both (' '). Keywords are entered on a
continuation line.

C1 OPTION: Same as LCT.

LTT: List of texts sequenced by type. You may specify a specific text type, in
order to list texts of just that type.

C1 OPTION: Same as LCT.

DESCRIPTIONS

DCT: Definition, description and comments for the text entered in the ENTITY CODE field, plus its summary (list of sections, with possible references to other texts/sections) and all cross-references with other entities.

C1 OPTION: Only option.

NOTE: To obtain the complete description of ALL texts, replace the Text code by an asterisk (*).

DTT: Like DCT, however you may obtain the description of all texts of a specific type. The type is entered in the TYPE field on the Generation and Print Commands (GP) screen.

C1 OPTION: Only option.

Comments

Entering Comments

The 'Comments' screen (-GC) enables you to write and edit text in relation to one selected instance. This screen is available on all entities.

Each comments line is made up of a 60-character field containing text and a 'Type of Line' field for particular purposes (comment, call of a P.I.A, indication of an alias).

CALLING A P.I.A.

The use of the Parameterized Input Aid entity (P.I.A.) may facilitate and standardize data entry on this screen.

An Input Aid is a group of parameterized lines. Each line contains a fixed label and a variable part which will be filled in the calling instance.

You call a P.I.A. by entering the value 'I' in the 'Type of Line' field and the P.I.A. code in the 'Description' field. VA Pac responds by displaying the P.I.A. lines field. Enter the parameters values on these formatted lines.

NOTE: The 'C2' option (O: C2) enables you to tab to the variable part of the P.I.A. line.

Additional lines cannot be inserted between called lines.

PREREQUISITES

The instance must be defined prior to being documented.

The called P.I.As must also exist.

<u>LINES COPY</u>

You may overwrite the instance code with another instance code (belonging to the same entity). This will not affect the original lines, but it will replicate them for the other instance.

NOTE: If the original lines include the lines of a called P.I.A., they will also be duplicated, except for user input on the variable parts of the P.I.A. lines.

>>>> Fore more information, see chapter 'Documentary Facilities', subchapter 'Parameterized Input Aids'.

```
--------------------------------------------------------------------------
|             PURCHASING MANAGEMENT SYSTEM        SG000008.LILI.CIV.1583 |
| ELEMENT    COMMENTS                CRDTAM CREDIT NOTE AMOUNT            |
| 1 2      3 4                5                                          |
| A LIN : T DESCRIPTION                                             LIB  |
|   010 :   ******************************************************  ADMENT|
|       :   INFORMATION          INTERNAL STANDARDIZATION           ADMENT|
|       :   Manager        :   MRS. DEBORAH WINGLET.................  ADMENT|
|       :   Internal type  :   Conceptual                    $TC   ADMENT|
|       :   Status         :   Transition                    $ET   ADMENT|
|       :   Addressee No. 1 :  MR. MIKE HAMMERSWORTH.................  ADMENT|
|       :   Addressee No. 2 :  MR. PATRICK KELLY...................  ADMENT|
|       :   Addressee No. 3 :  ...................................  ADMENT|
|       :   Date           :   881003                              ADMENT|
|       :   ******************************************************  ADMENT|
|   020 :   As of now, this element's description does not include the 1581|
|   040 :   minimum and maximum values allowed by the Travel Expenses  1581|
|   060 :   Section. This element will have to be updated before the   1581|
|   080 :   survey of the Preliminary Study Report on the INTERNAL     1581|
|   100 :   ACCOUNTING application.                                    1581|
|       :                                                                |
|       :                                                                |
|       :                                                                |
| *** END ***                                                           |
| O: C1 CH: EcrdtamGC                                                    |
--------------------------------------------------------------------------
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE (REQUIRED)
		'C'	Creation of the line
		'M'	Modification of the line
		'D'	Deletion of the line
		'A'	Deletion of the line
		'T'	Transfer of the line
		'B'	Beginning of multiple deletion
		'G'	Multiple transfer
		'?'	Request for HELP documentation
		E or -	Inhibit implicit update
		'X'	Implicit update without upper/lowercase processing
2	3		Line number
			Numeric.
			It is advisable to begin with line number '100' and then number in intervals of 20. This facilitates subsequent line insertions, as necessary.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
3	1		Line Type - Standard Documentation
		blank	Standard documentation line.
		I	Call of a P.I.A. You can only call a P.I.A. with a 'C' type. The comment lines from the called P.I.A. have a 'Line generation option' set to 'blank' or 'G' in the P.I.A. Description. The call line is then replaced by the called P.I.A.
		A	Alias for the Segment code.
4	60		DESCRIPTION - FIRST PART
			If no P.I.A. is called, you can use the whole field.
			On a blank-type line, you enter a free comment.
			In order to select only certain lines of the comments of an instance, use print option -EG and indicate the $OFF command at the left end of each line to be ignored. To re-activate the -EG option on a line, indicate a $ON command, left-justified, after the last line to be ignored.
			On an A-type line, enter the COBOL Segment name. (see chapter 'Generation of Copy Book', subchapter 'Description of VA Pac PIA 'Data'', value 'A*' in the 'Data Structure Code in Gener. Descr.' field.)
5	40		DESCRIPTION / SECOND PART
			This field is specific to a P.I.A. call.
			With value 'C2' in the OPERATION CODE field, the cursor automatically tabs to the first position of this field.
			This field is initialized with blanks (default value) or with the value specified in the INITIAL VALUE field for a Standard PIA description line (Type = 'blank').
			If symbolic parameters have been defined on the P.I.A. Description (-D), they may be entered in this field. They will be replaced by their corresponding value, and will remain displayed on the right of the screen.

Automatic Branching to the Comments

Some descriptions call other instances whose call lines may be commented via Comments lines, in particular the descriptions of:

.Segments (-CE),

.Database blocks (-DH, -DC, -DR, -DT),

.Model objects or relationships (-CM, -CE).

When description lines are commented, an asterisk ('*') appears in the DOC field on the relevant description screen.

To consult the comments, enter an explicit CHOICE (for example: S FF36 CE200G) or:

.set the cursor on the desired line,

.and press a PFkey (standard: PF11).

With either method, the same screen is obtained.

In addition, on simple list-type screens such as List of Data Elements or List of Programs, the same method is used to branch to the Comments of an instance on which the cursor is positioned.

EXAMPLE

From the 'LCP' screen, the user can access the Comments of a specific Program ('PGM050' for example) by positioning the cursor on the relevant line and pressing the appropriate PFkey. The screen obtained is the same as with the explicit CHOICE ('P PGM050 G').

Parameterized Input Aids

Introduction

The purpose of the Parameterized Input Aid (P.I.A.) entity is to pre-format the Comments screen (-GC), Generation Elements screen (-GG) and Generation Options screen (-GO) of an instance, in order to standardize them.

The P.I.A. is defined and described once, then called in one of these screens as needed.

A description line of a P.I.A. contains:
- A Fixed part, which contains the LABEL of the input field,
- A Variable part, which is the input field. The contents of this field will be specified when the P.I.A. is called.

   NOTE: Input in the variable part of a P.I.A. can be parameterized. See the "DESCRIPTION SCREEN" Subchapter for complete information on parameterization.

The basic types of P.I.A. are :

- The Documentary P.I.A., which is used to standardize the Comments, Generation Elements and Generation Options of instances.
- The P.I.A. which is used to indicate elements for the generation of Database Blocks, Screens or Programs.
- The P.I.A. which is used to indicate options for the generation of Database Blocks, Screens or Programs.
- Reserved P.I.A.s, such as 'DATA' used for generating copy books.

GENERAL CHARACTERISTICS

The Parameterized Input Aid (P.I.A.) entity includes the following:
- A Definition screen (required), for entry of the general characteristics (name, type, keywords),
- A Description screen, to describe the fixed and variable parts of a P.I.A.,
- A Comments screen, where notes (for example author, purpose of the P.I.A., etc..) may be entered.

CALL OF A P.I.A.

You can call a P.I.A. on the Comments lines (-GC), Generation Options lines (-GO) or Generation Elements lines (-GG) of entities or of Segment or Database Block description lines.

The P.I.A. then enables you to:
- Standardize the documentation of entities,
- Add physical complements required to generate Database descriptions (-CEnnnGG, -DCnnnGG, -DHnnnGG or -DRnnnGG),
- Indicate elements and options for the generation of Database Blocks, Screens and Programs.
- List the instances which call the PIA, with the value of a particular variable part. (ex: list of the instances with their authors).

Definition

A P.I.A. is defined by a code, a name and a type on a screen called by the letter I.

COMMENTS SCREEN

A P.I.A. may be documented via its Comments (-GC) screen.

