VisualAge Pacbase 2.5

USER INTERFACE GUIDE
REFERENCE MANUAL

DDUSE000251A

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1. INTRODUCTION

1.1. VISUALAGE PACBASE

THE VisualAge Pacbase Application Development Solution

VisualAge Pacbase is an Application Development tool operating on mainframe, OS/2, UNIX or Windows NT. It has been designed to ensure the complete management of various information systems.

Consistency is ensured by all the data being stored in one Specification database and managed in a unique way by the System.

VISUALAGE PACBASE PRODUCTS

VisualAge Pacbase is a modular AD solution which is composed of two main products - Pacdesign for application design, Pacbench for application development.

Pacdesign and Pacbench are used to populate the Specifications Database and to ensure the maintenance of existing applications. Each product includes several functions.

Basic Functions

Dictionary
Structured Code
Personalized Documentation Manager (PDM-PDM+)

Generators

On-Line Systems Development
Pacbench Client/Server
Batch Systems Development
COB / Generator

Database Description

DBD
DBD-SQL

Application Revamping

Pacbench Automatic Windowing (PAW) (releases older than VisualAge Pacbase 2.0)

Pacbase Web Connection

Quality Control

Pacbench Quality Control (PQC)
Quality Control Extensibility

Table Management

Pactables

Production Turnover and Follow-up

Production Environment (PEI)
PacTransfer
Development Support Management System (DSMS)
PC function: revamped DSMS (in releases older than VisualAge Pacbase 2.0)

Additionnal services
Pac/Impact
Dictionary Extensibility
Pacbase Access Facility (PAF-PAF+)
DSMS Access Facility (DAF)
Methodology (Merise, YSM, etc.)
Sub-networks comparison utilities
Rename/move entity utility (RMEN)
Journal Statistics utility (ACTI)
RACF / TOPSECRET Security Interface
ENDEVOR
VisualAge Smalltalk-VisualAge Pacbase bridge
Team Connection-VisualAge Pacbase bridge

1.2. PURPOSE OF THE MANUAL

PURPOSE OF THE MANUAL

The purpose of this manual is to explain how to use the System.

It describes the command language used to access the different screens in on-line mode.

PREREQUISITES

Before using this manual, the user should be familiar with the SPECIFICATIONS DICTIONARY.

1.3. PRINCIPLES OF DESCRIPTION

PRINCIPLES OF DESCRIPTION

In this manual, the entities and screens managed by VisualAge Pacbase are described in two parts:

. An introductory comment explaining the purpose and the general characteristics of the entity or screen,

. A detailed description of each screen, including the input fields.

When input screens include the same fields, their descriptions are identical.

All input fields described in this manual are assigned an order number. These numbers are printed in bold italics on the screen examples which appear before the input field descriptions and allow for easy identification of a given field.

>>>> If you use the VisualAge Pacbase WorkStation, the graphical interface of the corresponding windows is described in the VisualAge Pacbase WorkStation Reference Manual.

2. USING THE SYSTEM ON-LINE

2.1. SCREEN TYPES

SCREEN TYPES

Several types of screens are available in on-line mode:

. An initial screen, where the user signs on to the System.

. A set of hierarchical 'MENUS' that guide the user in accessing 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, obtained via input of the OPERATION CODE (O:) field.

Some are used for consultation only. They are the lists of entities and the lists of entity cross-references. The entity description screens are used both for consultation and update.

. A set of screens used to consult the screen documentation, known as on-line 'HELP' screens.

. A screen used to request the printing of documentation from the Database, and the generation of Programs, On-Line Screens (including maps), Database Block descriptions, Data Structure descriptions. This screen is called the Generation and Print Commands (GP) screen.

. A screen used to execute searches on keywords.

. A screen used for selective consultation of the Journal File (database update transactions).

Navigation between the different screens is done via input in the CHOICE (CH:) field.

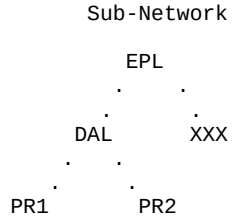
2.2. THE SUB-NETWORK CONCEPT

THE SUB-NETWORK CONCEPT

The information contained in the Database is stored in logical libraries. These libraries are organized into hierarchical structures known as sub-networks.

A sub-network is made up of a given library, plus the libraries upon which it is hierarchically dependent (higher-level libraries), and all of its dependent libraries (lower-level libraries).

EXAMPLE



Any processing operation performed on the Database is done in a selected library. A library is selected:

. on the initial System Sign-on screen,

. during the conversation, through the CHOICE option

CH: n*bbb, where 'bbb' = a given Library code.

During the execution of an on-line transaction, only the selected library can be updated. However, the System displays the lines which come from the libraries of the sub-network to which the selected library belongs.

For each requested display, the OPERATION CODE (O:) field allows the user to select certain library views among those making up the sub-network.

Once a library is selected, it is possible to use all of the information contained in the higher-level libraries; however this information cannot be modified.

In the case of conversion or adaptation of an application, in a lower-level library, information from its upper-level library may be modified if the protection and modification of extracted entities options are set to allow such modifications. (See Subchapter "INITIALIZATION OF A LIBRARY").

CAUTION: Once a library's protected status has been removed, the library is permanently unprotected.

Once a library is selected, the following data is displayed at the top of each accessed screen:

. The System Release and Version,

. 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 (i.e., level 2 or 3 on a current session, level 3 on a test 'T' session),

- '+' for Database Administrator (level 4),

NOTE: The library authorization level is assigned to the user by the Database Administrator when the user's sign-on privileges are established.

. The transaction code,

. The code of the selected library,

. The session number, followed by:

- 'H' when consulting a frozen session,

- 'T' when consulting a test version of a frozen session.

2.3. CONVERSATION INITIALIZATION/SIGN-ON

CONVERSATION INITIALIZATION/SIGN-ON

The sign-on screen is used to initialize a conversation. It is accessed by entering the transaction code.

USER IDENTIFICATION

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

This password may be modified at any time by using the two fields located at the bottom of the sign-on screen to the right of the CHOICE field (see below).
NOTE: The password can not contain any blank.

After a PF12 exit from VisualAge Pacbase, a reconnection displays the user code and the message 'PLEASE ENTER YOUR PASSWORD FOR CONVERSATION RETRIVAL'.
If the password is correct, the last access screen is displayed in its context.

LIBRARY SELECTION

The user must select a library in which to work. All 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) allows the user to consult all 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 SPECIFICATIONS DICTIONARY Reference Manual).

The CHOICE 'CH: N*lll' allows selection of another library during the conversation.

SELECTION OF A FROZEN SESSION OR TEST VERSION

A frozen session is selected at the beginning of a conversation (session number, followed by 'T' for test version of a frozen session). If the session number is not entered, the current session is selected by default.

By entering 'CH: NHssss' or 'NHsssst' in the CHOICE field, you can select a frozen session, or test version of a frozen session, during the conversation.

Entering 'CH: NH9999' in the CHOICE field returns you from the frozen to the current session.

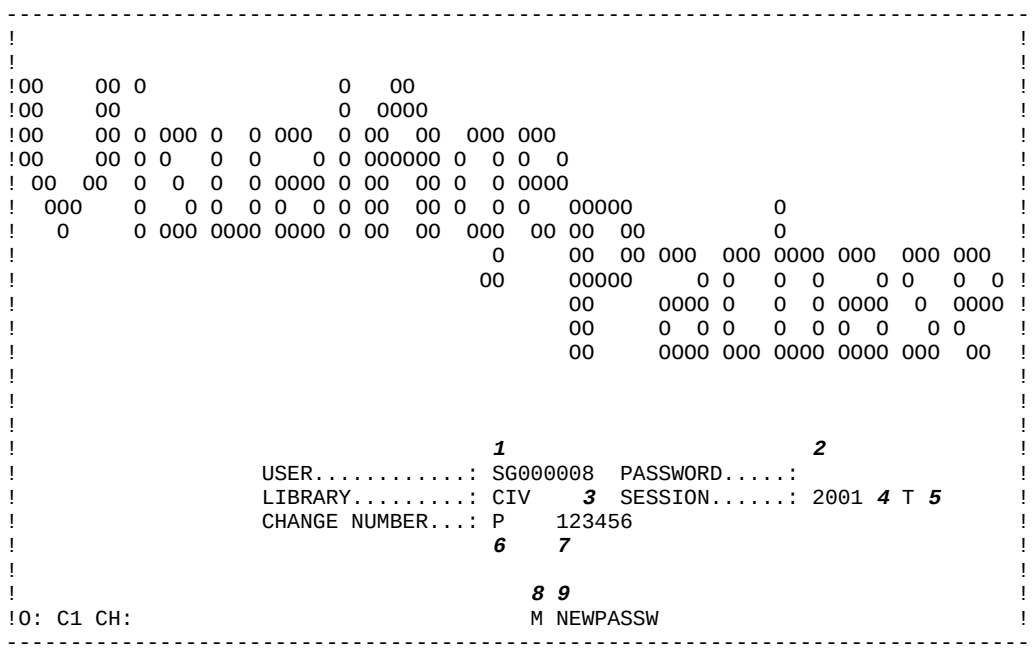
SELECTION OF A DSMS CHANGE NUMBER

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.

To modify the DSMS change number during the conversation, enter:

NCpppcccccc, where

ppp=product code and cccccc=change number
(if the product code is one- or two-character-long, enter two or one '&' respectively, right after it).



NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	8		USER CODE (REQUIRED) Each user must be given a personal user code and associated password. For each user code, the system defines the libraries which can be accessed and the actions allowed (read, update of current session, update of all sessions). The user code is stored for each transaction in the Journal. The management of user codes and access authorizations is the responsibility of the Database 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. 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) 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 alphanumeric character can be used. INTER-LIBRARY MODE ----------
		***	Reserved for selection of all the libraries (referred to as 'Inter-library' mode). This is commonly used when viewing the Database.
			AUTHORIZATION TO MANAGE THE PEI FUNCTION ----------
		$E	A specific library code has been reserved for the management of the Production Environment Interface function. This library does not have to be defined in the Database and cannot be accessed when you log on normally to the Database.
			ACCESS TO THE USER PARAMETERS ----------

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		$P	This library cannot be accessed when you log on to the Database normally.
			SESSION This field is made up of the session number and the version of a session.
4	4	NUMER.	SESSION NUMBER 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 The version of a session pertains to 'frozen' sessions only (no input is required when accessing the current 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	1		PRODUCT CODE/DSMS Input in this field is required when the connexion 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.
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 number of a product Change request managed

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			by the DSMS function. For further details, see the DSMS Reference Manual.
8	1		PASSWORD CHANGE INDICATOR This field is used when the user whishes to modify his/her password. M Modify current password.
9	8		NEW PASSWORD When it is entered, the new password is not visible. After validation, it must be entered again to be recognized. At sites controlled by RACF, passwords cannot be modified on-line. The modification of a password is permanent, i.e., if a user wishes to go back to using the previous password, he/she must modify the password a second time.

2.4. INITIALIZATION OF A LIBRARY

INITIALIZATION OF A LIBRARY

The creation of a new library in the Database must be done by the Database Administrator (authorization level 4), in two steps:

. First, the Database Administrator must create the library, indicating its code and its hierarchical relationship to existing libraries. This operation is performed by the MLIB procedure.

. Second, the library must be initialized. In on-line mode, this is done on the Library Definition (*) screen, accessed by entering the following input in the CHOICE field:

```
CH: *lll    ('lll' = library code)
```

Only initialized libraries can be updated.

GENERAL CHARACTERISTICS

The initialization of a library includes:

. The library clear name.

. General options pertaining to 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 element internal usages, generated COBOL variants, etc. The same application can be generated for several operating systems.

. Options to change the modification/protection of extracted entities for a given library; once chosen, these options are permanent.

MODIFICATION AND DELETION

Only the Database Administrator can update the Library Definition screen or delete a library via the MLIB procedure.

NOTES

Once a library has been created via the MLIB procedure, the Library Definition (*) screen contains the following value in the LIBRARY NAME field:

```
---> NOT INITIALIZED <---
```

It is possible to assign General Documentation to a Library.
For more information, please refer to the chapter "GENERAL DOCUMENTATION" in the SPECIFICATIONS DICTIONARY Reference Manual.