```
 ---------------------------------------------------------------------------
|                   PURCHASING MANAGEMENT SYSTEM        SG000008.LILI.CIV.1583 |
|                                                                              |
|  INPUT AID DEFINITION....: 1 AUTHOR                                          |
|                                                                              |
|  NAME...............: 2 AUTHOR DOCUMENTATION                                 |
|                                                                              |
|                                                                              |
|  TYPE...............: 3 C COMMENTS                                           |
|                                                                              |
|                                                                              |
|  EXPLICIT KEYWORDS..: 4                                                      |
|                                                                              |
|                                                                              |
|                                                                              |
|                                                                              |
|                                                                              |
|                                                                              |
|                                                                              |
|  SESSION NUMBER.....: 0059     LIBRARY.....: CIV    LOCK....:                |
|                                                                              |
|  O: C1 CH: Iauthor                          ACTION:                          |
 ---------------------------------------------------------------------------
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		CODE OF PARAMETERIZED INPUT AID (REQUIRED)
			'DATA' and 'VALORI' are reserved codes.
		DATA	The 'DATA' P.I.A. is used to generate COPY books from Data Structure descriptions. For more information, see chapter "Generation of Copy Book', subchapter "Description of P.I.A. Data".
		VALORI	It is used for the activity calculation of the PACMODEL function.
			These two P.I.A. are described in their corresponding manuals.
		PAC...	It is prohibited to define a P.I.A. code beginning with 'PAC'.
2	36		PARAMETERIZED INPUT AID NAME (REQUIRED IN CREAT)
			This name should be as explicit as possible. Words used here become implicit keywords (subject to limitations specified in Chapter 'KEYWORDS', Subchapter 'HOW TO BUILD THE THESAURUS', in this Manual).
3	1		TYPE
			Indicating the type is required.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		'C'	Comments Such a PIA type can be called in the Comments screen of an instance (-GC) only.
		'G'	Generation Elements Such a PIA type can be called in the Generation Elements screen of an instance (-GG) only.
		'O'	Generation Options Such a PIA type can be called in the Generation Options screen of an instance (-GO) only.
4	55		ASSOCIATED KEYWORDS
			This field is used to enter explicit keywords as the system automatically creates implicit keywords from the name of entities.
			A blank character is required to separate the different entities.
			A keyword is made of 13 characters maximum. The characters are to be alphanumeric. The '=' and '*' characters are not recognized.
			Uppercase and lowercase characters are equivalent.
			NOTE: Special characters can however be declared as being an equivalent to an internal value to enable the search of instances by keywords as being an equivalent to an internal value (Administrator workbench, 'Window' menu, 'Parameters browser' choice, 'Special characters' tab.
			It is possible to assign ten explicit keywords maximum by entity. For more information, see chapter 'Search for instances', in the section dedicated to keywords.

Description

The -D screen is used to describe the contents of the lines which make up a P.I.A.

GENERAL CHARACTERISTICS

Each P.I.A. Description line is made up of three fields:
- The TYPE OF P.I.A. LINE, which indicates:
  - A Standard P.I.A. line (Type = 'blank'),
  - A Comment line (Type = 'C'),
  - A Symbolic Value line used to define a parameter to be used in the variable part (Type = 'T').
- The LABEL, which is the fixed part of a P.I.A. line,
- The INITIAL VALUE, which is the variable part of a P.I.A. line.

On a P.I.A. Comment line, both the LABEL and INITIAL VALUE fields may contain documentary text.

Comment lines cannot be modified on the documentation of the entity calling the P.I.A.

The P.I.A. line may be taken into account in a generation process (LINE GENERATION OPTION = 'G').

At generation time, the fixed part and the variable part of P.I.A. lines are concatenated.

PARAMETERIZATION OF THE VARIABLE PART OF A P.I.A. LINE

Symbolic parameters are defined on 'T'-type description lines. A symbolic parameter is coded '$nn' left-justified in the LABEL field.

The corresponding value is indicated in the INITIAL VALUE field.

EXAMPLE: A symbolic parameter '$H' corresponds to the value 'HOSPITAL'. The user simply enters the symbolic parameter '$H' when the P.I.A. is called.

NOTE: The number of "T"-type lines is not limited.

Symbolic parameters may be used on any line of the called P.I.A.

LIMITATION

The global length of parameters in a P.I.A. is limited to 450 characters.

PREREQUISITE

The P.I.A. must have already been defined.

```
--------------------------------------------------------------------------
                 PURCHASING MANAGEMENT SYSTEM        SG000008.LILI.CIV.1583
  INPUT AID DESCRIPTION......:  1  AUTHOR AUTHOR DOCUMENTATION

 2 3     4 5                     6                        7   8 9
 A LIN : T LABEL                 INITIAL VALUE            LEN G REFER. LIBR.
   010 :        AUTHOR TITLE:                             040         0059
   020 : T $PM                   PROJECT MANAGER                      0059
   030 : T $SA                   SYSTEMS ANALYST                      0059
   040 : T $PG                   PROGRAMMER                           0059
   050 : T $DB                   DATA BASE ADMINISTRATOR              0059
   070 :        AUTHOR NAME:                              040         0059
   090 :              DATE:      MM/DD/19YY                010         0059
   100 :                                                  000         0059
     :
     :
     :
     :
     :
     :
     :
     :
     :
     :
 *** END ***
 O: C1 CH: -D
--------------------------------------------------------------------------
```

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
1	6		CODE OF PARAMETERIZED INPUT AID (REQUIRED IN CREAT)
			'DATA' and 'VALORI' are reserved codes.
		DATA	The 'DATA' P.I.A. is used to generate COPY books from Data Structure descriptions. For more information, see chapter "Generation of Copy Book', subchapter "Description of P.I.A. Data".
		VALORI	It is used for the activity calculation of the PACMODEL function.
			These two P.I.A. are described in their corresponding manuals.
		PAC...	It is prohibited to define a P.I.A. code beginning with 'PAC'.
2	1		ACTION CODE (REQUIRED)
		'C'	Creation of the line
		'M'	Modification of the line
		'D'	Deletion of the line
		'A'	Deletion of the line
		'T'	Transfer of the line

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
		'B'	Beginning of multiple deletion
		'G'	Multiple transfer
		'?'	Request for HELP documentation
		E or -	Inhibit implicit update
		'X'	Implicit update without upper/lowercase processing
3	3		Line number
			Numeric.
			It is advisable to begin with line number '100' and then number in intervals of 20. This facilitates subsequent line insertions, as necessary.
4	1		Type of P.I.A. line
		'blank'	STANDARD P.I.A. LINE: A standard P.I.A. line is made up of a fixed part (LABEL) followed by a variable part (INITIAL VALUE).
		C	COMMENT LINE: A P.I.A. comment line is used for documentary purposes and when the P.I.A. is called on a "-GC" screen, this line is displayed and cannot be modified by the user.
		T	SYMBOLIC VALUE LINE
			This type of P.I.A. line is used to define a symbolic parameter. In the LABEL field, the user enters a symbolic parameter (its maximum length is three characters, the first character being the '$' sign).
			In the INITIAL VALUE field, the user enters the actual value of the parameter.
			NOTE: The number of "T"-type lines is not limited, In other words, as many parameters as needed can be defined. Parameters are not specifically associated with any given P.I.A. line.
5	20		Printed label for level n
			This field contains the fixed part of a P.I.A. line as displayed when the P.I.A. is called.
			Its contents depend upon the TYPE OF P.I.A. LINE.
			The label is not justified (to be next to the value, it must be right-justified).

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			On P.I.A. lines to be generated (value ″G″ in the LINE GENERATION OPTION field on the P.I.A. Description (-D) screen), each instruction must be left-justified, and, if it does not fit on a single line, its continuation must begin with at least one 'blank' character.
6	29		Initial value
			1. ON A STANDARD P.I.A. LINE (Type = 'blank'):
			The user enters the default value displayed in the variable part when the P.I.A. is called.
		'blank'	If no default value is specified, the variable part of the P.I.A. line is underscored.
			2. ON A P.I.A. COMMENT LINE (Type = 'C'):
			The user enters the second part of the Comment line.
			3. ON A P.I.A. SYMBOLIC VALUE LINE (Type = 'T'):
			The user enters the actual value of the symbolic parameter previously entered in the LABEL field.
			NOTE: For P.I.A. Comment and Symbolic Value lines, the length of this field cannot exceed 29 characters.
7	3		LENGTH OF THE VARIABLE PART
			PURE NUMERIC FIELD
			In this field, the user enters the length of the variable part of the given P.I.A. line.
			When the P.I.A. is called, this field appears with this number of underscores ('_') , if no default value is defined in the INITIAL VALUE field.
			When the P.I.A. is called, if user input exceeds the length provided for in this field, it will be truncated.
			A P.I.A.'s variable part cannot exceed 40 characters.
			For the entire set of lines describing a P.I.A., the total length of all variable parts cannot exceed 450 characters.
		000	Default Value: There is no variable part for this line.
8	1		LINE GENERATION OPTION
		'blank'	Documentary line only, not taken into account when the occurrence calling the P.I.A. is generated.
		'G'	This line is taken into account when a Database Block, a Screen, or a TUI Client calling the P.I.A. is generated.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			NOTE: For the P.I.A. 'DATA', a 'blank' may be entered instead of 'G' with the same result.
		O	Line for options (DBD Function and Pacbench C/S).
9	6		Cross-reference (P.I.A. calls)
			This field may contain a cross-reference key code.
			It gives the possibility of getting a list of the entities calling the P.I.A with the contents of the variable part referenced by this key code (using choice XIcccccc, where cccccc is the key code).
			Example :
			the variable part 'author' is referenced by key code 'AUTH',
			choice XIAUTH gives the list of entities with their authors, such as :
			E ELEM1 Smith E ELEM2 Smith E ELEM3 Evans

TP Access Mode

```
LISTS
CHOICE              SCREEN                          UPD
------              ------                          ---
LCIaaaaaa           List of P.I.A.'s by code (starting    NO
                    with P.I.A. 'aaaaaa').

LNIaaaaaa           List of P.I.A.'s by name (starting    NO
                    with P.I.A. 'aaaaaa').

LTIaaaaaa           List of P.I.A.'s by type (starting    NO
                    with P.I.A. 'aaaaaa').

LXIaaaaaa           List of P.I.A.'s sorted by external   NO
                    references (starting with external
                    reference 'aaaaaa').

CROSS-REFERENCES:

XIaaaaaa            X-references of P.I.A. external       NO
                    references (starting with external
                    reference 'aaaaaa').

XIaaaaaaIbbbbbb     X-references of P.I.A. external       NO
                    references 'aaaaaa' (starting with
                    P.I.A. 'bbbbbb').

DESCRIPTION OF THE P.I.A. 'aaaaaa'
---------------------------------

CHOICE              SCREEN                          UPD
------              ------                          ---

Iaaaaaa             Definition  of P.I.A. 'aaaaaa'.  YES
```

```
IaaaaaaDbbbbbb       P.I.A. 'aaaaaa' Description          YES
                     (starting with line 'bbbbbb').
IaaaaaaGCbbb         Comments on P.I.A. 'aaaaaa'          YES
                     (starting with line number 'bbb').
IaaaaaaCR            Occurrences linked to P.I.A 'aaaaaa' YES
                     through User Relationships.
IaaaaaaATbbbbbb      Text assigned to P.I.A. 'aaaaaa'      NO
                     (starting with text 'bbbbbb').
IaaaaaaX             X-references of P.I.A. 'aaaaaa'.      NO
IaaaaaaXQbbbbbb      List of occurrences linked
                     to P.I.A.    NO
                     'aaaaaa' through the User Relations
                     (starting with Relation 'bbbbbb').
```

NOTE: After the first choice of type 'Iaaaaaa', 'Iaaaaaa' can be replaced with '-'.

All notations between parentheses are optional.

```
--------------------------------------------------------------------------------
|                PURCHASING MANAGEMENT SYSTEM        SG000008.LILI.CIV.1583 |
| LIST OF INPUT AIDS BY CODE                                                 |
|                                                                            |
| P.I.A. NAME                                     T TYPE              LIBR.  |
| ALTPCB DL1 ALTERNATE P.C.B.                     I IMS               *CEN   |
| AUTHOR AUTHOR DOCUMENTATION                     D DOCUMENTATION     0059   |
| GSAMPC GSAM FILE DEFINE                         I IMS               *CEN   |
| HDAM   DL1 HDAM DATA BASE DEFINE                I IMS               *CEN   |
| HDAMSE HDAM SEGMENT COMPLEMENTS                 I IMS               *CEN   |
| HIDAM  DL1 HIDAM DATA BASE DEFINE               I IMS               *CEN   |
| HIDAMS HIDAM SEGMENT COMPLEMENTS                I IMS               *CEN   |
| HISAM  DL1 HISAM DATA BASE DEFINE               I IMS               *CEN   |
| HISAMS HISAM SEGMENT COMPLEMENTS                I IMS               *CEN   |
| HSAM   DL1 HSAM DATA BASE DEFINE                I IMS               *CEN   |
| HSAMSE HSAM SEGMENT COMPLEMENTS                 I IMS               *CEN   |
| INDEX  DL1 INDEX DATA BASE DEFINE               I IMS               *CEN   |
| INDEXP MACRO LCHILD PRIMARY INDEX               I IMS               *CEN   |
| INDEXS INDEX SEGMENT COMPLEMENTS                I IMS               *CEN   |
| ISECON SECONDARY INDEX DEFINE                   I IMS               *CEN   |
| LCHILD MACRO DL1 LOGICAL CHILD                  I IMS               *CEN   |
| PCB    DL1 PCB COMPLEMENT                       I IMS               *CEN   |
| PSBGEN PSBGEN DL1 MACRO COMPLEMENT              I IMS               *CEN   |
|                                                                            |
| O: C1 CH: LCI                                                              |
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
|                    PURCHASING MANAGEMENT SYSTEM         SG000008.LILI.CIV.1583 |
| LIST OF INPUT AIDS EXTERNAL REF'S                                             |
|                                                                               |
| REFER. P.I.A.                                           LIN              LIBR. |
| ACCESS HDAM   DL1 HDAM DATA BASE DEFINE                 100              *CEN  |
|        HIDAM  DL1 HIDAM DATA BASE DEFINE                100              *CEN  |
|        HISAM  DL1 HISAM DATA BASE DEFINE                100              *CEN  |
|        HSAM   DL1 HSAM DATA BASE DEFINE                 100              *CEN  |
|        INDEX  DL1 INDEX DATA BASE DEFINE                100              *CEN  |
| DDNAME HDAM   DL1 HDAM DATA BASE DEFINE                 160              *CEN  |
|        HIDAM  DL1 HIDAM DATA BASE DEFINE                160              *CEN  |
|        HISAM  DL1 HISAM DATA BASE DEFINE                140              *CEN  |
|        HSAM   DL1 HSAM DATA BASE DEFINE                 140              *CEN  |
|        HSAM   DL1 HSAM DATA BASE DEFINE                 180              *CEN  |
|        INDEX  DL1 INDEX DATA BASE DEFINE                140              *CEN  |
| INDSEC PCB    DL1 PCB COMPLEMENT                        120              *CEN  |
| PASSWD HDAM   DL1 HDAM DATA BASE DEFINE                 140              *CEN  |
|        HIDAM  DL1 HIDAM DATA BASE DEFINE                140              *CEN  |
| PROGTP ALTPCB DL1 ALTERNATE P.C.B.                      140              *CEN  |
|        ALTPCB DL1 ALTERNATE P.C.B.                      160              *CEN  |
| PTR    HDAMSE HDAM SEGMENT COMPLEMENTS                  100              *CEN  |
|        HIDAMS HIDAM SEGMENT COMPLEMENTS                 100              *CEN  |
|                                                                               |
| O: C1 CH: LXI                                                                 |
--------------------------------------------------------------------------------
```

```
 -------------------------------------------------------------------------------
|                     PURCHASING MANAGEMENT SYSTEM          SG000008.LILI.CIV.1583 |
| X-REF'S OF INPUT AID EXTERNAL REF'S   ACCESS                                     |
|                                                                                 |
| -----P.I.A.       HDAM   --------------------------------------------- LIBR.    |
| LC ENTITY    LIN  TEXT                                                           |
|                                                                                 |
| -----P.I.A.       HIDAM  --------------------------------------------- LIBR.    |
|                                                                                 |
| -----P.I.A.       HISAM  --------------------------------------------- LIBR.    |
|                                                                                 |
| -----P.I.A.       HSAM   --------------------------------------------- LIBR.    |
|                                                                                 |
| -----P.I.A.       INDEX  --------------------------------------------- LIBR.    |
|                                                                                 |
|                                                                                 |
|                                                                                 |
|                                                                                 |
|                                                                                 |
|                                                                                 |
|                                                                                 |
| *** END ***                                                                     |
| O: C1 CH: XIaccess                                                              |
 -------------------------------------------------------------------------------
```

```
 ------------------------------------------------------------------------
|                 PURCHASING MANAGEMENT SYSTEM        SG000008.LILI.CIV.1583 |
| INPUT AID COMMENT                  AUTHOR AUTHOR DOCUMENTATION              |
|                                                                            |
| A LIN : T DESCRIPTION                                              LIB      |
|   010 :   AUTHOR                                                   0059     |
|   100 :   THIS P.I.A. IS TO BE USED TO DOCUMENT THE AUTHOR(S)      0059     |
|   110 :   OF THE FOLLOWING ENTITIES:                              0059      |
|   120 :      1.  TEXT                                              0059     |
|   130 :      2.  MANUALS                                           0059     |
|   140 :      3.  DATA STRUCTURES AND SEGMENTS                      0059     |
|   150 :      4.  DATABASE BLOCKS                                   0059     |
|   160 :      5.  SCREENS                                           0059     |
|   170 :      6.  REPORTS                                           0059     |
|   180 :      7.  PROGRAMS                                          0059     |
|   190 :      8.  P.I.A.'S                                          0059     |
|         :                                                                  |
|         :                                                                  |
|         :                                                                  |
|         :                                                                  |
|         :                                                                  |
|         :                                                                  |
|         :                                                                  |
|         :                                                                  |
|                                                                            |
| O: C1 CH: -GC                                                              |
 ------------------------------------------------------------------------
```

Print Command

LISTS

LCI: List of all P.I.A.'s, sequenced by code.

    .C1 OPTION: Without keywords,

    .C2 OPTION: With explicit keywords.

LKI: List of all P.I.A.'s by keywords.

    After typing LKI, a selection field (SEL:) enables
    the user to choose implicit ('L') or explicit ('M')
    keywords, or both (' ').

    .C1 OPTION: Same as LCI.

LXI: List of cross-references key codes, with the P.I.As
    to which they belong.

    .C1 OPTION: Only option.

DESCRIPTION

DCI: Definition, description and general documentation of
    the P.I.A. entered in the ENTITY CODE field.
    If no code is specified, this information
    is obtained on all P.I.A.'s.

Chapter 8. Generation and/or Printing

Introduction

The generation commands allow the user to generate:

- On-line programs in COBOL,
- Database blocks in the description language of the DBMS being used,
- Data structures in COBOL COPY clauses.

These sources will then be compiled and linked, using compilers and link editors, just as if they had been written directly in a source language. Also, through a generation, a file can be created to initialize an error messages file or database for an application.

The print commands allow the user to print lists or descriptions of all the entities in the database.

Both functions are allowed by a unique batch generation- print batch procedure (GPRT). The user enters generation- print commands to specify the entities he/she wishes to print/generate.

The GPRT procedure is a batch procedure which can be submitted on-line: commands are entered and jobs are submitted directly from the 'GP' generation-print screen (if the hardware permits direct submission of batch jobs on-line).

Each generation and print request is specific to a user and runs against a given library and a given session.

NOTES:

Verification of requests

The generation and print requests must relate to entities which can be accessed in the library where a user is working. An entity must be generated in its definition library.

Uppercase shift

If the printer in use does not process lowercase characters, the 'UPC' command allows for the automatic conversion of lowercase characters into

uppercase characters when reports are printed (see subchapter "GENERATION AND PRINT COMMANDS" in this chapter).