The Update Lock Facility is not available for the Library entity.

```
--------------------------------------------------------------------------------
!                       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                                      !
!SYSTEM DATE FORMAT INDICATOR.....: 19 I                                       !
!DATE FORMAT IN GENERATED PROGRAMS...: 20 E                                    !
!DECIMAL POINT PRESENTATION CHARACTER: 21 .                                    !
!                                                                              !
!                                                                              !
!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.
3	1		TYPE OF COBOL TO GENERATE Default option: See 'N' below. Automatically adapts extracted entities from higher-level libraries to the COBOL types specified. Extracted entities include programs, data structure calls, COBOL literals, reports with a "WRITE AFTER" or "WRITE BEFORE" mode specified, and the internal usage of data elements.
		0	Adaptation to ANSI COBOL: IBM MVS
		1	Adaptation to ANSI COBOL: IBM DOS
		2	Adaptation to COBOL : IBM 36
		3	Adaptation to COBOL : PC/MICROFOCUS
		4	Adaptation to COBOL : BULL DPS7
		5	Adaptation to ANSI COBOL: (74) BULL DPS8
		6	Adaptation to COBOL : (BCD) BULL DPS8 Adaptation to COBOL : TP8 for OLSD screens
		8	This variant is required at the Library level to work in half-byte packed mode with UNISYS Series A or DPS8 hardware (values 5, 6 and 8 for the TYPE OF COBOL TO GENERATE on the Dialogue or Program Definition). IMPORTANT NOTE: If this value 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.
		9	Adaptation to ANSI COBOL: UNISYS 90/30
		A	Adaptation to COBOL : (74) PRIME
		B	Adaptation to COBOL : UNISYS Series B

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		C	Extraction of COBOL Source. See STRUCTURED CODE Reference Manual, chapter "APPENDIX: PURE COBOL SOURCE CODE".
		D	Adaptation to ANSI COBOL: (74) CONTROL DATA Corp.
		E	Adaptation to ANSI COBOL: (68) CONTROL DATA Corp.
		F	Adaptation to COBOL : TANDEM
		I	Adaptation to COBOL : DEC/VAX
		J	Adaptation to ANSI COBOL: PERKIN ELMER-7-32
		K	Adaptation to ANSI COBOL: ICL 2900
		M	Adaptation to COBOL : BULL DPS6
		N	No adaptation selected at this level. Note: With this value the user must specify the TYPE OF COBOL TO GENERATE at the Dialogue, Screen, or Program levels.
		O	Adaptation to COBOL : AS 400
		R	Adaptation to COBOL : IBM 34
		S	Adaptation to COBOL : SFENA
		T	Adaptation to ANSI COBOL: SIEMENS
		U	Adaptation to ANSI COBOL: (74) UNISYS 1100 Series
		V	Adaptation to ANSI COBOL: UNISYS 90/60
		W	Adaptation to COBOL : DPPX IBM 8100
		X	Adaptation to ANSI COBOL: IBM MVS VS COBOL II
		Y	Addpatation to COBOL : IBM 38
4	1		TP MONITOR VARIANT
		blank	Not valid on the Library Definition screen. For other screens: the default value (library value; dialogue value). OLSD FUNCTION: TP Monitor Variants
		N	No Generation.
		0	CICS (IBM) (programs and BMS maps) 0, 1, X

NUM LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		IBM 36, monochrome map 2 PC/MICROFOCUS (MS/DOS) 3 QUESTAR 4, 5, 6 DEC/VAX I UNISYS 2200 (programs and FLDP maps) U UNISYS Series A SDF format 8 IBM 38 Y AS 400 O DPS6-DTF-DFC-Vision M VPLUS 7
	1	IMS (IBM) (programs and MFS maps) 0, X IBM 36, map in color 2 PC/MICROFOCUS (OS2) 3 VIP TYPE 4, 5, 6
	2	CICS (IBM), BMS map in color MICROFOCUS (UNIX) 3
	3	IMS (IBM), MFS map in color.
	4	IMS (IBM) monitor.
	5	CICS (IBM) monitor.
	C	MULTI-TERMINAL 4, 5, 6, U CICS MULTI-TERMINAL 0, 1, X ICL K UNISYS Series A Logical Screen 8
	F	TDS FORMS (BULL DPS7) 4 DM6 TP FORMS M 'TPSVRINIT service' type Program or 'TPSVRDONE service' type Program R
	R	'REQUESTER' type Program F 'CLIENT' type program R
	S	'SERVER' type program F 'SERVICE' type program R
		CLIENT/SERVER FACILITY:
	N	No generation.
	O	CICS (IBM) (Program and BMS map for the client) 0, X MICROFOCUS MS/DOS 3 TUXEDO R VPLUS 7 UNISYS-2200 U
	1	IMS (program and MFS map for the client) 0, X

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			MICROFOCUS OS/2 3
		C	Multi-screen CICS 0, 1 client only X Multi-screen DPS7 4 Multi-screen DPS8 5 TUXEDO (from release 6.2 onwards) R
		2	CICS (IBM) (program and BMS color map) 0, X MICROFOCUS UNIX 3
		3	IMS (program and MFS color map) 0, X WINDOWS/NT 3
		4	IBM VISUAL SET 3
5	1		MODE OF PROGRAMMING
		P	Default value when creating a library. Programming in Structured Code on Procedural Code '-P' lines.
		S	This value can be used for the following functions: COBOL GENERATOR function: --- (in conjunction with the Reverse Engineering function) 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'. For more details on Source Code (-SC), refer to the COBOL GENERATOR Reference Manual. C LANGUAGE MANAGER function: --- Specific procedures composed of Source Code (-SC) lines. With this value, the TYPE AND STRUCTURE OF PROGRAM field must be 'Y'. Use the COBOL variant 0 to generate the program.
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 generated streams (database blocks, screens, programs, or data structures) when they are created.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			These sets may be overridden by options specified with the flow control commands (FLB, FLO, FLP, FLD).
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 generated streams (database blocks, screens, programs, or data structures) when they are created. These sets may be overridden by options specified with the flow control commands (FLB, FLO, FLP, FLD).
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 NOTE: This value may be overridden on the relevant entities' definition screens. It may also be overridden at generation time.
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 NOTE: This value may be overridden on the relevant entities' definitions screens. It may also be overridden at generation time.
10	1		GENERATED COBOL FORMATTING 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. .'IF' statements are indented within (sub-)functions. NOTE

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			---- With the Batch Systems Development Function, this option cannot be modified at the program level: all batch programs generated from the same library will either be formatted or not, depending on the value entered in this field. With the On-Line Systems Development Function, it is possible to modify this option for a given dialogue. Refer to ON-LINE SYSTEMS DEVELOPMENT Reference Manual, chapter "DESCRIPTION OF A TRANSACTION", subchapter "DIALOGUE COMPLEMENT".
11	1		ALPHANUMERIC LITERAL 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 GENE-RATE field, the default option will be a single quote ('), or a double quote ("). 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 This option is used to specify whether or not comment lines are inserted in the generated programs.
		O	Insertion of comment lines.
		N	Suppression of comment lines. (Default option when the Library is defined) The suppression of comment lines also involves the suppression of the titles and frames of (sub-)func-tions, and of the corresponding COBOL paragraph names (Nxx or Nxxxx).
		S	Comments added by the user are ignored at the generation.
13	1		DOCUMENTATION PAGE SKIP OPTION PACBASE generates standard reports depending on the generation and/or printing requests. These reports are composed of sub-reports. This option is used to control page breaks for each of these sub-reports.
		O	No page skip between sub-reports (Default option when a library is defined).

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		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.
		60	Default option (when a Library is defined).
15	1		DOCUMENTATION FRAME OPTION Used to modify the 'frame' that surrounds the documentation printed by the System.
		*	Asterisk for vertical alignment. (Default option when a Library is defined). The user may enter any other character for vertical alignment.
16	1		DOCUMENTATION FRAME OPTION Used to modify the 'frame' that surrounds the documentation printed by the System.
		*	Asterisk for horizontal alignment. (Default option when a Library is defined). The user may enter any character for horizontal alignment.
17	1		MODIFICATION OF EXTRACTED LINES The structure of the System does not allow the modification of definition or description lines of entities defined in a higher-level library within the user's hierarchical view. However, when a single system runs in a multi-hardware environment, the user may want 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 re-

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			set 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. 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		DATE FORMAT IN GENERATED PROGRAMS When using the On-Line Systems Development function, this field specifies the date format to be used in generated programs.
		E	MM/DD/YY format.
		F	DD/MM/YY format.
21	1		DECIMAL POINT PRESENTATION CHARACTER

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			When using the On-Line Systems Development function, this field specifies the character to be used as the decimal point.
		.	Period. Example: 1000.00.
		,	Comma. Example: 1000,00.

3. GENERAL OPTIONS

3.1. INTRODUCTION

INTRODUCTION

The purpose of this chapter is to present the options, which mainly involve:

.Processing numeric fields,

.Processing upper/lowercase characters.

3.2. PROCESSING NUMERIC FIELDS

PROCESSING 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-formatting is done.

The numeric type of each field is indicated on the Batch Forms in the following manner:

.N for pure numeric fields,

.P for parameterized numeric fields,

.PN for pseudo-numeric fields.

3.3. PROCESSING UPPER/LOWERCASE

PROCESSING UPPER/LOWERCASE

The System manages input characters in the following way:

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

. 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.

IMPORTANT NOTE

Upper/lowercase character management depends on the operating system used (i.e., whether or not it accepts lowercase). If it accepts lowercase, then it does not automatically transform lowercase into uppercase.

In batch mode, the transformation operates the same way (refer to chapter "BATCH UPDATING").

PRINTED REPORTS

Upper/lowercase character management also exists for printed System reports. For information, refer to chapter "GENERATION AND/OR PRINTING", subchapter "ON-LINE REQUESTS".

4. ON-LINE ACCESS LANGUAGE

4.1. INTRODUCTION

INTRODUCTION

Two fields are used to access the screens:

. The OPERATION CODE field (O: ..) is used to select the desired hierarchical view of the sub-network from which the display is executed and to indicate the screen presentation option.

. The CHOICE field (CH: .....) is used to select the entity or list of entities the user wishes to work on.

These fields are located at the bottom of the screen.

The possible values for the OPERATION CODE field are listed in the following subchapter.

Refer to Chapter "CHOICE: ACCESS COMMANDS" for a complete list of the values for the CHOICE field.

4.2. THE OPERATION FIELD (O:)

THE OPERATION FIELD (O:__)

Consultation operations allow the user to view the contents of the libraries that make up the Database.

The OPERATION CODE is made up of two characters:

. The first character indicates the desired sub-network view, within the selected library, that will be displayed.

. 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 examples below are given for Option 1. They represent the complete list of possible values for the first character of the OPERATION CODE.

The second character is assumed to be 1.

OPERATION	MEANING
C1	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.
I1	Display of lines from the selected library and from lower- and higher-level libraries. This operation is useful when consulting cross-references within a sub-network from a higher-level library.
U1	Display of lines from the selected library only. This operation is useful when consulting lists.

OPERATION	MEANING
A1	Identical to 'C1', with display of duplicate lines. Used only when the MODIFICATION OF EXTRACTED LINES is authorized for higher-level libraries and for the selected library.
>1	Display of lines from higher-level libraries only.
<1	Display of lines from lower-level libraries only.
Z1	Display of lines from the selected library and from lower-level libraries.

SCREEN MEMORIZATION OPERATIONS

OPERATION	MEANING
Mn	This operation stores or 'memorizes' the screen upon which the request is executed. It is possible to memorize up to nine screens (using M1 through M9). 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.
Rn	This operation 'recalls' the screen that was memorized by the Mn operation. The recalled screen remains memorized. Operations 'R1' to 'R9' 'recall' screens memorized by operations 'R1' to 'R9', respectively. Function keys can also be used if available at the site (for R1 to R3). When a screen is recalled, the content of the CHOICE field is ignored. If no screen has been memorized the message "EMPTY SCREEN MEMORY" is displayed and the operation is not taken into account.

OTHER OPERATIONS

OPERATION	MEANING
FT	Final transaction, end of conversation with branching to the initial screen. It is also possible to end the conversation by clearing the screen. In this case, the current conversation is NOT saved. If the system is set up to use function keys, an exit with a save can be executed (normally using PF12). The message "CURRENT PACBASE CONVERSATION IS SAVED" will be displayed. To resume the 'saved' conversation, simply enter the transaction code.

NOTE

For instructions on using PFkeys, please refer to chapter "ADDITIONAL ON-LINE FUNCTIONS", subchapter "STANDARD FUNCTION KEYS".

4.3. THE CHOICE FIELD (CH:)

THE CHOICE FIELD (CH:)

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

Most CHOICEs branch to an entity definition or description screen, or else a more detailed CHOICE can be entered. For example: entity type, entity code or entity type, entity code, description, line number.

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

The contents of the CHOICE field are validated: 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).

Example: Cross-references of Data Element 'da' to On-Line Screen 'SCREEN' are accessed via CHOICE:

```
.Eda XO  SCREEN,  or
.E da XO SCREEN,  etc...
```

When a blank is to be taken into account, it must be replaced by an '&'. To access paragraph ' A' of text 'AB C', use choice: 'TAB&C D&A', for example.

Other CHOICEs branch to special screens (Generation and Printing, Consultation of Journal, etc.), return to a previous screen or jump to the next screen, or else are used for text editing facilities.

If an update and a CHOICE are entered together on the same screen, the update is performed first and then the CHOICE operation is performed (if there is no update error).

DISPLAY OF ENTITY LISTS

An entity list is obtained by entering the following 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 entities 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.

SELECTION OF AN ENTITY

To access an entity definition screen, enter the following input in the CHOICE field:

. The entity type,
. The entity code.

EXAMPLE: 'Pppppp' is used to access a program (entity P) with a program code of 'pppppp'.

THE ENTITY'S FAMILY OF SCREENS

From the definition screen, the user can scroll through an entity's family of screens by simply pressing 'ENTER', or by entering a specific screen choice (entity type, entity code, specific choice ('-' followed by the screen choice)).

Entering just '-' in the CHOICE field returns to the entity definition screen.

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

DESCRIPTION OF AN ENTITY

An entity description screen may be of two types:

1. The description is made up of a Call of other entities (for example: the Segment Call of Elements; the Screen Call of Segments). The corresponding CHOICE is '-Cx', where C = call and 'x' = type of entity to be called.

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

2. The description does not call another entity. The description screen is accessed with a specific CHOICE.

EXAMPLES: 'PppppppW' (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'.

CROSS-REFERENCES OF AN ENTITY

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

EXAMPLE: 'EddddddXP' (or -XP) displays the cross-references of data element 'ddddd' to programs ('P').

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

GENERAL DOCUMENTATION OF AN ENTITY

General Documentation is accessed by entering a 'G' after the selected entity.

EXAMPLE: 'TttttttG' (or -G) is used to access the General Documentation of Text 'ttttt'.

TEXT ASSIGNED TO AN ENTITY

An entity can also be documented by texts that are associated with it. Assigned Text is accessed by entering 'AT' after the selected entity.

EXAMPLE: 'SssssAT' (or -AT) displays Text assigned to Segment 'ssss'.

SPECIAL CHOICES

These choices are entered with an explicit one to four character code. This code is either independent, or linked to a given entity.

EXAMPLES: 'GP' is used to access the Generation and Print Commands screen.

'JO' is used to selectively consult the Journal file.

'SssssACT' is used to access the Activity Calculation on Segment 'ssss'.

'JP' is used to return to the previously displayed screen.

'.S' is used to do a search on a character string.

See chapter "CHOICE: ACCESS COMMANDS" for a complete list of access commands.

In on-line mode, all choices are listed on the menu screens (see subchapter "HIERARCHICAL MENUS").

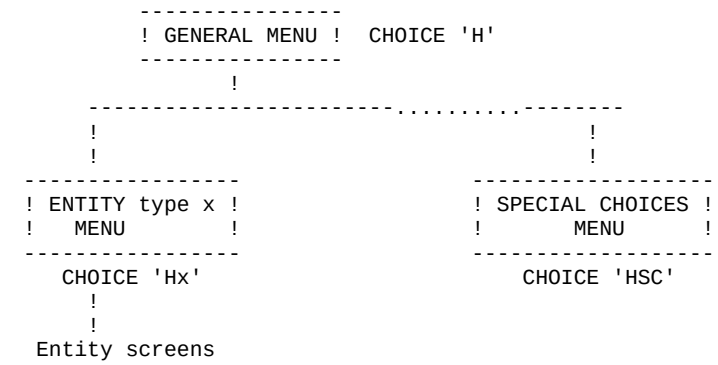
4.4. HIERARCHICAL MENUS

HIERARCHICAL MENUS

The System's screens may be accessed directly through the CHOICE field, if the user knows the explicit CHOICES ('expert' mode).

If not, the user 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:



NOTE

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

THE GENERAL MENU

The General Menu is accessed as follows:

- by entering 'H' in the CHOICE field,
- on 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 a list of Special Choices, and the Program Function Key (PFkey) assignments.

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

4.5. ON-LINE UPDATING

ON-LINE UPDATING

An entity 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 entity is reflected in all of the uses of that entity. 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 (authorization level '2' or '3') can do on-line updates.

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 (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.

There are two categories of ACTION CODES:

.Explicit Action Codes
.Implicit Action Codes
(see below).

INHIBITING ALL UPDATES (IMPLICIT & EXPLICIT)

A special CHOICE allows the user 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 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, the user enters an "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).