Online Requests

The Generation and Print Commands screen is accessed by entering the following input in the CHOICE field:

* CH: GP

HOW TO USE THE GP SCREEN

On the 'GP' screen, different input in the OPERATION CODE field provide different screen formats:

* C1: GPRT requests made in the connection Library and upper Libraries.
* I1: GPRT requests made in all Libraries (Inter-Library).
* C2: validated lines (GPRT requests and 'JOB' command lines) made in the connection Library and upper Libraries. Updates are not authorized on this screen.
* C4: User 'JOB' command lines. These lines are defined in inter-library in the Administration Database.

ENTERING AND STORING GPRT COMMANDS

The different GPRT commands are entered and stored using the 'C1' screen format. Only commands validated before execution are taken into account (see the 'Validation' paragraph below).

NOTE: To directly access a specific line of the 'C1' screen format, enter:

GPbbbb, with

bbbb = command for Print request.

SUBMISSION JCL

Command lines are entered and stored using the 'C4' screen format.

These lines are specific to each user. They are written just once and can be accessed from all libraries and from all sessions. They are used to start the execution of the GPRT procedure and to transmit the validated commands.

NOTE: if no command lines are entered, ask your Database Administrator.

These 'JCL' command lines are structured as follows:

* 'JCL' code entered in the COMMAND FOR PRINT REQUEST field,
* LINE NUMBER. They are sequenced as follows:

All validated 'JCL' command lines whose line number is less than 600000 appear first at the beginning of the job stream; command lines whose line number is equal to or greater than 600000 appear at the end of the job stream and follow the validated Commands for Print Requests.

- the actual command line is entered in the CONTINUATION OF REQUEST field.

NOTE: To directly access a specific line of the 'C4' screen format, enter:

GPnnnnnn, with

nnnnnn = LINE NUMBER

VALIDATION :

The commands selected are validated before submission in the 'C1' screen by entering 'V' in the VALIDATION field (see Subchapter 'Generation-Print Requests'). They are automatically deactivated after their submission.

In the 'C4' screen, only validated 'JCL' command lines are taken into account during the execution. These lines remain validated.

If a value other than 'V' is entered , the VALIDATION field is blanked out and the job is not submitted.

The 'C2' screen format displays validated lines only, including both the commands entered in the 'C1' screen and 'JCL' command lines entered in the 'C4' screen.

Updates are not allowed in this screen.

NOTE: To directly access a specific line of the 'C2' screen format, enter:

GPbbbb, with

bbbb = command for Print request.

JOB SUBMISSION

Enter 'job' or 'sub' in the JOB SUBMISSION REQUEST field of the 'C1','C2' and 'C4' screens.

COPY OF 'JCL' COMMAND LINES

This functionality is only available to the Database Administrator. These lines are saved in the Administration Database.

NOTE: The 'C4' option of the GP screen is reserved only for GPRT submission JCL. It is not meant to manage Test JCL or the Operations JCL of generated programs.

Request Structure

The structure of Generation-print requests breaks down into three parts:
- The command itself,
- The entity instance code if required,
- a presentation print option.

  Sometimes parameters are necessary. Parameters can be introduced in two places:
- in pre-formatted fields, with the command code,
- on a continuation line which is automatically generated for some of the commmands or resulting from values (1 to 5) entered on the continuation line of the command.

STRUCTURE OF THE COMMAND

The GPRT command consists of a three-characters code (four- character code for some Model entities (M type).

Warning: the following coding is not always respected.

The first character identifies the nature:
- 'L' : List entities.
- 'D' : Description of the entities, including the Definition, Description and General Documentation.
- 'G' : Generation of source code for the entity specified (Program, Screen, Database Block, etc.).
- 'P' : Print user manual or volume. The second character must be 'C', and the third 'V'.

The second character specifies how the information is to be presented:

C - By Code.

E - To generate Error messages (used when nature = 'G').

K - By Keyword (in the 'CONTINUATION OF REQUEST' column, enter the following value in the 'SEL:' field: 'Blank' to select both implicit and explicit keywords; 'L' to select implicit keywords only; 'M' to select explicit keywords only).

N - By Name.

T - By Type.

The third character is the Entity type:

Note: For a Model Entity, the M type is completed to specify if it concerns Objects (O type), Relations (R type) or Functional Integrity Constraints (C type).

```
D        Data Structure
E        Data Element
F        Meta-Entity
I        Parameterized Input Aid
K        Keyword (Thesaurus)
MC       Functional Integrity Constraint
MO       Model Object
MR       Model Relation
O        On-line Screen
P        Program
Q        User-Defined Relation
R        Report
S        Segment
T        Text
V        Volume
$        User Entity
Y        Extended User Entity
```

SPECIAL COMMANDS

- FLx : Flow control card (x = entity type) Commands to be inserted in front of stream
- UPC : Transformation of lowercase characters into uppercase characters for printers which do not support lowercase.
- GUT : Generation of user commands. No validation is done on this command.
- PCM : Description of PAF Tables for entities specific a method.

  The complete list of GPRT requests appears in Subchapter 'GENERATION AND PRINT REQUESTS / GP SCREEN'.

Optional Control Cards

With most hardware, the GPRT procedure can also submit compilation and link-edit procedures for the generated occurrences.

Job control cards must be used in the GPRT job stream for this purpose.

Generally, the job control cards are standardized at a site. They are entered in Administrator workbench by a VA Pac Administrator. For more information, see the "AD workbench - User's Guide" and also the Administrator workbench online help.

Each set of control cards is identified by a one-character Option Code which is referenced at generation time.

There are two categories of job control cards:
- the JCL to be inserted before the generated source (control cards in front of stream/programs),
- the JCL to be inserted after the generated source (control cards in back of stream/programs).

The appropriate Option Code value can be entered at three different levels:
- The Library Definition screen in the CONTROL CARDS IN FRONT/BACK OF STREAM and the CONTROL CARDS IN FRONT/BACK OF PROGRAMS fields. These will be the defaults for all Program occurrences in the Library.
- The occurrence Definition screen.
- The generation command (pre-formatted field).

One level must be completed at least to be able to submit the procedures.

The order of precedence is as follows:
- The generation command,
- The occurrence Definition screen,
- The Library Definition screen.
    - eBusiness entities (developed with Developer workbench),
    - Pacbench C/S entities (developed with the VA Pac WorkStation),
    - Screen, and Screen map (on a number of hardware),
    - Program,
    - Database Block,
    - Data Structure (COPY clause).

> **NOTE:** Compiling a Communication Monitor for TUXEDO (eBusiness or Pacbench C/S) requires the following instructions:

– Windows:

```
cobol MONITOR.cbl /LITLINK /CASE /DEFAULTCALLS"74"
```

• UNIX:

```
cobol MONITOR.cbl /CASE
```

PARAMETERIZING THE CONTROL CARDS

A total of nine parameters (values 1 - 9) can be passed in the control cards. The parameter value is assigned on the continuation line of the command using the format:

```
1=xxxx, 2=yyy, etc..
```

The VA Pac Administrator is responsible for transmitting the meaning of the parameters values to the development teams.

The length of a parameter should not exceed 36 characters.

Some examples of use of these parameters would be: printing classes, execution time limits, object libraries, etc.

Flow control card

A flow control card is a set of generated sources of same nature from a given Library and a given session obtained by a user. Code values can be entered for options common to the same flow control cards in Front/Back of stream.

The option code values are assigned on the Flow control cards FLx where x is the type of entity generated.

Case of Screen maps

The same Screen entity is used to generate both program and Screen map. If you want to generate only one of them, enter '$' in the control card in Front/Back of stream, in the field corresponding to the item you do not want to generate.