```
ACTION CODE VALUES .C      = Creation of the line

 .M      = Modification of the line

 .D      = 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")

 .?      = Request for HELP documentation
           (see Chapter "ACCESS TO THE 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 text editing facility. They are described in chapter "TEXT EDITING FACILITIES", subchapter "EDITING FROM THE ACTION CODE".

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 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.

LINE IDENTIFIERS

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 entity code, on description and documentation screens, it is the entity 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.

COPYING LINES FROM ONE ENTITY TO ANOTHER

Since the key is an updatable field, it is possible to copy lines from one entity to another entity of the same type 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, the user remains on the same screen, except if a choice has been specified.

For Programs and On-Line screens, it is possible to copy Structured Code (-B, -W, -P) lines from a Program to an On-Line Screen 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 entity, the System checks for the existence of an entity in a library, and warns the user 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. The user 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.

PROCESSING PRIORITIES

When working with the different update screens, the user has many different possibilities: update, HELP documentation request, end-of-job, etc.

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, end-of-job) (END),
. Update (explicit or implicit),
. Text editing request (duplication or insertion of lines) (END),
. Documentation request (END),
. Processing screen 'recalls' (R1 to R9) (END),

. Explicit choice (via PFkeys or entry in the CHOICE field).

EXAMPLE:

On a LIST type screen, if the user modifies a line, requests documentation and line duplication all at the same time, the processing sequence will be as follows (if the CHOICE field has been entered):

. 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 documentation, return to initial screen via 'END' in the CHOICE field,
. If the user modified the line on which a documentation request was made, this modification will NOT be taken into account.

4.6. ENTITY UPDATE LOCK

ENTITY UPDATE LOCK

As a general rule, any user can update any entity occurence: all modifications will automatically be effective wherever the occurrence is used.

This method of update is simple and flexible, but sometimes it may be desirable for only one user to be able to update an occurrence, for example:

. a Data Model still being developed,

. a Data Element which is not yet validated,

. a Program undergoing maintenance, etc.

VisualAge Pacbase allows the user to lock his/her occurrences, i.e. to prevent other users from updating them as well as unlocking them.

Update on a locked occurrence is allowed for:

. the user who locked it,

. or the user to whom the lock has been transferred (see the description of the NEW OWNER field below),

. and the database administrator (authorization level 4). The database administrator can also unlock an occurrence or transfer the lock to another user.

The locked entities will only be in read-mode for all other users.

When an unauthorized user attempts to update a locked entity, the following message is displayed:

```
            ENTITY LOCKED BY uuuuuu IN bbb
        where uuuuuuuu = user code, and bbb = library
```

On the Definition of the locked occurrence, the LOCK field in the bottom right corner of the screen 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.

Entities can be locked via the LL screen, titled LIST OF LOCKED ENTITIES. This screen displays the list of the occurrences locked by only one user. It is accessed via the following CHOICE:

```
     CH: LLuuuuuuuuLttt
  where uuuuuuuu = user Code, and ttt = entity type
```

Both codes are optional. If the user does not enter them, the LL screen displays the occurrences he/she locked. The user can only update the LL screen which corresponds to his/her own user code, except if he/she is the database administrator (authorization level 4). 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 MODIFICATION OF EXTRACTED LINES is authorized in a library, the update lock is effective in dependent libraries even if the entity is redefined within these libraries.

Information related to the use of the WorkStation

The List of Locked Entities (LL) screen includes three protected fields which provide information related to the local use of VisualAge Pacbase via the WorkStation. If a user downloads a description for update, this description must not be updated by another user or the result will be inconsistent. So if a description is downloaded for update, it is locked automatically; the user does not have anything to do. This is the technical lock.

The three fields related to the use of the WorkStation are, in the screen order, the ST, SE and X columns.

The ST ("Sub-Type") column is used only for the WorkStation specific entities. It identifies the downloaded description (e.g. "D1" description).

The SE ("Sub-Entity") column is used only for the Screen (C/S Screen, Screen, Business Component) and the Program entities. A "*" in this field indicates the download of a specific code screen (-P, -W, -8, -9, -SC).

The X column informs, with the value 'Y', that the occurrence is locked at the local level, contrary to the L column, where the value 'Y' indicates a lock at the host level.

There are different lock types depending to the use of VisualAge Pacbase: on the host or on a PC.

Lock Types

The lock type is displayed on the Definition of each locked occurrence that an unauthorized user accesses.

There are three lock types:

. If the occurrence is locked on the host, the lock is always Y, even if the occurrence is also locked locally. For the Text entity, if the only lock is a local lock on a description, the lock type is Y. Similarly, if the only lock on a Screen occurrence is a local lock on the Call of Data Elements (-CE) description or on the Mapping (-M), the lock type is Y.

. For the Screen (C/S Screen, Screen, Business Component) and Program entities, if the only lock is a local lock on a specific code description (-P, -W, -8, -9, -SC), the lock type is *.

. For the WorkStation entities, if the only lock is a local lock on a description, the lock type is >.

The various lock types are presented below, first as they are entered (for locks on the host) or displayed (for local locks) on the LL screen, then by the corresponding character which is displayed on the Definition of the locked occurrence.

Note: The LL screen displays two lines for the same Screen/Program occurrence or the same WorkStation entity occurrence if this occurrence is locked both locally and on the host. The first line displays the lock on the host and the second the local lock.

```
     LL Screen                ==>  Lock type on the locked
+-------------------------+         occurrence Definition
! TY  CODE   ST  SE   L X !
+-------------------------+
! O   SCREN1           Y   !  ==>    Y
! O   SCREN1             Y !  ==>    Y
! O   SCREN1       *     Y !  ==>    *
! P   PROG1        *     Y !  ==>    *
! T   TEXT1            Y   !  ==>    Y
! T   TEXT2              Y !  ==>    Y
! T   TEXT3            Y Y !  ==>    Y
! $1A UEO1             Y   !  ==>    Y
! $1A UEO2   D1         Y !  ==>    >
+-------------------------+
```

ON-LINE ACCESS LANGUAGE **4**
ENTITY UPDATE LOCK **6**

```
!                       APPLICATION DEVELOPMENT        SG000008.LILI.CIV.1583  !
!LIST OF LOCKED ENTITIES                                USER : SG000008         !
!1 2   3            4                                 5   6                     !
!A TY  CODE   ST SE NAME                               L X NEW OWNER     LIBR.  !
!  O   SGCLNT       CLIENT SCREEN                       Y               1536   !
!  S   SG10         CLIENT FILE                         Y               1536   !
!  $1A FRGR1A D1    CLIENT FILE UPDATING                Y               1583   !
!  T   TEXSG2       COMMENTS                          Y Y               1451   !
!  T   TEXSG3       INVENTORY                         Y                 1451   !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!*** END ***                                                                   !
!CH: LLsg000008                                                                !
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE
2	3		ENTITY TYPE Type of locked entity.
		M	Method.
		T	Text.
		E	Data Element.
		D	Data Structure.
		S	Segment.
		I	Parameterized Input Aid.
		B	Database Block.
		O	Screen.
		R	Report.
		P	Program.
		U	User Manual.
		V	Volume.
		$tt	User Entity Occurrence.
		Q	User-Defined Relationship.
		F	User Entity.
3	6		ENTITY CODE The user enters the code of the locked entity in this field.
4	36		ENTITY NAME/COMMENTS Default value: Clear Name of the locked entity. Otherwise, this field can be used to enter the reason why the entity is being locked.
5	1		ENTITY LOCK/HOST LEVEL
		Y	Entity with update lock. In this case, updating is only possible by the entity "owner". Users with a level '4' authorization for the library where the entity is defined are also allowed to update this entity.
		blank	Entity update is not restricted. Updating is possible by all users with update authori-

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			zation on the library where the entity is defined. Entering a 'blank' in this field is equivalent to deleting the line (same result as a "D" in the ACTION CODE field).
6	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.

4.7. ACCESS TO HELP DOCUMENTATION

ACCESS TO THE HELP DOCUMENTATION

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:

1. Enter '?' in any ACTION CODE field on the screen,
   . Press the ENTER key.

2. Press the PF4 key.

   (See chapter "ADDITIONAL ON-LINE FUNCTION", subchapter "STANDARD FUNCTION KEYS" for details on the use of PFkeys.)

B. INPUT FIELD HELP:

Two methods may be used in order to request Input Field HELP:

1. 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.

2. Enter '?' in the first position of the input field,
   . Erase end of field,
   . Press the PF4 key.

   (See chapter "ADDITIONAL ON-LINE FUNCTION", subchapter "STANDARD FUNCTION KEYS" for details on the use of PFkeys.)

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

If the user wishes to request on-line HELP documentation on another input field located on the same line as an input field which already contains a '?', this '?' must first be erased. Since update is inhibited, this operation will not affect the database.

Any PACBASE screen may be accessed from a HELP screen via input in the CHOICE field.

RETURN TO THE INITIAL HELP SCREEN

To return to the initial HELP screen, enter a dash ('-') in the CHOICE field.

RETURN TO THE INITIAL ENTITY SCREEN

To return to the the initial entity screen from a HELP screen, enter 'END' in the CHOICE field.

NOTE: 'END' is automatically displayed in the CHOICE field of the last HELP screen.

If you have viewed only one help screen, you can return to the initial screen by entering 'JP' in the CHOICE field.

RETURN TO THE ENTITY DEFINITION SCREEN

To return to the entity definition screen, enter and underscore ('_') in the CHOICE field.

4.8. WORD SEARCH SCREEN (WS)

THE WORD SEARCH SCREEN

The WS screen allows the user to search entity occurrences via a search argument which can be:

. Word(s) that make up the entity clear name (i.e., implicit keywords), and their synonyms,

. Explicit keywords, and their synonyms.

GENERAL CHARACTERISTICS

A search by keyword is normally performed on all entities of the selected library sub-network (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')
Example: Entering 'BRANCH AREA' in the SEARCH ARGUMENT field will list all occurrences which have BOTH keywords.

. 'OR' Operator : (represented by the '=' sign)
Example: Entering 'BRANCH=AREA=SUBSIDIARY' will list all occurrences which have at least one of these three keywords.

. Both the 'AND' and 'OR' Operators:
Example: Entering 'BRANCH AREA=SUBSIDIARY' will list occurrences which have the BRANCH and AREA keywords, AND occurrences which have BRANCH and SUBSIDIARY.

No search is done on empty words.

A search is also done on synonyms of keywords.

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 occurrences which begin with these letters. For example: PURCHASING (policy), PURCHASE (order), PURCHASED (item), etc.

LIMITATION

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

ON-LINE ACCESS LANGUAGE 4
WORD SEARCH SCREEN (WS) 8

```
!                  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	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	3		ENTITY TYPE A keyword search can be done by entity type.
		blank	Search all entities.
		B	Database block.
		D	Data structure.
		E	Data element.
		F	User Entity.
		I	Parameterized input aid.
		M	PACMODEL.
		O	Screen.
		P	Program.
		Q	User-Defined Relationship.
		R	Report.
		S	Segment.
		T	Text.
		U	User Manual.
		V	Volume.
		$	User Entity Occurrence.
		$tt	'tt'-type User Entity Occurrence.
2	1		SELECTION OF KEYWORD TYPE
		blank	This generates a search through clear 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,

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			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'.

4.9. JOURNAL CONSULTATION

JOURNAL CONSULTATION

All updates to the Database (with the exception of generation and printing requests) are stored in the Journal file, which can be used to restore the database in case of a system failure.

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.

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.

Among the selection possibilities offered by the Journal, the CHOICEs '-Fnnnn', '-Bnnnn' and '-Annnn', which were operational in release 7.0, are no longer available in the subsequent releases.

```
--------------------------------------------------------------------------------
!                      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                                                                  !
--------------------------------------------------------------------------------
```

4.10. DIFFERENCES BETWEEN SESSIONS

DIFFERENCES BETWEEN SESSIONS

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

It also allows the user 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 User Entity Call of Elements (F.....CE) screens.

IMPLEMENTATION

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

On the desired entity 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)

the user 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
Screens:         O......B, -CP, -CS, -CE, -W, -P
Data Elements:   E......D
Segments:        S......SS, -CE
Database Blocks: B......DH, -DC, -DR, -DT
Texts:           T......D (Y-type lines are ignored)
User Manuals:    U..D
Volumes:         V......D
Report:          R......D, -L, -CE
PIAs:            I......D
General Documentation lines (-G).
```

5. TEXT EDITING FACILITIES

5.1. INTRODUCTION

INTRODUCTION

While working on-line, the user 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, the user 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 text 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.

5.2. EDITING FROM THE CHOICE FIELD

EDITING FROM THE CHOICE FIELD

Text editing commands are entered in the CHOICE field of the screens to be updated.

There are four types of commands

.SEARCH on a character string,

.REPLACING a character string,

.RENUMBERING an entity description,

.INSERT MODE option.

The first three commands can be used on the Text Description (-D) screen, the Procedural Code (-P) screen, the Work Areas (-W) screen, Pure COBOL Source Code (-9) screen, and the Source Code (-SC) screen (of Reverse Engineered programs).

Renumbering is also available on the Screen and Segment Call of Elements (-CE).

The INSERT MODE command can only be used on the Text Description (-D) screen.

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 text 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 the user simply presses the 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 ACCESS LANGUAGE", subchapter "ON-LINE UPDATING", paragraph "PROCESSING PRIORITIES").

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/aaaaaaaaa/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"

The user 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".

AUTOMATIC RENUMBERING

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

.Text (-D),
.Program (-P, -W, -SC and -9 lines),
.Segment (-CE),
.On-Line Screen (-CE, -W, -P).

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 surpassed, 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.

EXAMPLES

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'.
```

RENUMBERING OF THE 'O.....CE' AND 'S....CE' SCREENS

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.

General Documentation (-G) lines of data element call lines will also be renumbered.

INSERT MODE

A special CHOICE allows the user to enter text using the INSERT mode option (i.e., by pressing the INSERT key on the keyboard without having to use ERASE EOF):

CH: .NY

To return to the standard OVERLAY mode, enter the following input in the CHOICE field:

CH: .NN

NOTES: The INSERT mode requires that significant spaces be entered.

This facility is available on Text Description lines only.