Generation and Print Commands / GP Screen

```
--------------------------------------------------------------------------------
| VA Pac                    APPLICATION DEVELOPMENT        P.0.*CODEUTI.BASE.1583 |
|                                                                      15         |
|GENERATION AND PRINT COMMANDS                         8 and 9    USER:           |
|1  2   3        45 6 7   <--------------------        ------------------>        |
|A  COM ENTITY : OP V C CONTINUATION OF REQUEST                          11       |
|   LKP       : C1      LIST OF PROGRAMS RELATED BY KEYWORDS         SEL:_        |
|             :         ------------------------------------------             |
|   UPC       : C1      SHIFT TO UPPERCASE    MANUAL:_ DOC:_ ERROR MESS:_         |
|             :                                                                   |
|   FLP       : C1      PROGRAM JOB CARD / JOB DELIM  ENV: _ (CCF:_   CCB:_)      |
|             :                                                                   |
|   GCP PA10FL : C1     SOURCE CODE FOR SELECTED PROGRAM      (CCF:_   CCB:_)     |
|             :                                                                   |
|   GCP PA20PA : C1     SOURCE CODE FOR SELECTED PROGRAM      (CCF:_   CCB:_)     |
|                                                                                 |
|   GCP PA30AR : C1     SOURCE CODE FOR SELECTED PROGRAM      (CCF:_   CCB:_)     |
|                                                                                 |
|   FLO       : C1      SCREEN JOB CARD / JOB DELIM   ENV: _ (CCF:_   CCB:_)      |
|   GCO DO0000 : C1     SCREEN'S PGM AND MAP SOURCE CODE      (CCF:__ CCB:__)     |
|             :                                                      12 13 14     |
|   PCV VOLUME : C1     PRINT VOLUMES BY CHAP OR SUBCHAP AND CODE: _  __ __       |
|             :                                                                   |
|             :                                                                   |
|*** END ***                                                                      |
| 2                                             10                                |
|+ |O: C1 CH: GP                          JOB:                                    |
--------------------------------------------------------------------------------
```

```
 ------------------------------------------------------------------------------
| VA Pac                 APPLICATION DEVELOPMENT      P.0.*CODEUTI.BASE.1583    |
|                                                                    0008       |
|VALID GENERATION AND PRINT COMMANDS                          USER: SG000008    |
|                                                                               |
|A  COM ENTITY : OP   C CONTINUATION OF REQUEST               : LIB   SESSI     |
|   JCL 000000 :        //PSTSG8 JOB (634,CGI46808),SG8,CLASS= :                |
|   JCL 000020 :        //   EXEC ZA73GPRT,ROOT=LI,FILE=LI,OUT :                |
|   JCL 000030 :        //   LOADTP='PST.CICS.LINKLIB',OUTL=R, :                |
|   JCL 000040 :        //   INDUV='PST',INDSV='PST',INDSN='PS :                |
|   JCL 000045 :        //   STEPLIB='PST.PAC73.MBR7',         :                |
|   JCL 000050 :        //   LOADBA='PST.BATCH.LINKLIB'        :                |
|   JCL 600100 :        //PAC.PAC7SC DD DSN=PST.LILISCA,DISP=S :                |
|   JCL 600200 :        //PAC.PAC7SG DD DSN=PST.LILISGA,DISP=S :                |
|                  :                                                            |
|                  :                                                            |
|                  :                                                            |
|                  :                                                            |
|UPDATE INHIBITED WITH THIS DISPLAY TYPE                                        |
|O: C2 CH: GP                            JOB:                                   |
 ------------------------------------------------------------------------------
```

```
---------------------------------------------------------------------------
| VA Pac                 APPLICATION DEVELOPMENT        P.0.*CODEUTI.BASE.1583 |
| JCL LINES FOR THE COMMANDS                              USER: SG000008   |
|                                                                         |
| A   COM  LINE  :    V C CONTINUATION OF REQUEST                         |
|     JCL  000000 :   V   //PSTSG8 JOB (634,CGI46808),SG8,CLASS=X,MSGCLASS=C |
|     JCL  000020 :   V   //   EXEC ZA73GPRT,ROOT=LI,FILE=LI,OUTL=R,OUT=C, |
|     JCL  000030 :   V   //   LOADTP='PST.CICS.LINKLIB',OUTL=R,UTI='SG8', |
|     JCL  000040 :   V   //   INDUV='PST',INDSV='PST',INDSN='PST',       |
|     JCL  000045 :   V   //   STEPLIB='PST.PAC73.MBR7',                  |
|     JCL  000050 :   V   //   LOADBA='PST.BATCH.LINKLIB'                 |
|     JCL  600100 :   V   //PAC.PAC7SC DD DSN=PST.LILISCA,DISP=SHR        |
|     JCL  600200 :   V   //PAC.PAC7SG DD DSN=PST.LILISGA,DISP=SHR        |
|                         :                                               |
|                         :                                               |
|                         :                                               |
|                         :                                               |
|                         :                                               |
|                         :                                               |
|                         :                                               |
|                         :                                               |
|                         :                                               |
|                         :                                               |
|                         :                                               |
| *** END ***                                                             |
| O: C4 CH: GP                          JOB:                              |
---------------------------------------------------------------------------
```

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
1	1		ACTION CODE
		'C'	Creation of the line
		'M'	Modification of the line
		'D'	Deletion of the line
		'A'	Deletion of the line
		'T'	Transfer of the line
		'B'	Beginning of multiple deletion
		'G'	Multiple transfer
		'?'	Request for HELP documentation
		E or -	Inhibit implicit update
		'X'	Implicit update without upper/lowercase processing
2	4		GENERATION-PRINT COMMANDS
			NOTE: Input of the entity code is required or optional depending on the command. The following indicators describe the various options:
			(A) Required entity code input (Batch column 9).

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			(B) Optional entity code input. If omitted, all the occurrences of the entity type are listed in the user's hierarchical view. field.
			(C) Entity code input not allowed. All occurrences of the entity type are listed in the user's hierarchical view.
			(D) A blank line may be requested. Type an asterisk in the CONTINUATION OF REQUEST INDICATOR (C) field and press the ENTER key. The options for each command are listed below. This corresponds to batch columns 31 to 80 incl.
			NOTE: Each command may require additional information. The following list identifies these input fields by code.
			(1) SEL: _ Limit the list by keyword type: enter 'M' for explicit, 'L' for implicit, or blank for both. In batch mode, enter this value in column 30. See also SELECTION OF KEYWORD TYPE.
			(2) Same as above plus a following line on which a user may enter one or several keywords. This appears as a continuation line in on-line mode and corresponds to batch columns 31 to 80.
			(3) FORMAT: _ A format may be specified: enter 'I' for internal, 'E' for input, or 'S' for output. Enter these values in column 17 in batch mode. A blank is also valid and means that the default value is desired. See also TYPE TO SELECT.
			(4) CCF:_ CCB: The code of the control card in front of program and in back of program, respectively. Enter these codes in columns 19 to 22 in batch mode. These codes must be consistent with the codes displayed on the Dialog Definition screen.
			(5) CCF:__ CCB:__ The code of the control card in front of program and in front of map, and the code of the control card in back of program and in back of map, respectively. The user can override the default control cards. These codes should be consistent with the values on the Dialog Definition screen. In batch mode, use columns 19 to 22.
			(6) TYPE: __ The user enters the selected type which should be consistent with the corresponding field on the Definition screen of that entity type. In batch mode enter the type in columns 17 and 18.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			(7) PRINT DOCUMENT Y CHAP/SUBCHAP AND CODE:_ __ __ Specify the chapter and/or subchapter. Enter 'C' for chapter followed by the chapter code, or 'S' for subchapter followed by the chapter and subchapter codes. In batch mode use columns 23 through 27.
			(8) ENV.:__ (CCF:__ CCB:__) For those sites that are using the PEI option, the environment may be specified. In batch mode enter the environment code in column 17 and the corresponding control cards in columns 19 through 22.
			THESAURUS
		DCK	(C) A complete Description of Keywords defined in the thesaurus which lists the SYNONYM OR DEFINITION field contents associated with each keyword.
			Note: This data being specified in Inter-Library only, this command cannot be used with the U1 option. Use the C1 or I1 option which gives the same output.
		LCK	(1) (C) A listing of all keywords defined in the thesaurus, with their synonyms. It includes the number of uses of these keywords in the Database. The information is sequenced by code.
			TEXTS
		DCT	(A) Description of selected Text.
			Note: If you enter an asterisk in the ENTITY CODE field, the Descriptions of all Text occurrences are printed, sequenced by code.
		DTT	(B) (6) Descriptions of Text occurrences sequenced by type.
		L*T	List of Texts with their paragraphs titles, sequenced by code.
		LCT	(C) List of Text occurrences sequenced by code.
		LKT	(2) List of Text occurrences whose names and/or explicit Keywords contain the Keyword(s) specified.
		LNT	List of Text occurrences sequenced by name.
		LTT	(6) List of Text occurrences sequenced by type.
			DOCUMENTS (PDM)
			Note: DOCUMENT entity = VOLUME entity in the VA Pac character-mode interface.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
		DCV	(B) Printing of the Description of the Document whose code is entered in the Entity field. When this code is not entered, the Descriptions of all the Documents are printed, sequenced by code.
		FLV	(C) (D) (4) Flow control for Documents.
		LCV	(C) List of Documents sequenced by code.
		LKV	(C) (2) List of Documents selected according to the keyword(s) entered on the continuation line.
		LNV	(C) (2) List of Documents sequenced by name.
		PCV	(B) (D) (7) Printing of the contents of the Document whose code is entered in the ENTITY CODE field. When this code is not entered, the contents of all the Documents are printed, sequenced by code. For local printing in RTF format, the Document must be generated with the C2 option. Selective Printing is documented in the 'Personalized Documentation Manager' manual, chapter Access Commands, subchapter 'Generation-Printing'.
			ELEMENTS AND PROPERTIES
		DCE	(B) A complete description of the defined Element(s). The information is sequenced by Element code.
			Note: to display the assigned text, use print option '2'.
		DFE	(B) A listing of the Element(s) not defined in the Specifications Dictionary, with cross-references.
		LAE	(C) List of Elements sequenced by Cobol name.
		LCE	(B) A list of defined Elements sequenced by Element code.
		LKE	(C) (2) A list of Elements and properties sequenced by keyword.
		LNE	(C) A list of Elements and properties sequenced by name.
		LXE	(C) A list of defined Elements and properties which are not used.
			DATA STRUCTURES
		DCD	(B) A complete Description of the Data Structure(s). This includes cross-references to Programs and Screens and a list of associated Reports and Segments. The information is sequenced by Data Structure code.
			Note: To get the associated text use print option '2'.
		FLD	(C) (D) (4) This command is used to specify the job card and end- of-job delimiters: flow control of Data Structures.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			Use the continuation line to define user parameters on the control cards.
		GCD	(A) Generate a COBOL description (COPY book) of the Data Structure.
			For more details on generation, refer to the 'Data Dictionary' manual.
			C3 : Generation of comments which will be used by VA Pac Connector (an eBusiness tool).
			C4 : All the calls to the DATA and DATASQ P.I.As. will be ignored
		LCD	(C) A list of Data Structures sequenced by code.
		LED	(A) List the error messages defined for the Data Structure and for each Segment. This list only includes messages that have already been generated.
		LKD	(C) (2) A list of the Data Structures whose names and/or explicit keywords contain the keyword(s) specified.
		LND	(C) (2) A list of the Data Structures sequenced by name.
		LOD	(C) A list of Data Structures sequenced by external name.
		LPD	(C) A list of Data Structures sequenced by Program external name.
		LTD	(C) A list of Data Structures sequenced by type.
			SEGMENTS AND LOGICAL VIEWS
		DCS	(B) (D: with input of the entity code) (3)
			Note: Enter the Data Structure code in the ENTITY CODE field, and the Segment code(s) on the continuation line(s).
			A complete Description of the Segment(s). This includes cross-references to Programs and Screens for the Data Structure and to all entities for the Segment(s) and a list of associated Reports and Segments. For Segments defined as tables (Pactables function), a list of subschemas and subsystems is printed.
			Note: To get the associated text for both the Segment and the Data Structure, use print option '2'.
		LCS	(C) List of Segments sequenced by code.
		LKS	(C) (2) List of Segments whose names and/or explicit keywords contain the keyword(s) specified.
		LNS	(C) List of Segments sequenced by name.
			INPUT AIDS