5.3. EDITING FROM THE ACTION CODE

EDITING FROM THE ACTION CODE

These editing facilities are implemented through the ACTION CODE field on all full-page updatable screens associated with an entity description. Four functions in this category are available:

.LINE INSERTION starting from a given key,
.LINE DUPLICATION, as many times as requested,
.THE LINE SPLIT,
.THE LINE TRANSFER AND DELETE facility.

After the ENTER key is pressed, these commands call a pre- formatted screen which is entered for update, except for the LINE TRANSFER AND DELETE facility, which directly updates the Database. Modifications to entity description screens other than through the above-mentioned commands are processed as standard implicit/explicit update transactions (refer to chapter "ON-LINE ACCESS LANGUAGE", subchapter "ON-LINE UPDATING", paragraph "PROCESSING PRIORITIES").

LINE INSERTION

Line insertion is executed as follows:

. An 'I' (INSERT) is entered in the ACTION CODE field of the line after which line insertion will begin.

. The number of lines to be inserted is entered in the LINE NUMBER field. For lines without a line number, the number of lines to be inserted is indicated 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, PACBASE assigns the line number of the initial line to all the repeated lines. The user 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. The user must manually modify the line number.

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.

THE LINE TRANSFER AND DELETE FACILITY

The user can COPY and DELETE 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 copied,

. Enter a 'G' in the ACTION CODE field of the first line if a group of lines are to be copied,

. And enter an 'L' on the last line to be copied.

In all cases, each line to be copied must have a new identifier, otherwise the line(s) will simply be deleted.

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, the user 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.

6. CHOICE: ACCESS COMMANDS

6.1. INTRODUCTION

INTRODUCTION

On the lists which follow the user will find the various codes used in the CHOICE field to access all of the System screens.

Users under a system where only certain functions are available can only use those corresponding access commands.

For each entity, a detailed list of the relevant access commands is provided in the corresponding reference manuals.

If the CHOICE field has not been entered, displays the continuation of the list or entity description, except if the screen has been modified (by display option or by update of the database).

When entity descriptions have been requested, displays the different screens making up the entity description for which there are existing line occurrences.

On the last screen of a list or an entity, the following message is displayed:

'*** END ***'

6.2. LIBRARIES (*)

LIBRARIES

LIST OF LIBRARIES

CHOICE	SCREEN	UPD
LC*aaa	List of libraries (starting with library 'aaa')	NO

CHARACTERISTICS OF LIBRARY 'aaa'

CHOICE	SCREEN	UPD
*aaa	Definition of library 'aaa'.	YES
*aaaGbbb	General documentation for the 'aaa' library (starting with line number 'bbb').	YES
*aaaXQbbbbbb	List of entities linked to the 'aaa' library through the 'bbbbbb' user-defined relationship.	NO

6.3. KEYWORDS (K)

KEYWORDS: ON-LINE ACCESS

KEYWORD-RELATED SCREENS

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

6.4. DATA ELEMENTS (E)

DATA ELEMENTS: ON-LINE ACCESS

LIST OF DATA ELEMENTS

CHOICE	SCREEN	UPD
LCEaaaaaa	List of Elements by Code (starting with data element 'aaaaaa').	NO
LNEaaaaaaaaaaaaa	List of Data Elements sorted by name (starting with name 'aaaaaaaaaaaaa'). The sort is performed on the following elements: - the first twenty characters of the clear name, - the code of the Data Element. Note: Child Data Elements with no clear name do not appear on the list	NO
LACEaaaaaaaaaaaaaaaaa	List of Elements by COBOL name (starting with data element 'aaaaaaaaaaaaaaaaa') For elements from REVERSE ENG.	NO
LALEaaaaaaaaaaaaa	List of data elements sorted by name (starting with name 'aaaaaaaaaaaaa'). Equivalent of 'LNE'.	NO
LAREaaaaaaaaaaaaaaaaaa	List of data elements sorted by relational name (starting with 'aaaaaaaaaaaaaaaaaa').	NO
LFEaaaaaa	List of undefined data elements by code (starting with element 'aaaaaa').	NO
LUEaaaaaa	List of data elements for update (starting with element 'aaaaaa').	YES

DESCRIPTION OF DATA ELEMENT 'aaaaaa'

CHOICE	SCREEN	UPD
Eaaaaaa	Definition of data element 'aaaaaa'.	YES
EaaaaaaDbbb	Description of data element 'aaaaaa' (starting with line number 'bbb').	YES
EaaaaaaGbbb	General Documentation for data element 'aaaaaa' (starting with line number 'bbb').	YES
EaaaaaaATbbbbbb	Text assigned to the data element 'aaaaaa' (starting with text 'bbbbbb').	NO
EaaaaaaX	X-references of data element 'aaaaaa' to all entities.	NO
EaaaaaaXTbbbbbb	X-references of data element 'aaaaaa' to texts (starting with text 'bbbbbb').	NO
EaaaaaaXMbbbbbb	X-references of data element 'aaaaaa' to the Method Entities (starting with Method Entity 'bbbbbb').	NO
EaaaaaaXQbbbbbb	List of entities linked to data element 'aaaaaa' through user-defined relationship 'bbbbbb'.	NO
EaaaaaaXBbbbbbb	X-references of data element 'aaaaaa' to blocks (starting with block 'bbbbbb').	NO
EaaaaaaXBbbbbbbDCddd	X-references of data element 'aaaaaa' to CODASYL-type blocks (starting with block 'bbbbbb', line number 'ddd')	NO

EaaaaaaXBbbbbbbDHddd	X-references of data element 'aaaaaa' to Hierarchical-type block (starting with block 'bbbbbb', line number 'ddd')	NO
EaaaaaaXBbbbbbbDRddd	X-references of data element 'aaaaaa' to Relational-type block (starting with block 'bbbbbb', line number 'ddd')	NO
EaaaaaaXVbbbbbb	X-references of data element 'aaaaaa' to volumes (starting with volume 'bbbbbb').	NO
EaaaaaaXObbbbbb	X-references of data element 'aaaaaa' to screens (starting with screen 'bbbbbb').	NO
EaaaaaaXObbbbbbWccddd	X-references of data element 'aaaaaa' to work areas (-W) of screen 'bbbbbb' (starting with work area 'cc', line number 'ddd').	NO
EaaaaaaXObbbbbbBccddeee	X-references of data element 'aaaaaa' to Beginning Insertions (-B) of screen 'bbbbbb' (starting with section 'cc', paragraph 'dd', line number 'eee').	NO
EaaaaaaXObbbbbbCPcccccc	X-references of data element 'aaaaaa' to Call of P.M.S.(-CP) of screen 'bbbbbb' (starting with macro-structure 'cccccc').	NO
EaaaaaaXObbbbbbPccddeee	X-references of data element 'aaaaaa' to procedural code (-P) of screen 'bbbbbb' (starting with function/subfunction 'ccdd', line number ' eee').	NO
EaaaaaaXKbbbb	X-references of data element 'aaaaaa' to the key of relational /SQL database blocks (starting with segment 'bbbb').	NO
EaaaaaaXSbbbb	X-references of data element 'aaaaaa' to segments (starting with segment 'bbbb').	NO

EaaaaaaXRbbb	X-references of data element 'aaaaaa' to reports (starting with report 'bbb').	NO
EaaaaaaXRbbbCE	X-references of data element 'aaaaaa' to report call of elements (starting with report 'bbb').	NO
EaaaaaaXPbbbbbb	X-references of data element 'aaaaaa' to programs (starting with program 'bbbbbb').	NO
EaaaaaaXPbbbbbbBccddeee	X-references of data element 'aaaaaa' to Begininning Insertions (-B) of program 'bbbbbb' (starting with section 'cc', paragraph 'dd', line number 'eee').	NO
EaaaaaaXPbbbbbbCPcccccc	X-references of data element 'aaaaaa' to Call of P.M.S. (-CP) of program 'bbbbbb' (starting with macro-structure 'cccccc').	NO
EaaaaaaXPbbbbbbSCfusfnnn	X-references of data element 'aaaaaa' to source code (-SC) of 'reversed' program 'bbbbbb' (starting with function/subfunction 'fusf', line number 'nnn')	NO
EaaaaaaXPbbbbbbWccddd	X-references of data element 'aaaaaa' to work areas (-W) of program 'bbbbbb' (starting with work area 'cc', line number 'ddd')	NO
EaaaaaaXPbbbbbbPfusfnnn	X-references of data element to procedural code (-P) of program 'bbbbbb' (starting with function/ subfunction 'fusf', line number 'nnn').	NO
EaaaaaaXPbbbbbb9cccccc	X-references of data element to Pure COBOL Source Code (-9) of program 'bbbbbb' (starting with -9 line 'cccccc').	NO
EaaaaaaXFbbbbbb	X-references of data element 'aaaaaa' to User Entities (starting with UE 'bbbbbb').	NO

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

All notations between parentheses are optional.

6.5. TEXTS (T)

TEXTS: ON-LINE ACCESS

LISTS

CHOICE	SCREEN	UPD
LCTaaaaaa	List of texts by code (starting with text 'aaaaaa').	NO
LTTaaTbbbbbb	List of texts by type (starting with type 'aa' and with text 'bbbbbb').	NO

DESCRIPTION OF TEXT 'aaaaaa'

CHOICE	SCREEN	UPD
Taaaaaa	Definition of text 'aaaaaa'.	YES
TaaaaaaGbbb	General documentation for 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 General Documentation lines (starting with line 'bbb').	NO
TaaaaaaXUbb OR TaaaaaaXVbbbbbb	X-references of text 'aaaaaa' to user manuals AND volumes (starting with user manual 'bb' and volume 'bbbbbb').	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 entities linked to text 'aaaaaa' through the 'bbbbbb' user-defined relationship.	NO
TaaaaaaDbbccc	Description of text 'aaaaaa' (starting with paragraph 'bb' and line number 'ccc').	YES

TEXT LAYOUT SIMULATION

TaaaaaaSIMbbbDcc	Simulation of paragraph description of text 'aaaaaa' using Report layout 'bbb' (starting with paragraph 'cc'). (To use the standard layout, enter '&&&' as the layout code).	NO

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

All notations between parentheses are optional.

6.6. DATA STRUCTURES (D)

DATA STRUCTURES: ON-LINE ACCESS

LIST OF DATA STRUCTURES

CHOICE	SCREEN	UPD
LCDaa	List of data structures by code (starting with data structure 'aa').	NO
LTDtaa	List of data structures by type (starting with type 't' and D.S. 'aa').	NO
LPDaaaaaa	List of data structures by External Name (starting with external name 'aaaaaa').	NO

DESCRIPTION OF DATA STRUCTURE 'aa'

CHOICE	SCREEN	UPD
Daa	Definition of data structure 'aa'.	YES
DaaGbbb	General documentation for data structure 'aa' (starting with line number 'bbb').	YES
DaaATbbbbbb	Text assigned to the data structure 'aa' (starting with text 'bbbbbb').	NO
DaaX	X-references of data structure 'aa'.	NO
DaaXQbbbbbb	List of entities linked to data structure 'aa' through the 'bbbbbb' user-defined relationship.	NO
DaaXVbbbbbb	X-references of data structure 'aa' to volumes (starting with volume 'bbbbbb'.	NO
DaaXPbbbbbb	X-references to programs for data structure 'aa' (starting with program 'bbbbbb').	NO

DaaXPbbbbbbCPcccccc	X-references of data structure 'aa' to Call of P.M.S. (-CP) of program 'bbbbbbb' (starting with macro-structure 'cccccc').	NO
DaaXPbbbbbbWccddd	X-references of data structure 'aa' to Work Areas (-W) of program 'bbbbb' (starting with work area 'cc', line number 'ddd').	NO
DaaXObbbbbb	X-references of data structure 'aa' to screens (starting with screen 'bbbbbb').	NO
DaaXObbbbbbCPcccccc	X-references of data structure 'aa' to Call of P.M.S. (-CP) of screen 'bbbbbb' (starting with macro-structure 'cccccc').	NO
DaaXObbbbbbWccddd	X-references of data structure 'aa' to Work Areas (-W) of screen 'bbbbbb' (starting with work area 'cc', line number 'ddd').	NO
DaaLSbb	Data structure 'aa' list of segments (starting with segment 'bb'). .C1: default value. .C2: only the segment codes and the transaction code values are displayed.	NO
DaaLRb	Data structure 'aa' list of reports (starting with report 'b').	NO

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

All notations between parentheses are optional.

6.7. SEGMENTS (S)

SEGMENTS: ON-LINE ACCESS

LIST OF SEGMENTS

CHOICE	SCREEN	UPD
LCSaaaa	List of segments by code (starting with segment 'aaaa').	NO

DESCRIPTION OF SEGMENT 'aaaa'

CHOICE	SCREEN	UPD
Saaaa	Definition of segment 'aaaa'.	YES
SaaaaGbbb	General documentation for segment 'aaaa' (starting with line number 'bbb').	YES
SaaaaATbbbbbb	Text assigned to segment 'aaaa' (starting with text 'bbbbbb').	NO
SaaaaLSPbbbb	List of parent segments for segment 'aaaa' (starting with parent segment 'bbbb').	NO
SaaaaLSCbbbb	List of child segments for segment 'aaaa' (starting with child segment 'bbbb').	NO
SaaaaX	X-references of segment 'aaaa'.	NO
SaaaaXSbbbb	X-references of segment 'aaaa' to segments (starting with segment 'bbbb').	NO
SaaaaXBbbbbbb	X-references of segment 'aaaa' to blocks (starting with block 'bbbbbb').	NO
SaaaaXQbbbbbb	List of entities linked to segment 'aaaa' through user-defined relation-ship 'bbbbbb'.	NO

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SEGMENTS (S) 7

SaaaaXVbbbbbb	X-references of segment 'aaaa' to volumes starting with the 'bbbbbb' volume.	NO
SaaaaXPbbbbbb	X-references of segment 'aaaa' to programs (starting with program 'bbbbbb').	NO
SaaaaXPbbbbbbCPcccccc	X-references of segment 'aaaa' to Call of P.M.S. (-CP) of program 'bbbbbb' starting with macro-structure 'cccccc').	NO
SaaaaXPbbbbbbWccddd	X-references of segment 'aaaa' to work areas (-W) of program 'bbbbbb' (starting with work area 'cc', line number 'ddd').	NO
SaaaaXObbbbbb	X-references of segment 'aaaa' to screens (starting with screen 'bbbbbb').	NO
SaaaaXObbbbbbCPcccccc	X-references of segment 'aaaa' to Call of P.M.S.(-CP) of screen 'bbbbbb' (starting with macro-structure 'cccccc').	NO
SaaaaXObbbbbbWccnnn	X-references of segment 'aaaa' to work areas (-W) of screen'bbbbbb' (starting with work area 'cc', line number 'nnn').	NO
SaaaaSSbn	Definition of the sub-schemas or sub-systems of segment 'aaaa' in the PACTABLES function (starting with sub-schema 'n' with 'b' = 's', or sub-system 'n' with 'b' = 'y'.	YES
SaaaaCEbbb	Call of elements/attributes of segment 'aaaa'(starting with line number 'bbb').	YES
SaaaaCEbbbGccc	General Documentation for the element/attribute called on line 'bbb' of segment 'aaaa' (starting with general documentation line number 'ccc').	YES
SaaaaDBEbbb	SQL view source for view 'aaaa' (starting with line 'bbb').	YES

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SEGMENTS (S) **7**

SaaaaLALbbb	Level, address and length of segment 'aaaa' (starting with line 'bbb').	NO
SaaaaDEDbbb	Data element details of segment 'aaaa' (starting with line 'bbb').	NO
	If this choice is used in C2 option, the relational label replaces that of the data element.	NO
SaaaaCNbbbbbb	List of constraints of segment 'aaaa' integrity (from the block 'bbbbbb')	NO
SaaaaSTA	Statistics on segment 'aaaa'.	NO
SaaaaACT	Activity calculation on segment 'aaaa'.	NO

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

All notations between parentheses are optional.

6.8. PARAMETERIZED INPUT AIDS (I)

PARAMETERIZED INPUT AIDS: ON-LINE ACCESS

LISTS

CHOICE	SCREEN	UPD
LCIaaaaaa	List of P.I.A.'s by code (starting with P.I.A. 'aaaaaa').	NO
LXIaaaaaa	List of P.I.A.'s by external ref's. (starting with external ref. 'aaaaaa').	NO
Cross-references:		
XIaaaaaa	X-references of P.I.A. external ref's. (starting with external ref. 'aaaaaa').	NO
XIaaaaaaIbbbbbb	X-references of P.I.A. external ref. 'aaaaaa' (starting with P.I.A. 'bbbbbb').	NO

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

CHOICE	SCREEN	UPD
Iaaaaaa	Definition of P.I.A. 'aaaaaa'.	YES
IaaaaaaGbbb	General documentation of P.I.A. 'aaaaaa' (starting with general documentation line number 'bbb').	YES
IaaaaaaATbbbbbb	Text assigned to P.I.A. 'aaaaaa' (starting with text 'bbbbbb').	NO
IaaaaaaX	X-references of P.I.A. 'aaaaaa'.	NO
IaaaaaaXObbbbbb	X-references of P.I.A. 'aaaaaa' to screens (starting with screen 'bbbbbb').	NO

IaaaaaaX*bbb	X-references of P.I.A. 'aaaaaa' to libraries (starting with library 'bbb').	NO
IaaaaaaXDbb	X-references of P.I.A. 'aaaaaa' to data structures (starting with data structure 'bb').	NO
IaaaaaaXRbbb	X-references of P.I.A. 'aaaaaa' to reports (starting with report 'bbb').	NO
IaaaaaaXMbbbbbb	X-references of P.I.A. 'aaaaaa' to Method entities (starting with method entity 'bbbbbb').	NO
IaaaaaaXBbbbbbb	X-references of P.I.A. 'aaaaaa' to database blocks (starting with block 'bbbbbb').	NO
IaaaaaaXTbbbbbb	X-references of P.I.A. 'aaaaaa' to texts (starting with text 'bbbbbb').	NO
IaaaaaaXEeeeeee	X-references of P.I.A. 'aaaaaa' to data elements (starting with element 'eeeeee').	NO
IaaaaaaXUbb	X-references of P.I.A. 'aaaaaa' to user manuals (starting with user manual 'bb').	NO
IaaaaaaXIbbbbbb	X-references of P.I.A. 'aaaaaa' to other P.I.A.'s (starting with P.I.A. 'bbbbbb').	NO
IaaaaaaXPbbbbbb	X-references of P.I.A. 'aaaaaa' to programs (starting with program 'bbbbbb').	NO
IaaaaaaXSbbbb	X-references of P.I.A. 'aaaaaa' to segments (starting with segment 'bbbb').	NO
IaaaaaaXVbbbbbb	X-references of P.I.A. 'aaaaaa' to volumes (starting with volume 'bbbbbb').	NO

IaaaaaaXQbbbbbb	List of entities linked to P.I.A. 'aaaaaa' through the 'bbbbbb' user-defined relationship.	NO
IaaaaaaXFbbbbbb	X-references of P.I.A. 'aaaaaa' to user entities (starting with user entity 'bbbbbb').	NO
IaaaaaaX$bbcccccc	X-reference of P.I.A. 'aaaaaa' to User Entity Occurrence bbcccccc (type 'bb', UEO 'cccccc').	NO
IaaaaaaDbbb	Description of P.I.A. 'aaaaaa' (starting with line number 'bbb').	YES

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

All notations between parentheses are optional.

6.9. USER MANUALS (U)

USER MANUALS: ON-LINE ACCESS

LIST

CHOICE	SCREEN	UPD
LCUaa	List of user manuals by code (starting with user manual 'aa').	NO

DESCRIPTION OF USER MANUAL 'aa'

CHOICE	SCREEN	UPD
Uaa	Definition of user manual 'aa'.	YES
UaaGbbb	General documentation for user manual 'aa' (starting with line number 'bbb').	YES
UaaDbbcc	Description of user manual 'aa' (starting with chapter 'bb', subchapter 'cc').	YES
UaaXQbbbbbb	List of entities linked to user manual 'aa' through the 'bbbbbb' user-defined relationship 'bbbbbb'.	NO

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

All notations between parentheses are optional.

6.10. VOLUMES (V)

VOLUMES

LIST OF VOLUMES

CHOICE	SCREEN	UPD
LCVaaaaaa	List of volumes by code (starting with volume 'aaaaaa').	NO
LTVtVaaaaaa	List of volumes by type (starting with type 't' and with volume 'aaaaaa').	NO

DESCRIPTION OF VOLUME 'aaaaaa'

CHOICE	SCREEN	UPD
Vaaaaaa	Definition of volume 'aaaaaa'.	YES
VaaaaaaGbbb	General Documentation for volume 'aaaaaa' (starting with general documentation line number 'bbb').	YES
VaaaaaaATbbbbbb	Texts assigned to volume 'aaaaaa' (starting with text 'bbbbbb').	NO
VaaaaaaX	X-references of volume 'aaaaaa'	NO
VaaaaaaXVbbbbbb	X-references of volume 'aaaaaa' to volumes (starting with volume 'bbbbbb').	NO
VaaaaaaXQbbbbbb	List of entities linked to volume 'aaaaaa' through user-defined relationship 'bbbbbb'.	NO
VaaaaaaDbbccnnn	Description of volume 'aaaaaa' (starting with chapter 'bb', subchapter 'cc' and line number 'nnn').	YES

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

All notations between parentheses are optional.

6.11. USER ENTITIES (F)

USER ENTITIES

LIST OF USER ENTITIES

CHOICE	SCREEN	UPDATE
LCFaaaaaa	List of User Entities by code (starting with User Entity 'aaaaaa').	NO

DESCRIPTION OF USER ENTITY 'aaaaaa'

CHOICE	SCREEN	UPDATE
Faaaaaa	Definition of User Entity 'aaaaaa'.	YES
FaaaaaaGbbb	General Documentation for User Entity 'aaaaaa' (starting with line number 'bbb').	YES
FaaaaaaATbbbbbb	Text assigned to User Entity 'aaaaaa' (starting with text 'bbbbbb').	NO
FaaaaaaX	X-references of User Entity 'aaaaaa'.	NO
FaaaaaaXVvvvvvv	X-references of User Entity 'aaaaa' to volumes (starting with volume 'vvvvvv').	NO
FaaaaaaXQrrrrrr	List of entities linked to User Entity 'aaaaaa' through User-Defined Relationship 'rrrrrr'.	NO
FaaaaaaCEdnnn	Call of Elements of User Entity 'aaaaaa' (starting with description type 'd' and line number 'nnn').	YES
FaaaaaaL$oooooo	List of occurrences for User Entity 'aaaaaa' (starting with occurrence 'oooooo')	NO

NOTE: After the first 'Faaaaaa' input in the CHOICE field, 'Faaaaaa' may be replaced by '-'.

All notations between parentheses are optional.

6.12. USER RELATIONSHIPS (Q)

USER-DEFINED RELATIONSHIPS

LIST OF USER-DEFINED RELATIONSHIPS

CHOICE	SCREEN	UPDATE
LCQrrrrrr	List of user-defined relationships (starting with Relationship 'rrrrrr')	NO

DESCRIPTION OF USER-DEFINED RELATIONSHIP 'rrrrrr'

CHOICE	SCREEN	UPDATE
Qrrrrrr	Definition of user-defined relationship 'rrrrrr'.	YES
QrrrrrrGbbb	General documentation for user-defined relationship 'rrrrrr' (starting with general documentation line number 'bbb').	YES
QrrrrrrATbbbbbb	Text assigned to user-defined relationship 'rrrrrr' (starting with text 'bbbbbb').	NO
QrrrrrrX	X-references of user-defined relationship 'rrrrrr'.	NO
QrrrrrrX*	X-references of user-defined relationship 'rrrrrr' in Entities.	NO
QrrrrrrXVvvvvvv	X-references of user-defined relationship 'rrrrrr' to volumes (starting with volume 'vvvvvv').	NO
QrrrrrrXQssssss	List of entities linked to user-defined relationship 'rrrrrr' through relationship 'ssssss'.	NO

QrrrrrrXFaaaaaa	X-references of user-defined relationship 'rrrrrr' to user entities (starting with user entity 'aaaaaa').	NO

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

All notations between parentheses are optional.

6.13. USER ENTITY OCCURRENCES ($)

USER ENTITY OCCURRENCES (UEO)

LIST OF USER ENTITY OCCURRENCES

CHOICE	SCREEN	UPDATE
LC$ttoooooo	List of UEO's by code (starting with type 'tt', code 'oooooo')	NO

DESCRIPTION OF OEU OF TYPE 'tt' AND OF CODE 'oooooo'

CHOICE	SCREEN	UPDATE
$ttoooooo	Definition of UEO 'ttoooooo'	YES
$ttoooooo	Definition of UEO 'ttoooooo'	YES
$ttooooooGbbb	General documentation for UEO 'ttoooooo' (starting with general documentation line number 'bbb').	YES
$ttooooooATbbbbbb	Text assigned to UEO 'ttoooooo' (starting with text 'bbbbbb')	NO
$ttooooooX	X-references of UEO 'ttoooooo'	NO
$ttooooooXVvvvvvv	X-references of UEO 'ttoooooo' to volumes (starting with volume 'vvvvv').	NO
$ttooooooXQrrrrrr	List of entities linked to UEO 'ttoooooo' through Relationship 'rrrrrr'.	NO
$ttooooooDnlll	Description of UEO 'ttoooooo' (starting with description 'n', line number 'lll').	YES

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

All notations between parentheses are optional.

6.14. MODEL ENTITIES (PACMODEL) (M)

METHOD ENTITIES (METHOD FUNCTION)

LIST OF METHOD ENTITIES

CHOICE	SCREEN	UPD
LMPaaaaaa	List of Method properties (starting with property 'aaaaaa').	NO
LMOaaaaaa	List of Method objects (starting with object 'aaaaaa').	NO
LMCaaaaaa	List of Method F.I.C.'s (starting with F.I.C. 'aaaaaa').	NO
LMRaaaaaa	List of Method relationships (starting with relationship 'aaaaaa').	NO

DESCRIPTION OF METHOD ENTITY 'aaaaaa'

CHOICE	SCREEN	UPD
Maaaaaa	Definition of Method entity 'aaaaaa' (Object, Relationship or F.I.C.).	YES
MaaaaaaGbbb	General documentation for method entity 'aaaaaa' (starting with line 'bbb').	YES
MaaaaaaATbbbbbb	Text assigned to Method entity 'aaaaaa' (starting with text 'bbbbbb').	NO
MaaaaaaX	X-references of Method entity 'aaaaaa'	NO
MaaaaaaXMbbbbbb	X-references of Method entity 'aaaaaa' to Method entities (starting with Method entity 'bbbbbb').	NO
MaaaaaaXQbbbbbb	List of entities linked to Method entity 'aaaaaa' through User-Defined Relationship 'bbbbbb'.	NO

MaaaaaaXSbbbb	X-references of Method entity 'aaaaaa' to segments (starting with segment 'bbbb').	NO
MaaaaaaXBbbbbbb	X-references of Method entity 'aaaaaa' to database blocks (starting with block 'bbbbbb').	NO
MaaaaaaXVbbbbbb	X-references of Method entity 'aaaaaa' to volumes (starting with volume 'bbbbbb').	NO
MaaaaaaCMbbb	Method Relationship Call of Objects (starting with line 'bbb').	YES
MaaaaaaCMbbbGccc	Method Call of Objects General Documentation for call line 'bbb' (starting with line number 'ccc').	YES
MaaaaaaCEbbb	Method Call of Elements/Properties (starting with line 'bbb').	YES
MaaaaaaCEbbbGccc	Method Call of Elements General Documentation for call line 'bbb' (starting with line number 'ccc').	YES

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

All notations between parentheses are optional.