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
		DCI	(C) A complete description of the Input Aid(s) including a list of uses of the Input Aid(s) in other entities. The information is sequenced by the PIA code.
		LCI	(C) A list of Input Aids sequenced by the PIA code.
		LKI	(C) (2) A list of the Input Aids whose names and/or explicit keywords contain the keyword(s) specified.
		LNI	(C) (2) A list of the Input Aids sequenced by name.
		LXI	(C) List of all cross-references (PIA calls) as defined on the PIA Description screen sequenced by the value of this field.
			DATABASE BLOCKS
		DTB	(B) (6) Description(s) of Database Blocks of the type specified including cross-references to other Blocks and Screens.
			Note: To get the associated text, use print option '2'
		FLB	(C) (D) (4) (8) This command is used to specify the job card and end- of-job delimiters: Flow control of the Database Block.
		FLS	(C) (D) (4) (8) Same as FLB for Relational/SQL Blocks.
			Use the continuation line to define user parameters on the control cards.
		GCB	(A) (D) (4) Generate a DDL description of the Database Block specified (including 'DB'-type Blocks for DB2).
			Use the continuation line to define the user parameters on the control cards.
		GSQ	(A) (D) (4) Generates the SQL DDL for the Relational/SQL Database Block specified. Use the continuation line to define the user parameters on the control cards.
		LCB	(C) List of Database Blocks sequenced by code.
		LEB	(C) List of Database Blocks sequenced by external name.
		LES	(C) List of SQL objects sequenced by external name.
		LKB	(C) (2) A list of the Database Blocks whose names and/or explicit keywords contain the keyword(s) specified.
		LNB	(C) (2) A list of Database Blocks sequenced by name.
		LTB	(6) A list of Database Blocks whose Block type have been defined with the specified value.
		LTS	(C) A list of SQL objects sequenced by code.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			* FOLDERS, FOLDER VIEWS, BUSINESS COMPONENTS, * C/S SCREENS (TUI CLIENT COMPONENTS) * SCREENS, DIALOGS.
		DCO	(A) Complete Screen Description including Dialog Complement and uses in other Screens.
		DGC	(A) Complete Description of a Pacbench C/S Screen.
		DGS	(A) Complete Description of a Pacbench C/S Business Component.
		DSO	(A) Description of the selected Screen.
		FGC	(C) (D) (4) (8) Flow control for Pacbench C/S Screens.
		FGE	(C) (D) (4) Flow control for Pacbench C/S error messages.
		FGS	(4) Flow control for Server Component.
		FLE	(C) (D) (4) Flow control for Dialog error messages.
		FLO	(C) (D) (4) (8) Flow control for Screens.
		FME	(4) Flow control for eBusiness Error messages.
		FMS	(4) Flow control for Server.
		FSO	(C) (D) (4) (8) Flow control for source Screen.
		GCO	(A) (D) (5) Generate a COBOL Description of the Screen specified.
		GGC	(A) (D) (5) Generate a C/S Screen (TUI Client Component).
		GGS	(A) (D) (5) Generation applicable to Business Component, Communication Monitor, Error Server, Folder.
		GEC	(A) (D) Pacbench C/S:
			C1 : Error messages defined for the Client or Server Dialog and for each component.
			C2 : Error messages generated through option 1 plus documentary help messages.
			C3 : Error messages for the Dialog only.
		GED	(A) (D)
			C1 : Error messages generated for a Data Structure and for each Segment.
			C2 : Error messages generated through option 1 plus documentary help messages.
		GEO	(A) (D) OLSD Function:
			C1 : Error messages defined for the Dialog and for each Screen.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			C2 : Error messages generated through option 1 plus documentary help messages.
			C3 : Error messages for the Dialog only.
			C4 : Creation of the file required by Pacbase Web Connection. This command is applicable to the Dialog.
			Note: If a Segment/Screen suffix is entered on the continuation line of one of the preceding commands, error messages are generated/printed only for the selected Segment/Screen.
		GEF	(A) Generation of error messages for a C/S Folder.
		GEI	(A) Generation of error messages for INIT/TERM component.
		GES	(A) Generation of error messages for a C/S Component.
		GSO	(A) Generate source code for the selected Screen.
		GVC	(A) (D) (5) Extract a Proxy object. Applicable to Folder View, Folder and Business Component.
		GMF	(A) Generate a Folder.
		GMI	(A) Generate an INIT/TERM Server.
		GMM	(A) Generate a Communication Monitor.
		GMS	(A) Generate a Server.
		GME	(A) Generate an Error Server.
		LCO	(C)
			List of Screens sequenced by code.
		LEC	(A) List the error messages defined for the Client Component and for each Client Screen. This list only includes messages that have already been generated.
		LEO	(A) List the error messages defined for the Dialog and for each Screen. This list only includes messages that have already been generated.
		LKO	(C) (2) List of Screens whose names and/or explicit keywords contain the keyword(s) specified.
		LNO	(C) List of Screens sequenced by name.
		LOT	(C) List of Screens sequenced by Transaction code.
		LPO	(C) List of C/S Screens sequenced by external program name.
		LSO	(C) List of C/S Screens sequenced by external map name.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
		LTO	(C) List of Screens sequenced by type.
			REPORTS
		DCR	(B) (D: when the entity code has been entered)
			Note: When requesting the Description of a single Report, enter the Report code prefix in the ENTITY CODE field and the last character of of the Report code on the continuation line.
		LCR	(C) List of Reports sequenced by code.
		LTR	(C) List of Reports sequenced by type.
		LKR	(2) A list of the Reports whose names and/or explicit keywords contain the keyword(s) specified.
		LNR	(C) List of Reports sequenced by name.
			PROGRAMS
		DCP	(B) A complete description of Program(s). The information is sequenced by the Program code.
			Note: To get the associated text, use print option '2'.
		DSP	(A) Description of the selected Program produced by Reverse Engineering.
		FLP	(C) (D) (4) (8) This command is used to specify the job card and end-of-job delimiters: Flow control for Programs.
			Use the continuation line to define user parameters on the control cards.
		FSP	(C) (D) (4) (8) This command is used to specify the job card and end-of-job delimiters: Flow control for 'reverse engineered' programs. Use the continuation line to define user parameters on the control cards.
		GCP	(A) (D) (4) Generate a COBOL description of the Program specified Use the continuation line to define user parameters o the control cards.
		GSP	(A) (D) (4) Generate a COBOL description of the 'reverse engineered' Program specified. Use the continuation line to define user parameters on the control cards.
		LCP	(C) List of Programs sequenced by program code. Note: To get keywords, use print option '2'.
		LEP	(C) List of Programs sequenced by external name.
		LKP	(2) A list of the Programs whose names and/or explicit keywords contain the keyword(s) specified.
		LNP	(2) List of Programs sequenced by name.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
		LTP	(C) List of Programs sequenced by type.
			METHOD ENTITIES
		DCM	(A) A complete Description of the Method entity as specified.
		DCMC	(C) A complete Description of Method Functional Integrity Constraint(s).
		DCMO	(C) A complete Description of Method Object(s).
		DCMR	(C) A complete Description of Method Relation(s).
		LCMC	(C) List of Method Functional Integrity Constraints sequenced by F.I.C. code.
		LCMO	(C) List of Method Objects sequenced by Object code.
		LCMP	(C) List of properties sequenced by Property code.
		LCMR	(C) List of Method Relations with their Functional Integrity Constraints, sequenced by Relation code.
		LKM	(C) (2) A list of the Method entities whose names and/or explicit keywords contain the keyword(s) specified.
			META-ENTITIES
		DCF	(B) A complete Definition and Description of the Meta-Entity entered in the ENTITY field. If no code is specified, all Meta-Entities are listed. The information is sequenced by code.
		DCQ	(B) A complete Definition and Description of the User Relations entered in the ENTITY field. If no code is specified, all User Relations are listed. The information is sequenced by code.
		DCY	(B) A complete Definition and Description of the Extended User Entity entered in the ENTITY field. If no code is specified, all Extended User Entities are listed. The information is sequenced by code.
		DC$	(B) A complete Definition and Description of the User Entity entered in the ENTITY field (the following form is required: DC$xx, where xx corresponds to the type of entity call).
		LCF	(C) List of Meta-Entities sequenced by code.
		LCQ	(C) List of User Relations sequenced by code.
		LCY	(A) List of Extended User Entities sequenced by code.
		LC$	(A) List of User Entities sequenced by type and code (LC$xx, xx being the type of entity call).