6.15. PROGRAMS (P)

PROGRAMS: ON-LINE ACCESS

LIST OF PROGRAMS

CHOICE	SCREEN	UPD
LCPaaaaaa	List of programs by code (starting with program 'aaaaaa').	NO
LTPnPaaaaaa	List of programs of type 'n' (starting with program 'aaaaaa').	NO
LEPeeeeeeee	List of programs by external name (starting with external name 'eeeeeeee').	NO

DESCRIPTION OF PROGRAM 'aaaaaa'

CHOICE	SCREEN	UPD
Paaaaaa	Definition of program 'aaaaaa'.	YES
PaaaaaaGbbb	General documentation for program 'aaaaaa' (starting with line 'bbb').	YES
PaaaaaaXVbbbbbb	X-references of program 'aaaaaa' to volumes (starting with volume 'bbbbbb').	NO
PaaaaaaATbbbbbb	Text assigned to program 'aaaaaa' (starting with text 'bbbbbb').	NO
PaaaaaaX	X-references of program 'aaaaaa'.	NO
PaaaaaaXVbbbbbb	X-references of program 'aaaaaa' to volumes (starting with volume 'bbbbbb')	YES
PaaaaaaXPbbbbbb	X-references of program 'aaaaaa' to programs (starting with program 'bbbbbb')	YES
PaaaaaaXObbbbbb	X-references of program 'aaaaaa' to screens (starting with screen 'bbbbbb').	NO
PaaaaaaXQrrrrrr	List of entities linked to program 'aaaaaa' through user-defined relationship 'rrrrrr'.	NO

PaaaaaaCDbb	Call of data structures of program 'aaaaaa' (starting with data structure 'bb').	YES
PaaaaaaHCDbb	ZOOM on data structure 'bb' called into program 'aaaaaa'.	YES
PaaaaaaCPbbbbbb	Call of parameterized macro-structures of program 'aaaaaa' (starting with P.M.S. 'bbbbbb').	YES
PaaaaaaBbbccddd	Beginning Insertions modifications of program 'aaaaaa' (starting with section 'bb', paragraph 'cc', line 'ddd').	YES
PaaaaaaWbbccc	Description of Work Areas of program 'aaaaaa' (starting with work area 'bb' line 'ccc').	YES
PaaaaaaPfusfnnn	Description of Procedural Code of program 'aaaaaa' (starting with function 'fu', sub-function 'sf', line number 'nnn').	YES
PaaaaaaPGfusfnnn	View of Procedures Generated of program 'aaaaaa' (starting with function 'fu', sub-function 'sf', line number 'nnn'), with display of generated procedure titles.	YES
Paaaaaa9bbbbbb	Description of Pure COBOL Source Code of program 'aaaaaa' (starting with -9 line 'bbbbbb').	YES
PaaaaaaTCfusf	View of Titles and Conditions of automatic and specific procedures of program 'aaaaaa' (starting with function 'fu', sub-function 'sf').	YES
PaaaaaaTCfusf<nn or Paaaaaa<nnTCfusf	View of Titles and Conditions of automatic and specific procedures of program 'aaaaaa' up to level 'nn' (starting with function 'fu', sub-function 'sf').	YES

PaaaaaaTOfusf	View of Titles Only of automatic and specific procedures of program 'aaaaaa' (starting with function 'fu', sub-function 'sf').	NO
PaaaaaaTOfusf<nn or Paaaaaa<nnTOfusf	View of Titles Only of automatic and specific procedures of program 'aaaaaa' up to level 'nn' (starting with function 'fu', sub-function 'sf').	NO
PaaaaaaSCfusfnnn	Description of Source Code of "reversed" program 'aaaaaa' (starting with function 'fu', sub-function 'sf', line number'nnn').	YES
PaaaaaaSTRfusf	Program Structure of "reversed" program 'aaaaaa' (starting with function 'fu', sub-function 'sf').	YES

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

All notations between parentheses are optional.

6.16. REPORTS (R)

REPORTS

LIST OF REPORTS

CHOICE	SCREEN	UPD
LCRaaa	List of reports by code (starting with report 'aaa').	NO
LTRbRaaa	List of reports by type 'b' (starting with report 'aaa').	NO

DESCRIPTION OF REPORT 'aaa'

CHOICE	SCREEN	UPD
Raaa	Definition of report 'aaa'.	YES
RaaaGbbb	General documentation for report 'aaa' starting with line 'bbb').	YES
RaaaATbbbbbb	Text assigned to report 'aaa' (starting with text 'bbbbbb').	NO
RaaaX	X-references of report 'aaa'.	NO
RaaaXVbbbbbb	X-references of report 'aaa' to volumes (starting with volume 'bbbbbb').	NO
RaaaXPbbbbbb	X-references of report 'aaa' to programs (starting with program 'bbbbbb').	NO
RaaaXQbbbbbb	List of entities linked to report 'aaa' through user-defined relationship 'bbbbbb'.	NO
RaaaLbbCccc	Layout of report 'aaa' (starting with line 'bb', column 'ccc').	YES
RaaaDbbccc	Description of report 'aaa' (starting with category 'bb', line 'ccc').	YES

CHOICE: ACCESS COMMANDS **6**
REPORTS (R) **16**

RaaaCEbbccc	Call of data elements in report 'aaa' YES (starting with structure 'bb', position 'ccc').

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

All notations between parentheses are optional.

6.17. SCREENS (O)

CHOICE: SCREENSLIST OF SCREENS

CHOICE	SCREEN	UPD
LCOaabbbb	List of screens by code. (starting with screen 'aabbbb').	NO
LPOddddddddd	List of screens by external name (starting with ext. name 'dddddddd').	NO
LTOttttttttt	List of screens by transaction code (starting with transac. code 'tttttttt').	NO
LSOmmmmmmm	List of screens by external map (starting with map 'mmmmmmm').	NO
LNOttOeeeeee	List of screens by type ('tt' is the type and 'eeeeee' is the first screen code in the list)	NO

DESCRIPTION OF SCREEN 'aabbbb'

CHOICE	SCREEN	UPD
Oaabbbb	Definition of On-Line Screen 'aabbbb'.	YES
OaabbbbGccc	General Documentation for screen 'aabbbb' (starting with line 'ccc').	YES
OaabbbbATcccccc	Text assigned to screen 'aabbbb' (starting with text 'cccccc').	NO
OaabbbbX	X-references of screen 'aabbbb'	NO
OaabbbbXO	X-references of screen 'aabbbb' to screens	NO
OaabbbbXQrrrrrr	List of entitites linked to screen 'aabbbb' through user-defined relation-ship 'rrrrrr'.	NO
OaabbbbXVvvvvvv	X-references of screen 'aabbbb' to volumes (starting with volume 'vvvvvv'.)	NO
OaabbbbCEccc	Data Elements of Screen 'aabbbb' (starting from line 'ccc').	YES

CHOICE: ACCESS COMMANDS 6
SCREENS (O) 17

CHOICE	SCREEN	UPD
OaabbbbCEccc	Call of elements of screen 'aabbbb' (starting with line 'ccc').	YES
OaabbbbCScddss	Call of segments of screen 'aabbbb' (starting with category indicator 'c' and segment ddss). NOTE: "c" is equivalent to "&" for the screen-top category.	YES
OaabbbbCPcccccc	Call of parameterized macro-structures in screen 'aabbbb' (starting with macro-structure 'cccccc').	YES
OaabbbbBccddeee	Beginning Insertions Modifications for on-line screen 'aabbbb' (starting with section 'cc', paragraph 'dd', line 'eee').	YES
OaabbbbWccddd	Description of Work Areas (-W) of screen aabbbb' (starting with work area 'cc', line 'ddd').	YES
OaabbbbPfusfnnn	Description of Procedural Code (-P) of screen 'aabbbb' (starting with function 'fu', sub-function 'sf', line number 'nnn').	YES
OaabbbbLnnCxxx	Layout of screen 'aabbbb' (starting with line 'nn', column 'xxx').	YES
OaabbbbMnnCxxx	Mapping of screen 'aabbbb' (starting with line 'nn', column 'xxx').	YES
OaabbbbO	Dialogue Complement.	YES
OaabbbbADRnnCxxx	Views of Address of Elements of screen 'aabbbb' (starting with line nn, column xxx).	NO
OaabbbbSIM	Dialogue Simulation (starting with screen 'aabbbb').	NO

CHOICE: ACCESS COMMANDS **6**
SCREENS (O) **17**

CHOICE	SCREEN	UPD
OaabbbbTOfusf<nn	View of Titles Only of screen 'aabbbb' (starting with function 'fu', sub-function 'sf' up to level 'nn').	NO
OaabbbbTCfusf<nn	View of Titles and Conditions of screen 'aabbbb' (starting with function 'fu', sub-function 'sf' up to level 'nn').	YES
OaabbbbPGfusfnnn	View of Procedures Generated of screen 'aabbb' (starting with function 'fu', sub-function 'sf', line number 'nnn'), with display of generated procedure titles.	YES
Oaabbbb<nn	View of Titles and Conditions of automatic and specific procedures of screen 'aabbbb' (up to level 'nn').	YES

6.18. DATABASE BLOCKS (B)

DATABASE BLOCKS: ON-LINE ACCESS

LISTS

CHOICE	SCREEN	UPD
LCBaaaaaa	List of database blocks by code (starting with block 'aaaaaa').	NO
LTBaabbbbbb	List of database blocks by type (starting with type 'aa' and block 'bbbbbb').	NO
LEBaaaaaaaa	List of database blocks by external name (starting with name 'aaaaaaaa').	NO

DESCRIPTION OF BLOCK 'aaaaaa'

CHOICE	SCREEN	UPD
Baaaaaa	Definition of database block 'aaaaaa'	YES
BaaaaaaGbbb	General documentation for block 'aaaaaa' (starting with line 'bbb').	YES
BaaaaaaATbbbbbb	Text assigned to block 'aaaaaa' (starting with text 'bbbbbb').	NO
BaaaaaaX	X-references of block 'aaaaaa'.	NO
BaaaaaaXBbbbbbb	X-references of block 'aaaaaa' to PSB's (starting with PSB 'bbbbbb').	NO
BaaaaaaXObbbbbb	X-references of block 'aaaaaa' to screens (starting with screen 'bbbbbb').	NO
BaaaaaaXObbbbbbCScdddd	X-references of block 'aaaaaa' to the Call of Segments of screen 'bbbbbb' (starting with category 'c' and with segment 'dddd'). Note: 'c' is equal to & for the screen-top category.	NO
BaaaaaaXObbbbbbWccddd	X-references of block 'aaaaaa' to the Work Areas of screen 'bbbbbb' (starting with work area 'cc', line number'ddd').	NO
BaaaaaaXQbbbbbb	List of entities linked to block 'aaaaaa' through user-defined relationship 'bbbbbb'.	NO
BaaaaaaXVvvvvvv	X-references of block 'aaaaaa' to volumes (starting with volume 'vvvvvv').	NO
BaaaaaaXPbbbbbb	X-references of block 'aaaaaa' to programs (starting with program 'bbbbbb').	NO
BaaaaaaXPbbbbbbWccddd	X-references of block 'aaaaaa' to Work Areas of program 'bbbbbb' (starting	NO

CHOICE: ACCESS COMMANDS **6**
DATABASE BLOCKS (B) **18**

with work area 'cc', line number 'ddd').

CODASYL (NETWORK) DATABASE BLOCK DESCRIPTION

CHOICE	SCREEN	UPD
BaaaaaaDCbbb	Description of CODASYL database block 'aaaaaa' (starting with line 'bbb').	YES
BaaaaaaDCbbbGccc	General documentation of CODASYL database block 'aaaaaa' description line 'bbb' (starting with general documentation line 'ccc').	YES
LCAaaaaaa	List of areas by code (starting with area 'aaaaaa').	NO
LCCaaaaaa	List of CODASYL sets (starting with set 'aaaaaa').	NO
CaaaaaaACT	CODASYL activity on a set (starting with set 'aaaaaa').	NO

HIERARCHICAL DATABASE BLOCK DESCRIPTION

CHOICE	SCREEN	UPD
BaaaaaaDHbbb	Description of hierarchical block 'aaaaaa' (starting with line 'bbb')	YES
BaaaaaaDCbbb	Description of DB2 database block 'aaaaaa' (starting with line 'bbb').	YES

BaaaaaaDHbbbGccc	General documentation of hierarchical block 'aaaaaa' description line 'bbb' (starting with general documentation line 'ccc').	YES
BaaaaaaDCbbbGccc	General documentation of DB2 database block 'aaaaaa' description line 'bbb' (starting with general documentation line 'ccc').	YES
BaaaaaaSQL	Interactive SQL for consultation and update of DB2 catalog for block 'aaaaaa'.	NO

BaaaaaaDHbbb	Description of hierarchical block 'aaaaaa' (starting with line 'bbb')	YES
BaaaaaaDHbbbGccc	General documentation of hierarchical block 'aaaaaa' description line 'bbb' (starting with general documentation line 'ccc').	YES

TURBO-IMAGE DATABASE BLOCK DESCRIPTION

CHOICE	SCREEN	UPD
BaaaaaaDTbbb	Description of TURBO-IMAGE database block 'aaaaaa' (starting with line 'bbb').	YES
BaaaaaaDCbbbGccc	General documentation of TURBO-IMAGE database block 'aaaaaa' description line 'bbb' (starting with general documentation line 'ccc').	YES

LIST OF RELATIONAL/SQL OBJECTS

CHOICE	SCREEN	UPD
LTStddss	List of relational/SQL objects by type and code (starting with with type 't', code 'ddss').	NO
LESteeeeeeeeeee	List of relational/SQL objects by type and external name (starting with type 't' and external name 'eeeeeeeeeeee'). Note: If the external name is indicated on the segment definition, it is not taken into account in the list.	NO

RELATIONAL/SQL DATABASE BLOCK DESCRIPTION

CHOICE	SCREEN	UPD
BaaaaaaDRbbb	Description of relational/SQL block 'aaaaaa' (starting with line 'bbb').	YES
BaaaaaaDRbbbGccc	General documentation of relational/ SQL block 'aaaaaa' description line 'bbb' (starting with general documentation line 'ccc').	YES
BaaaaaaDRbbbK	Building of relational/SQL key 'K' on description line 'bbb' of block 'aaaaaa'.	YES
BaaaaaaGEN	Generation of SQL commands for relational/SQL block 'aaaaaa'.	YES
BaaaaaaGENnnn	Generation of SQL commands for the object defined on description line 'nnn' of block 'aaaaaa'.	YES

TANDEM DATABASE BLOCK DESCRIPTION

CHOICE	SCREEN	UPD
BaaaaaaDCbbb	Description of TANDEM database block 'aaaaaa' (starting with line 'bbb').	YES
BaaaaaaDCbbbGccc	General documentation of TANDEM database block 'aaaaaa' description line 'bbb' (starting with general documentation line 'ccc').	YES

NOTES: After the first choice of type 'Baaaaaa', 'Baaaaaa' can be replaced with '-'.

All notations between parentheses are optional.

6.19. SPECIAL CHOICES

SPECIAL CHOICES

CHOICE	MEANING
LHaaa	List of frozen sessions. (starting with session 'aaa').
JO	Journal file display of transactions on the Database.
GPaabbb	Calls the Generation and Print Commands screen (starting with sequence order number 'aa', command 'bbb').
N*aaa	Change to another library 'aaa'. This choice can be entered at the same time as the following one.
NHaaaab	Change to another session 'aaaa', version 'b'. This choice can be entered at the same time as the previous one.
NH9999	Return to current session. Access to the various libraries and sessions is conditioned by access authorizations.
NCpppnnnn	Change to another DSMS Product Code (ppp) and Change Number (nnnnnn). NOTE: 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 1008, the Choice field must contain: CH: NCp&&1008 However if the NC Choice is entered without Product Code or Change Number, it is possible to work in a Library and/or Session environment which is not under DSMS control. Transactions will then be recorded in the Journal without any DSMS references.