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
		LKF	(2) (C) A list of the Meta-Entities whose names and/or explicit keywords contain the keyword(s) specified.
		LKQ	(2) (C) A list of the User Entities Relations whose names and/or explicit keywords contain the keyword(s) specified.
			Note: For all printing by keyword, you can specify the TYPE OF SELECTION (BLANK, L or M) on the print line. Keywords are indicated on the continuation line sent back.
		LKY	(2) (A) A list of the Extended User-Entities whose names and/ or explicit keywords contain the keyword(s) specified.
		LK$	(2) (A) A list of the User Entities whose names and/ or explicit keywords contain the keyword(s) specified.
		LNF	(C) A list of the Meta-Entities sequenced by name.
		LNQ	(C) A list of the User Relations sequenced by name.
		LNY	(A) A list of Extended User-Entities sequenced by name.
		LN$	(A) A list of the User Entities sequenced by name.
			SHIFT TO UPPER-CASE
		UPC	This command allows for the automatic transformation of lower-case letters into upper-case letters in the printed output of the GPRT procedure.
			When the UPC command is entered, the following line is displayed:
			SHIFT TO UPPERCASE MANUAL:_ DOC:_ ERROR MESS:
			The VA Pac user must specify to which type of GPRT output the UPC command will apply (even when only one GPRT command is validated).
			In order to do this, the value '1' must be entered in one of the three fields displayed above: in the MANUAL field for Volumes (V); in the DOC field for entity related commands; in the ERROR MESS field for the generation of error messages.
			Note: This also allows the selective implementation of the UPC command when the execution of several GPRT jobs is requested and the SHIFT TO UPPER-CASE must not apply to all of them, in which case the corresponding field(s) must be left blank.
		GUT	(A) Generate User Command. No code validation. The entity code is optional. The label is made up of two parts which can be modified. The first part (on 25 characters) is initialized by 'USER GENERATION' and the second part (on 14 characters) must be completed by the user.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			METHOD ENTITIES PAF TABLES
		PCM	Description of PAF Tables for entities specific to a method. This command is necessarily followed by a Method code. VA PAC-GIP INTERFACE
		GIP	VisualAge Pacbase-GIP Interface generation.
3	6		ENTITY CODE
			This field is displayed with the label 'ENTITY' on screen format options '1' and '2' of the GP screen.
			When required, the user enters the entity code which corresponds to the COMMAND FOR PRINT REQUEST.
			'PCM' COMMAND: You enter in this field the code of the selected Methodology:
		M	Merise
		D	YSM
		A	SSADM
		O	OMT
		F	IFW
			OPERATION CODE
4	1		LIBRARY VIEW SELECTION CODE
			Used to select the libraries from which the entities are to be generated and/or printed.
			This code has the same meaning as the first character of the OPERATION CODE field on all VisualAge Pacbase screens.
		'C'	Default value: Selected library and higher level libraries. In case of duplicates, the lines from the lower level library are taken into account.
			NOTE: IN GENERATION THE VALUE 'C' IS AUTOMATICALLY AS- SIGNED BY THE SYSTEM.
		'I'	Selected library and lower and higher level libraries.
		'U'	Selected library only.
		'A'	Selected library and higher level libraries with display of duplicates.
		'>'	Higher level libraries only.
		'<'	Lower level libraries only.
		'Z'	Selected library and lower level libraries.
5	1		PRINT OPTION

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			In this field, you specify print options: there are 4 options numbered from 1 to 4 (default option : 1); each option corresponds to presentation variants of lines to be printed, e.g. printing of additional information (with or without keywords, programs with or without associated texts, ...); the detail of each print option is given for each entity in the corresponding reference Manuals.
6	1		VALIDATION OF COMMAND REQUEST
			This field does not appear on the "C2" screen format option.
		'blank'	The value in the COMMAND FOR PRINT REQUEST field is not to be taken into account.
		V	The COMMAND FOR PRINT REQUEST is validated.
			NOTE: These commands must be re-validated each time a request is made.
7	1		CONTINUATION OF REQUEST INDICATOR
		BlanK	No continuation line is requested.
			A maximum of 5 continuation lines is authorized (coded 1 to 5).
			The first continuation line is created on the command line by entering '1' in the S field and the label corresponding to this line in the CONTINUATION OF REQUEST field.
			To delete a continuation line, you just need to blank out its label. NOTE: When you blank out the label corresponding to the continuation line '2', you delete the continuation lines '3','4' and '5' if these lines existed.
			When you duplicate a command line with an entity's instance code and continuation lines, the continuation lines are duplicated for the new entity's instance.
8	50		COMMAND LABEL / SYSTEM RESPONSE
			This is the name of the generation-print command.
			With some commands, you may be requested to enter additional data (selection of keyword type, control cards Before/After program).
			If a continuation line is used, it can contain keywords or parameters for generators.
9	50		CONTINUATION LINE
			Continuation lines are used to complete some generation-print commands.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
			A first line is automatically created for the commands that require contiuation lines.
			EXAMPLES :
			For a request of list by keywords (ex: LKS), a line coded 1 is automatically created. You enter the keywords on that line and you can, if needed, create new lines (a maximum of 5 continuation lines can be created).
			Other example: when you want to generate the Description of a Segment (DCS command), you enter the code of the entity's instance in the ENTITY field and the suffix of the Segment in the CONTINUATION OF REQUEST field.
10	3		JOB SUBMISSION REQUEST
			Used to automatically submit the generation and/or printing job from the GP screen when the operating system and TP monitor in use allow for this. The job stream will contain only validated commands for ration and/or print requests and validated JCL lines, all libraries and sessions included.
		'blank'	No job submission. Update the AG file.
		JOB	Job submission.
			NOTE: For IMS, system messages are displayed. See USER'S MANUAL, chapter "CHOICE: ACCESS COMMANDS", subchapter "SPECIAL CHOICES: IMS VERSION".
		SUB	Job submission.
			NOTE: For IMS, system messages are not displayed.
11	1		SELECTION OF KEYWORD TYPE
		'blank'	Selection on both implicit and explicit keywords.
		L	Selection on implicit keywords only.
		M	Selection on explicit keywords only.
12	1		DOCUMENT SELECTIVE PRINT REQUEST
			Field displayed with PCV command only.
		blank	Print the whole Document (default value)
		C or 1	Print the selected chapter or level-1 section, respectively. Field used jointly with next field.
		S or 2	Print the selected subchapter or level-2 section (included in the level-1 section indicated in the following field), respectively. Field used jointly with next two fields.

NUM	LEN	VALUE CLASS	AND FILLING MODE DESCRIPTION OF FIELDS
13	2		LEVEL-1 SECTION # / CHAPTER CODE
			Field displayed with PCV command only.
			WITH VALUE "C" IN PRECEDING FIELD:
			Code of the chapter to be printed, or of the chapter that contains the subchapter to be printed.
			WITH VALUE "1" IN PRECEDING FIELD:
			Number of the level-1 section to be printed, or of the level-1 section that contains the level-2 section to be printed.
14	2		LEVEL-2 SECTION # / SUBCHAPTER CODE
			Field displayed with PCV command only.
			WITH VALUE "S": Code of the subchapter to be printed.
			WITH VALUE "2": Number of the level-2 section to be printed.
15	8		CODE OF RECIPIENT USER FOR JCL COPY
			This field is reserved for on-line use.
			If you have a 4-level authorization, this field allows you to initialize another user's JCL lines. To do so, when the JCL lines are displayed, override your user code with that of the other user. Press the ENTER key.

Job report

Two specific CHOICEs are available when the System is running:

LJOB   : List of jobs.

LIST OF JOBS (LJOB)

The 'LJOB' CHOICE allows the user to view all Generation and Print (GPRT) procedure jobs currently submitted on-line as well as the compilation/link-edit sub-jobs submitted by the GPRT jobs themselves.

The status of each job is defined as:

- WAITING FOR EXECUTION

- EXECUTING

- ENDED

NOTE: A number is automatically assigned to all jobs submitted by the System (incremented from 1 to 1 by the user code).

It is possible to view a list of jobs if you specify a job number in the 'START NB' field.

JOB REPORT

You can view a job report from the List of jobs screen (choice LJOB).

To display this screen, place the cursor on the line of the selected job and press PF10.

A GPRT job report contains data which are similar to the data of a batch GPRT report PAC7IA, for example:
* The date and time of the GPRT job execution, displayed at the top of the screen.
* A line for each PACB sub-program executed, with the return code.
* The date and time of execution ended, displayed at the bottom of the screen.

NOTE:

It is possible to access the job report from a line number entered in the 'LINE' field.

PURGING JOBS

You can purge the executed jobs or those waiting to be executed by entering the 'A' or 'D' value in the action code field on the line of the job to be purged.

A message is displayed indicating the number of cancelled transactions. This is the number of records associated with the job and cancelled in the LB file.