NOTE: Changing Library/Session/Product/Change is conditioned by the access authorizations of the user who request it.

CONTINUATION OF SPECIAL CHOICES (HSC MENU)

JP	Jump to the previous screen.
JF	Jump forward to the next screen.
JI	Jump "in-place" to the same screen.
LLuuuuuuuuLttt	List of entities locked by user 'uuuuuuuu' starting with entity type 'ttt'.

OTHER CHOICES

CHOICE	MEANING
H	Calls the General Menu (default choice on the sign-on screen.
He	Calls the Sub-menu for entity type 'e'.
.NU	No update (inhibits the implicit action codes; explicit action codes must be used for update).
.U	Implicit update.
.NT	Inhibits both implicit and explicit updates on the current screen.
.NY	Input in INSERT mode.
.NN	Return to OVERLAY mode.
.Dnnnnv	Consultation of differences between the current session and a frozen session or test version of a frozen session, or between a frozen session and its test version.
.Mnnnnv	Update of the current session based on the differences detected in session 'nnnnv'.
-	Redisplay of documentation consulted or return to the entity definition screen
END	Return to the initial screen after consultation of documentation

NOTES

Special choices are available for text editing purposes.

They are detailed in chapter "TEXT EDITING FACILITIES", sub- chapter "EDITING FROM THE CHOICE FIELD".

Special choices are also available for the IMS version. They are detailed in the following subchapter.

After using the .D choice, update is invalidated until another, valid, choice is asked for, or until the screen following the message "END OF DIFFERENCES ON THE CRITERION" is displayed.

In the List of Locked Entities, the User Entity Occurrences locked at the Description screen level will be displayed after the list of the Occrrences locked at the Definition screen level.

6.20. SPECIAL CHOICES: IMS VERSION

SPECIAL CHOICES: IMS VERSION

Two additional CHOICEs are available when the System is running under IMS:

```
LJOB    : List of jobs.

JOBnnpp : Report of job "nnpp".
```

Both choices are referred to as the MAILBOX.

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.

JOB OR SUB-JOB REPORT

The CHOICE 'JOBnnpp' allows the user to review the job or sub-job output report:

'nn' being the sequential number assigned by the system and incremented at each on-line submission of a 'GPRT' job,

'pp' being the suffix of the assigned number with value '00' for all GPRT type jobs and incremented for each subsequent sub-job.

OUTPUT OF GPRT JOB EXECUTION

After the execution of each procedure STEP (program generation, map generation, etc.), the following data is displayed:

- The time execution ended,
- The name of the STEP,
- The return code.

REPORT OF COMPILATION/LINK-EDIT SUB-JOBS

- A line is displayed for each program in which an error was detected. This line contains:

  . the program library code,
  . the external program code (PROGRAM-ID),
  . the full name of the program.

- Errors will be displayed in the following order:

  . IDENTIFICATION DIVISION,
  . ENVIRONMENT DIVISION,
  . DATA DIVISION,
  . PROCEDURE DIVISION.

For each erroneous line, the following will be displayed:

- The function/sub-function code,
- The first COBOL line containing an error,
- All the errors affecting this line, preceded by the error code (W, C, or E).

NOTE: It is also possible to access this screen from the List of jobs (see CHOICE 'LJOB'): place the cursor on the line of the selected job and press 'PF10'.

PAGING

Once a job report is accessed with CHOICE 'JOBnnpp' (display starts with line one), it is possible to consult this report from a given line. The number of this line should be entered in the designated field located at the top right corner of the screen.

In addition, it is possible to page forward and backward 'n' pages. In the same field, enter a '+' or '-' followed by the number of pages.

This paging request is not available for CHOICE ('LJOB'). (This screen works in the same way as the other screens).

PURGING JOBS

The executed jobs or those waiting to be executed can be purged by the user. The specific job number is entered in the designated field located at the bottom right corner of the screen. A message is displayed indicating the number of cancelled transactions.

NOTES: It is possible to purge sub-jobs which were submitted by a 'GPRT' procedure. In order to do this, it is necessary to enter the prefix 'nn' of the 'GPRT' job, followed by the characters '**' (or '***').

EXAMPLE:

```
GPRT   0800
OLSD   0801
BSD    0802
                          PURGE (NUMBER): 08**
                   or     PURGE (NUMBER): 8***
```

In this example, the 'GPRT' job and the two sub-jobs, 'OLSD' and 'BSD', are purged simultaneously.

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

JOB MESSAGES

A message is displayed in the CHOICE field, informing the user of the status of the last job executed or in the process of execution ('STARTED' or 'ENDED'). If several jobs were submitted by the user and if he/she has not pressed the ENTER key at the time the system sends the message, these jobs will appear one at a time.

NOTE: The '&' character appears at the beginning of the message in order to avoid involuntary branching on the job report when the user presses the ENTER key.

EXAMPLES:

CH: &JOB9999 JOBNAME STARTED
CH: &JOB9999 JOBNAME ENDED

If the user wishes to access the job review, the '&' sign must be deleted and the ENTER key pressed. If this is not the case, any other CHOICE may be entered.

Examples of the 'LJOB' and 'JOBnnpp' screens appear below.

CHOICE: ACCESS COMMANDS 6
SPECIAL CHOICES: IMS VERSION 20

```
--------------------------------------------------------------------------------
!               S.P.C. : IMS DB-DC IMS VARIANT           +PAC.PB73.IMS.182   !
!LIST OF JOBS                                                                  !
!         JOBNAME   NUMBER   TYPE      DATE      STATUS                       !
!                                                                              !
!         PCVMARC    5700    GPRT    12/29/85    ENDED                        !
!         PCVMARC    5701    DIALG   12/29/85    ENDED                        !
!         PCVMARC    5800    GPRT    01/11/86    ENDED                        !
!         PCVMARC    5801    DIALG   01/11/86    ENDED                        !
!         PCVMARL    8700    GPRT    01/16/86    ENDED                        !
!         PCVMARL    8701    BATCH   01/16/86    ENDED                        !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!*** END ***                                                                   !
!O: C1 CH: LJOB                                  PURGE (NUMBER) :             !
--------------------------------------------------------------------------------
```

CHOICE: ACCESS COMMANDS **6**
SPECIAL CHOICES: IMS VERSION **20**

```
--------------------------------------------------------------------------------
!               S.P.C. : IMS DB-DC IMS VARIANT            +PAC.PB73.IMS.182   !
!     REPORT JOB5701                                          LINE : 00001    !
!    ************************************************************          !
!    * 11:47:39     START OF JOB5701       PCVMARC                *         !
!    ************************************************************          !
!    *                                                            *         !
!    * 11:49:12     PROGRAM COMPILATION    JIE020     RET CODE: 0012 *       !
!    *                                                            *         !
!    ************************************************************          !
!    * 11:51:08     END OF JOB5701         PCVMARC                *         !
!    ************************************************************          !
!                                                                            !
!            ********************************************                    !
!            *   JIE020 JIE020      P.C. FILE FOLLOW UP     *                 !
!            ********************************************                    !
!                                                                            !
!----- IDENTIFICATION DIVISION                                               !
!                                                                            !
!E- SUPMAP SPECIFIED AND E-LEVEL DIAGNOSTIC HAS OCCURRED. PMAP CLIST LOAD DECK !
!  IGNORE                                                                    !
!                                                                            !
!                                                                            !
!*** END ***                                                                 !
!O: C1 CH: JOB5701                                  PURGE (NUMBER) :         !
--------------------------------------------------------------------------------
```

7. ADDITIONAL ON-LINE FUNCTIONS

7.1. PRELIMINARY NOTE

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.

7.2. BRANCHING TO AN ENTITY

BRANCHING TO AN ENTITY

Automatic branching to an entity is possible from the following screens:

.Lists (including Word Search screen lists),
.Call of an entity by another entity (-Cx),
.Entity cross-references (-Xx).

Automatic branching to an entity is executed by:

.Positioning the cursor on the desired entity line,
.and pressing a PFkey (standard: PF10).

For the first two types of screens, automatic branching is to the Entity Definition screen. From the entity cross-reference screen, automatic branching is to the screen on which the cross-reference was created.

7.3. BRANCHING TO DOCUMENTATION

BRANCHING TO DOCUMENTATION

Some entity descriptions call other entities whose call lines may be commented via General Documentation lines, in particular the descriptions of:

.Segments (-CE),
.Database blocks (-DH, -DC, -DR, -DT),
.Model objects or relationships (-CM, -CE).

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

The user may want to consult the General Documentation. This can be done by either entering an explicit CHOICE (for example: S FF36 CE200G) or by:

.positioning the cursor on the desired line,
.and pressing 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 General Documentation of the entity on which the cursor is positioned.

EXAMPLE

From the 'LCP' screen, the user can access the General Documentation 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').

7.4. OTHER BRANCHING OPERATIONS

OTHER BRANCHING OPERATIONS

DATA STRUCTURE CALLS

The description of a batch program includes a list of data structures used in the program (Program Call of Data Struc- tures (-CD) screen).

When a branching operation using the PFkey for branching to General Documentation is executed on this screen, the screen obtained is the ZOOM facility (-HCD) for the data structure on which the cursor is positioned.

'-TC' and '-PG' SCREENS

PF9 (standard) allows the user to branch between the Procedures Generated (-PG) and the Titles and Conditions (-TC) screens.

If the site is equipped with the CICS monitor, the PF8 key (standard) allows the user to redisplay the Titles and Conditions (-TC) screen starting from the cursor position.

7.5. STANDARD 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 corresponding subchapter in chapter "DATABASE MANAGEMENT").

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	Inhibits implicit udpates
PF8	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 General Documentation ('G)
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 (See also chapter "ON-LINE ACCESS LANGUAGE", subchapter "ACCESS TO THE HELP DOCUMENTATION").

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

8. GENERATION AND/OR PRINTING

8.1. INTRODUCTION

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.

NOTES:

Verification of requests

While the System will prohibit the user from entering invalid commands, it does not reject command requests that will result in duplicate information (such as having both a request for a description of all data structures and a request for a description of one particular data structure).

The user must therefore verify that the commands entered are not redundant. Additionally, 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).

8.2. ON-LINE REQUESTS

ON-LINE 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, four different input in the OPERATION CODE field provide four different screen formats.

. ENTERING AND STORING COMMANDS

The various GP commands are entered and stored using screen format 'C1'. Only those commands which are validated before execution are taken into account (see point 'Validation' below).

NOTE:

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

aa = sequence order for printing reports,
bbbb = command for print request,
ccccccc = entity code.

If you do not enter any sequence order for printing reports or if the command for print request contains less than 4 characters, you must replace the missing characters by as many & (ex: GP&&DCP&AAAA).

. SUBMISSION JCL

JCL commands are entered and stored using screen format 'C4'.

The submission JCL is specific to each user. It is written just once and can be accessed from any library. This JCL is used to start execution of the GPRT procedure and to transmit the validated commands.

This JCL is structured as follows:

- the code 'JCL' is entered in the COMMAND FOR PRINT REQUEST field,
- line numbers are entered in the ENTITY CODE field and are sequenced as follows:

  All validated JCL lines whose line number is less than 60,000 will appear at the beginning of the job stream; JCL lines whose line number is equal to or greater than 60,000 will appear at the end of the job stream and will follow the validated Commands for Print Requests.

- The actual JCL 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 desired GP Commands are validated using screen format 'C1'.

All commands must be validated before execution of the GPRT procedure. This is done by entering a "V" in the VALIDATION OF COMMAND REQUEST field. The commands are automatically deactivated after submission. Only validated JCL lines are taken into account during execution. Validated JCL lines remain validated. (Refer to subchapter "GENERATION AND PRINT COMMANDS / GP SCREEN").
If a value other than 'V' is entered, the validation field will be blanked out, and the job will not be submitted.

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

The 'C3' screen format displays all entries (validated or not) on both the 'C1' and 'C4' screen formats.

NOTE:

To directly access a specific line of the 'C2' or 'C3' screen format, enter:
GPaabbbbccccc, with
aa = sequence order for printing reports,
bbbb = command for print request,
ccccc = entity code.
If you do not enter any sequence order for printing reports or if the command for print request contains less than 4 characters, you must replace the missing characters by as many & (ex: GP&&DCP&AAAA).

The 'C4' screen format displays the JCL lines necessary to submit a GPRT request.

. JOB SUBMISSION

In order to submit a GPRT request, 'JOB' or 'SUB' must be entered in the JOB SUBMISSION REQUEST field of the GP screen (C1, C2, C3 or C4). The two are equivalent, except under IMS, where 'JOB' will allow the user to follow the execution of a job, whereas 'SUB' will not. (See chapter "CHOICE: ACCESS COMMANDS", subchapter "SPECIAL CHOICES: IMS VERSION").

COPY OF EXISTING JCL LINES

This functionality is only available to those users with a level '4' authorization, generally the Database Administrator.

The userid in the USER CODE field may be overridden with another user code so that the JCL lines can be copied to the recipient user code.

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.

8.3. REQUEST STRUCTURE

REQUEST STRUCTURE

The GPRT command consists of a three-charater code (four- character code for some Model entities of the PACMODEL func- tion).

The first character identifies the nature:

. 'L' : List entities.

. 'D' : Description of the entities, including the defini- tion, 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 "U" or "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 (value 'blank' in the SELECTION OF KEYWORD TYPE selects both implicit and explicit keywords; value 'L' selects implicit keywords only; value 'M' selects explicit keywords only).

N - By Name.

T - By Type.

The third character is the entity type:

B	Database Block
D	Data Structure
E	Data Element
F	User Entity
I	Parameterized Input Aid
K	Keyword (Thesaurus)
MC	Functional Integrity Constraint
MO	Model Object
MP	Model Property
MR	Model Relationship
O	On-line Screen
P	Program
Q	User-Defined Relationship
R	Report
S	Segment
T	Text
U	User Manual
V	Volume
$	User Entity Occurrence

SPECIAL COMMANDS

. FLx : Flow control card (x = entity type) (see subchapter "OPTIONAL CONTROL CARDS").

. JCL : Allows the user to set up the GPRT on-line submission JCL (see subchapter "ON-LINE REQUESTS").

. UPC : transformation of lowercase characters into uppercase characters for printers which do not support lowercase.

The complete list describing all of the GPRT request commands appears in subchapter "GENERATION AND PRINT COMMANDS / GP SCREEN".

NOTE

Sometimes parameters are necessary. Parameters can be introduced in two places:

. in pre-formatted fields, with the command code,

. on a continuation line, by placing the asterisk ('*') in the CONTINUATION LINE field.

The presentation options and any possible parameters are indicated for each GPRT request command in subchapter "GENERATION AND PRINT COMMANDS / GP SCREEN".