NOTE:

Purging a job in the Database (PURGE) does not purge it from the output queue of the operating system (SPOOL).

```
-------------------------------------------------------------------------------
|                                                                             |
| VA Pac         ENGLISH DOCUMENTATION              P0*DOC.LILI.DOA.1867       |
| LIST OF JOBS                                                                 |
|                                                                             |
|   A  JOB NAME  NUMBER  TYPE    DATE      STATUS                              |
|                                                                             |
|      GPRT      0001    GPRT    01/08/2004  ENDED                            |
|      GPRT      0002    GPRT    01/09/2004  ENDED                            |
|      GPRTF060  0003    GPRT    01/12/2004  ENDED                            |
|      GPRT      0004    GPRT    01/12/2004  ENDED                            |
|      GPRT      0005    GPRT    01/14/2004  ENDED                            |
|      GPRT      0006    GPRT    01/14/2004  ENDED                            |
|      GPRT      0007    GPRT    01/15/2004  ENDED                            |
|      GPRT      0009    GPRT    01/19/2004  ENDED                            |
|                                                                             |
|                                                                             |
|                                                                             |
|                                                                             |
|                                                                             |
|                                                                             |
|                                                                             |
|                                                                             |
|                                                                             |
| *** END ***                                                                 |
| O: C1 CH: LJOB                                    START NB:                  |
|                                                                             |
-------------------------------------------------------------------------------
```

```
-------------------------------------------------------------------------------
| VA Pac          ENGLISH DOCUMENTATION                  P0*DOC.LILI.DOA.1867 |
| REPORT JOB0004                                                               |
|                                                                             |
|      ***************************************************************        |
|      I 01/12/2004  15:00:36  START OF JOB0004        GPRT           I       |
|      ***************************************************************        |
|      --------------------------------------------------------------         |
|               EXECUTION OF GENERATION AND PRINT PROCEDURE        I          |
|      --------------------------------------------------------------         |
|       PROGRAM: BVPACA10 (PACA10 7733T) OF 07/30/2003 RET CODE  : 00 I        |
|       PROGRAM: BVPACA20 (PACA20 7733T) OF 11/17/2003 RET CODE  : 00 I        |
|      --------------------------------------------------------------         |
|               ****  PERSONALIZED DOCUMENTATION MANAGER    ****   I          |
|      --------------------------------------------------------------         |
|       PROGRAM: BVPACN30 (PACN30 7733T) OF 11/17/2003 RET CODE  : 04 I        |
|       **** GENERATION REQUEST                                    I          |
|       PROGRAM: BVPACN35 (PACN30 7733T) OF 11/17/2003 RET CODE  : 04 I        |
|       PROGRAM: BVPACN50 (PACN50 7733T) OF 07/30/2003 RET CODE  : 00 I        |
|       **** LOCAL FILE GENERATED                                  I          |
|      --------------------------------------------------------------         |
|               ******      GENERAL DOCUMENTATION      ******     I          |
|      --------------------------------------------------------------         |
|                                                                             |
| O: C1 CH:                                              LIGNE : 0000         |
|                                                                             |
-------------------------------------------------------------------------------
```

Chapter 9. Journal Consultation

When the Database is created, an option (refer to REST procedure) is used to store all updates, logon and logoff transactions to the Database in the Journal file.

It is possible to consult the Journal on-line by entering the following CHOICE:

```
CH: JO
```

This choice accesses a screen displaying the following in- formation for each transaction:

.Rank,

.User code,

.Session number and version,

.Library code,

.Product code (DSMS),

.Change number (DSMS),

.< or > entered in column S will be used to select

transactions entered from or till a specified time,

.Time, in the 'hhmmss' format,

.Action code,

.Line code (batch form code),

.Key.

Logon and logoff transactions can be identified by the code value entered on the input line: 'LN' for logon and 'LF' for logoff. These transactions contain the user code, the execution time and the terminal code.

The first transaction is displayed in full at the bottom of the screen.

SELECTING TRANSACTIONS

The screen used to select transactions from the Journal is common to all users in all the libraries in which they work.

It is possible to display a selection of transactions that correspond to criteria in the input fields at the top of the screen. One (or more) selection criteria can be entered, starting with the rank.

All of the information items listed above can be selection criteria, and several selection criteria can be entered at the same time.

The 'S' (sign) field is used in conjunction with the Time field to select transactions by time. For example:

- '<' 160000 will display all transactions entered before 4:00 pm;
- '>' will display all transactions entered after 4:00 pm.

  WARNING: if you specify selection criteria located to the right of the product code, if you branch to another screen and then branch again to the Journal screen (via JP or screen recall), these criteria are no longer taken into account.

NOTES

When a selection request is processed, the search stops after the system has read the number of transactions specified by the value entered on the input line of the REST restoration procedure.

The user is then asked to press the ENTER key to continue the search.

```
--------------------------------------------------------------------------------
|                   APPLICATION DEVELOPMENT          SG000008.LILI.DEA.512 |
|                                                                          |
|JOURNAL FILE DISPLAY OF TRANSACTIONS                                      |
|                                                                          |
| RANK USER  SESSI. LIB  CHANGE S  TIME  A LN  :         K E Y             |
| 3682 JP     512   DEF         212344 C T  : DHBIBL GG    703             |
| 3681 JP     512   DEF         212344 C T  : DHBIBL GG    695             |
| 3680 JP     512   DEF         212344 C T  : DHBIBL GG    687             |
| 3679 JP     512   DEF         212344 C T  : DHBIBL GG    679             |
| 3678 JP     512   DEF         212344 C T  : DHBIBL GG    671             |
| 3677 JP     512   DEF         212344 C T  : DHBIBL GG    663             |
| 3676 GP     512   DEA         203355 M T  : OSMII  GG    231             |
| 3675 GP     512   DEA         203221 M T  : OSMII  GG    167             |
| 3674 GP     512   DEA         203217 M T  : OSMII  GG    163             |
| 3673 JP     512   DEF         180901 C T  : DHBIBL GG    655             |
| 3672 JP     512   DEF         180901 C T  : DHBIBL GG    649             |
| 3671 JP     512   DEF         180901 C T  : DHBIBL GG    647             |
| 3670 JP     512   DEF         180901 C T  : DHBIBL GG    639             |
| 3669 JP     512   DEF         180901 C T  : DHBIBL GG    631             |
| 3668 JP     512   DEF         180901 C T  : DHBIBL GG    623             |
| 3667 JP     512   DEF         180901 C T  : DHBIBL GG    615             |
| I PACD40 I '  I    '     II PTU420  I '   I   '      I                   |
|                                                                          |
|O: C1 CH: JO                                                              |
--------------------------------------------------------------------------------
```

Chapter 10. Appendix

General Options

Processing of Numeric Fields

The System manages three types of numeric fields:

- Purely numeric fields: they can only contain numeric characters. (Example: number of occurrences of a segment, number of repetitions of a data element, line number of a comment line for an entity, etc.).
- Parameterized numeric fields: they can contain the character '$' and must be purely numeric once the parameter value has been replaced.
- Pseudo-numeric fields: they are primarily used as numeric fields, but the system accepts other types of characters.

  The batch forms and on-line screen documentation will indicate which type of field each numeric field is.

PROCESSING PRINCIPLES

The system ensures processing for the three types of numeric fields as follows:

- Purely numeric fields: formatted according to normal writing rules (right-justified, elimination of non- significant zeros);
- Parameterized numeric fields:
  - If the field does not contain a '$', the processing is identical to that of the purely numeric fields,
  - If it contains a '$', the parameter will be replaced and that value will be validated to ensure it is numeric, but no re-formatting will be done;
- Pseudo-numeric fields:
  - If this field expresses a number, it is processed as a purely numeric field,
  - If it contains a '$', it is processed as a parameterized numeric field,
  - In all other cases, neither validation nor re-format_ ting is done.

Processing of Lowercase Characters

You can enter lowercase characters only if your system accepts lowercase.

If your system does not automatically transform lowercase into uppercase characters, input characters are managed in the following way:

1. All codes entered in lowercase are automatically transformed into uppercase,

2. All entity clear names, as well as text, remain as inputted. The implicit keywords, automatically assigned by the system from the entity clear names, are transformed into uppercase, except for accented characters.

Note: An "X" entered in the ACTION CODE field will inhibit the automatic transformation of lowercase characters into uppercase characters.

PRINTED REPORTS

Upper/lowercase character management also exists for printed System reports. For information, refer to chapter "GENERATION AND/OR PRINTING" in this manual.

Available Function Keys

STANDARD FUNCTION KEYS

The Function Keys are used to facilitate input of the most frequently used CHOICEs of the System.

During the installation of the Sustem at a given site, a set of standard Function Keys is provided. It is possible to modify the initial assignment of Function Keys via the Database Restoration (REST) procedure (see the Administrator's Procedures Guide).

The Program Function Keys (HPF) menu lists the Function Key assignments.

NUMBER	STANDARD SIGNIFICANCE
PF1	Recall screen memorized in M1 (equivalent to OPERATION CODE R1)
PF2	Recall screen memorized in M2 (equivalent to OPERATION CODE R2)
PF3	Recall screen memorized in M3 (equivalent to OPERATION CODE R3)
PF4	Call screen-related HELP (*) (equivalent to ACTION CODE '?')
PF5	Return to main menu (equivalent to CHOICE 'H')
PF6	Return to initial screen (equivalent to OPERATION CODE 'FT')
PF7 PF8	Inhibits implicit udpates CICS: '-TC' screen display starting from cursor position
PF9	Call of '-TC' screen from '-PG' and vice-versa OR Zoom on key description from screen 'B......DR'
PF10	Branch to Entity Definition screen
PF11	Branch to Entity or Description Line Comment ('GC')
PF12	End of session with conversation saved

(*): For access to input field HELP:

'?' should be entered in the input field before pressing the PF4 key in standard.

The HELP function cannot be called on non-input screens.

PRELIMINARY NOTE

The access to the various screens is facilitated by:

. the cursor position,

. the Use of PFkeys.

The use of these functions depends on the hardware and operating system in use at the site.

The values of the Function Keys are assigned during the System installation. These values can be modified by the Database Administrator (refer to subchapter "STANDARD FUNCTION KEYS").

In any case, the use of the standard command language is always valid.

HARDWARE WHICH DOES NOT SUPPORT FUNCTION KEYS

When the hardware in use at a site does not support the standard use of function keys, you can use '.nn' CHOICEs to simulate 'PFnn' function key use.

EXAMPLE:: PF7 --> CH: .7

PF10--> CH: .10

In addition, if cursor positioning cannot be retrieved after ENTER is pressed, cursor positioning can be simulated by entering a slash ('/') in the first input field of the desired line to branch to a selected entity, menu choice, or to call the on-line HELP documentation.

When cursor positioning can be simultated through the use of the slash ('/'), the default function key is '.10'. In order to branch to a selected entity, simply enter the '/' in the ACTION CODE field.

NOTE: Cursor positioning cannot be simulated on list-type screens since they do not have input fields. The Line Split is also not available on the Text Description screen, as the '/' character is processed as a regular

character.

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