PRINTING BY KEYWORD

To obtain a printout by keyword, enter a 'K' as the second character of the command. In this case, after the line has been created, a 'continuation' line is automatically displayed. The user can enter on this line the keyword(s) for which a printout is desired.

Furthermore, the print name contains a slection field in which the user can specify whether the selection is to be made:

. On the whole set of keywords (SPACE),

. On the keywords automatically derived from the name (L),

. On explicit keywords (M).

8.4. OPTIONAL CONTROL CARDS

OPTIONAL CONTROL CARDS

With most hardware, it is possible in the GPRT procedure to also submit compilation and link-edit procedures for generated entities in the job stream.

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 a User Parameter file (AP) which is managed by the Database Administrator (see Operations Manual - Part II "Batch Procedures: Administrator's Guide", chapter "Database Management Utilities", subchapter "PARM: Update of User Parameters"). A list of the available control card sets may be viewed on the "List of Control Cards" screen (CHOICE: CH: LCPC) in the Management of User Parameters.

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:

. on 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 the programs in the library.

. on the Program, On-Line Screen, or Database Block Definition screens to override the defaults if necessary.

. On the flow control card 'FLx' or generation 'GCx' commands. This override applies to the current run only.

The order of precedence is as follows:

- the FLx or GCx command,

- the Program, On-Line Screen or Database Block Definition screen,

- the Library Definition screen.

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 FLx or GCx command using the format 'n=xxxxxx', where:

. 'n' represents the number of the parameter,

. 'xxxxxx' represents the value assigned to the parameter (maximum: 36 characters).

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

NOTE

The On-Line Screen entity serves to generate both the on-line program and the screen map. The user has the possibility to suppress the generation of the screen map by coding a '$' character as one of the control card codes (refer to the descriptions of the CARDS IN FRONT/BACK MAP below).

8.5. GENERATION AND PRINT COMMANDS / GP SCREEN

```
  ------------------------------------------------------------------------------
  !                      APPLICATION DEVELOPMENT        SG000008.LILI.CIV.1583  !
  !GENERATION AND PRINT COMMANDS                            USER: 21 SG000008  !
  !1 2  3   4        56 7 8 <-------------------- 9 AND 10 ------------------>   !
  !A SO COM ENTITY : OP V C CONTINUATION OF REQUEST                              !
  !     LKP        : C1   * LIST OF PROGRAMS RELATED BY KEYWORDS        SEL:_    !
  !                :        ---------------------------------------------- 17   !
  !     UPC        : C1     SHIFT TO UPPERCASE    MANUAL:_ DOC:_ ERROR MESS:_    !
  !                :                                      13    14           15   !
  !  90 FLP        : C1     PROGRAM JOB CARD / JOB DELIM  ENV: _ (CCF:_ CCB:_)   !
  !                :                                                 13    15   !
  !  90 GCP PA10FL : C1     SOURCE CODE FOR SELECTED PROGRAM     (CCF:_ CCB:_)   !
  !                :                                                13    15   !
  !  90 GCP PA20PA : C1     SOURCE CODE FOR SELECTED PROGRAM     (CCF:_ CCB:_)   !
  !  90 GCP PA30AR : C1     SOURCE CODE FOR SELECTED PROGRAM     (CCF:_ CCB:_)   !
  !  91 FLO        : C1     SCREEN JOB CARD / JOB DELIM   ENV: _ (CCF:_ CCB:_)   !
  !  91 GCO DO0000 : C1     SCREEN'S PGM AND MAP SOURCE CODE   (CCF:__ CCB:__)   !
  !                :                                          13-14   15-16  !
  !  96 PCV VOLUME : C1     PRINT VOLUMES BY CHAP / SUBCHAP AND CODE: _ __ __    !
  !                :                                              18 19 20     !
  !                :                                                           !
  !*** END ***                                                                  !
 2                                      11
+ !O: C1 CH: GP                      JOB:                                      !
  ------------------------------------------------------------------------------
```

GENERATION AND/OR PRINTING 8
GENERATION AND PRINT COMMANDS / GP SCREEN 5

```
--------------------------------------------------------------------------------
!                      APPLICATION DEVELOPMENT        SG000008.LILI.CIV.1583  !
!VALID GENERATION AND PRINT COMMANDS                        USER: SG000008     !
!                                                                              !
!A SO 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:                                    !
--------------------------------------------------------------------------------
```

GENERATION AND/OR PRINTING 8
GENERATION AND PRINT COMMANDS / GP SCREEN 5

```
--------------------------------------------------------------------------------
!                      APPLICATION DEVELOPMENT        SG000008.LILI.CIV.1583  !
!GENERATION AND PRINT COMMANDS                              USER: SG000008     !
!                                                                              !
!A SO COM ENTITY : OP V C CONTINUATION OF REQUEST               : LIB SESSI   !
!     JCL 000000 :    V   //PSTSG8 JOB (634,CGI46808),SG8,CLASS= :             !
!     JCL 000020 :    V   //   EXEC ZA73GPRT,ROOT=LI,FILE=LI,OUT :             !
!     JCL 000030 :    V   //   LOADTP='PST.CICS.LINKLIB',OUTL=R, :             !
!     JCL 000040 :    V   //   INDUV='PST',INDSV='PST',INDSN='PS :             !
!     JCL 000045 :    V   //   STEPLIB='PST.PAC73.MBR7',         :             !
!     JCL 000050 :    V   //   LOADBA='PST.BATCH.LINKLIB'        :             !
!     JCL 600100 :    V   //PAC.PAC7SC DD DSN=PST.LILISCA,DISP=S :             !
!     JCL 600200 :    V   //PAC.PAC7SG DD DSN=PST.LILISGA,DISP=S :             !
!  90 FLP        : C1     PROGRAM JOB CARD / JOB DELIM  ENV: _ ( : ITF         !
!  90 GCP PA10FL : C1     SOURCE CODE FOR SELECTED PROGRAM     ( : ITF         !
!  90 GCP PA20PA : C1     SOURCE CODE FOR SELECTED PROGRAM     ( : ITF         !
!  90 GCP PA30AR : C1     SOURCE CODE FOR SELECTED PROGRAM     ( : ITF         !
!  91 FLO        : C1     SCREEN JOB CARD / JOB DELIM   ENV: _ ( : ITF         !
!  91 GCO DO0000 : C1     SCREEN'S PGM AND MAP SOURCE CODE   (CC : ITF         !
!  91 FLO        : C1     SCREEN JOB CARD / JOB DELIM   ENV: V ( : SG8         !
!  91 GCO PA0030 : C1     SCREEN'S PGM AND MAP SOURCE CODE   (CC : SG8         !
!  91 GCO PA8888 : C1     SCREEN'S PGM AND MAP SOURCE CODE   (CC : SG8         !
!               :                                                              !
!UPDATE INHIBITED WITH THIS DISPLAY TYPE                                       !
!O: C3 CH: GP                          JOB:                                    !
--------------------------------------------------------------------------------
```

GENERATION AND/OR PRINTING 8
GENERATION AND PRINT COMMANDS / GP SCREEN 5

```
--------------------------------------------------------------------------------
!                      APPLICATION DEVELOPMENT        SG000008.LILI.CIV.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	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE
2	2		SEQUENCE ORDER FOR PRINTING REPORTS This field is used to specify the sequence in which the requested reports selected by the user will be printed. Sub-reports of a standard report are printed in a pre-determined order which cannot be modified.
		blank	The output of description and list request commands will be printed in the sequence in which they are entered.
		A - 99	The standard reports will be sorted and printed according to this value. For specific requests for generation of entities, or printing of user manuals or volumes, the System automatically groups the following entity types together and assigns the following values for the printing order:
		90	Programs
		91	Screens
		92	Database blocks
		93	User manuals
		94	Error messages
		95	Data structures
		96	Volumes (PDM facility) NOTE: If the user attempts to modify these values, the system will ignore it without issuing an error message.
3	4		COMMAND FOR PRINT REQUEST 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 mode col. 9) (B) Optional entity code input. If omitted, all occurrences of the entity type are listed in the user's hierarchical view. (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 by placing an asterisk in the CONTINUATION OF REQUEST INDICATOR (C) field and pressing the ENTER key. What may be entered on this line depends on the command;

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			the user is instructed below on what options are possible. This corresponds to batch columns 31 to 80 inclusive. NOTE: Each command has different requirements with respect to the type of additional information to be supplied. Values may be entered here, or left blank for the default. The following list identifies by code the information expected for each command: (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 by entering '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. The codes must be consistent with the codes displayed on the Dialogue 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 Dialogue Definition. 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. (7) PRINT VOLUME BY CHAP/SUBCHAP AND CODE:_ __ __

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			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. TEXTS ---
		DCT	(B) A complete description of the text(s), including the relation of the text(s) with other texts and a list of paragraphs and their relation with other paragraphs. The information is sequenced by text code.
		L*T	List of Texts and paragraphs titles.
		DTT	(6) Description(s) of texts of the type specified. See the DCT command.
		LCT	(C) A list of texts, sequenced by text code.
		LKT	(2) A list of the texts whose names and/or explicit keywords contain the keyword(s) specified.
		LTT	(6)

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			A list of texts whose type codes have been defined as specified. A list of all paragraph titles sequenced by text code.
			VOLUMES -------
		FLV	(C) (D) (4) This command is used to specify the job card and end-of-job delimiters: Flow control for volumes. Use the continuation line to define user parameters on the control cards.
		LCV	(C) List of Volumes, sequenced by code.
		LKV	(C) (2) List of Volumes selected according to the key word(s) entered on the continuation line.
		DCV	(B) Printing of the description of the Volume whose code is entered in the Entity field. When this code is not entered, the descriptions of all the Volumes are printed, sequenced by code.
		PCV	(B) (D) (7) Printing of the contents of the Volume whose code is entered in the Entity field. When this code is not entered, the contents of all the Volumes are printed, sequenced by code. For local printing in RTF format, the Volume must be generated with the C2 option. Partial printing is documented in the 'Personalized Documentation Manager' Reference Manual, Chapter 'Access Commands', subchapter 'Generation-Print'.
		PCM	Edition of PAF columns related to a method and association between method choice and Pacbase.
			USER MANUALS ------------
		DCU	(B) A complete description of user manual(s). The information is sequenced by user manual code.
		LCU	(C) A list of user manuals, sequenced by user manual code.
		LKU	(2) A list of the user manuals whose names and/or explicit

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			keywords contain the keyword(s) specified.
		PCU	(B) (D: when the entity code has been entered) Print the contents of the user manual(s). To print chapter(s) only, enter the chapter code(s) on the continuation line. (NOTE: the PAGE NUMBERING OPTION value must be 'C' on the User Manual Definition screen.)
			ELEMENTS AND PROPERTIES ----------
		DCE	(B) A complete description of the defined element(s). The information is sequenced by element code. To get assigned text, use print option "2".
		DFE	(B) A listing of the element(s) not defined in the Specifications Dictionary, with cross-references.
		LACE	(C) A list of elements, sequenced by Cobol name.
		LCE	(B) A list of defined elements, sequenced by element code.
		LKE	(C) (2) A list of the elements whose names and/or explicit keywords contain the keyword(s) specified.
		LNE	(C) A list of elements and properties sequenced by element 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-

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			of-job delimiters: flow control of data structures. 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 concerning generation, refer to the chapter corresponding to the 'DICTIONARY' reference manual.
		LCD	(C) A list of data structures sequenced by data structure Code.
		LTD	(C) A list of data structures sequenced by data structure type.
		LPD	(C) A list of data structures sequenced by external name.
		LKD	(C) (2) A list of the data structures whose names and/or explicit keywords contain the keyword(s) specified. SEGMENTS --------
		LCS	(C) A list of segments sequenced by segment Code.
		LKS	(C) (2) A list of the segments whose names and/or explicit keywords contain the keyword(s) specified.
		DCS	(B) (D: when entity code has been entered) (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 with the PACTABLE function, a list of sub-schemas and sub-systems is printed. NOTE: To get the associated text for both the segment and the data structure, use print option "2".

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			INPUT AIDS ----------
		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 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.
		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 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.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		LCB	(C) List of database blocks sequenced by block code.
		LEB	(C) List of database blocks sequenced by external name.
		LKB	(C) (2) A list of the database blocks whose names and/or explicit keywords contain the keyword(s) specified.
		LTB	(C) (6) A list of database blocks whose block types have been defined with the specified value.
		LTS	(C) A list of SQL objects sequenced by code.
		LES	(C) List of SQL objects sequenced by external name.
			SCREENS -------
		DCO	(A) A complete description of the dialogue or screen specified including information from the dialogue complement screen, and uses of the screen in other screens. For screens, information is also provided on relevant segments, macro-structure calls, beginning insertions modifications, work areas and structured code. Note: To get the associated text, use print option "2"
		FLO	(C) (D) (4) (8) This command is used to specify the job card and end-of-job delimiters: Flow control for screens. Use the continuation line to define user parameters on the control cards.
		GCO	(A) (D) (5) Generate a COBOL description of the screen specified. Use the continuation line to define user parameters on the control cards.
		LCO	(C) A list of the screens sequenced by screen code.
		LNO	(C) A list of the screens sequenced by type.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		LPO	(C) A list of the screens sequenced by external program name.
		LSO	(C) A list of the screens sequenced by external map name.
		LKO	(C) (2) A list of screens whose names and/or explicit keywords contain the keyword(s) specified.
		LTO	(C) List of Screens sequenced by transaction code.
		DGC	(A) A complete description of a C/S Screen.
		DGS	(A) A complete description of a Business Component.
		GGC	(A) (D) (5) Generate a C/S Screen.
		GGS	(A) (D) (5) Generate a Business Component.
		GVC	(A) (D) (5) Generate a Proxy Logical View (from Business Comp.).
		FGC	(C) (D) (4) (8) This command is used to specify the job card and end-of-job delimiters: Flow control for C/S Screen.
		FGS	(C) (D) (4) (8) This command is used to specify the job card and end-of-job delimiters: Flow control for business component
			REPORTS -------
		DCR	(B) (D: when the entity code has been entered) NOTE: When requesting the description of a single report, enter the data structure code in the ENTITY CODE field and the last character of the report code on the continuation line. A complete description of the report(s). This includes report layouts. The information is sequenced by the report code. Note: To get the associated text, use print option "2"
		LCR	(C)

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			List of reports sequenced by Report Code.
		LTR	(C) List of reports sequenced by Type.
		LKR	(2) A list of the reports whose names and/or explicit key-words contain the keyword(s) specified.
			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"
		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 engineer-ed" programs. Use the contiuation 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 on the control cards.
		GSP	(A) (D) (4) Generate a COBOL description of the "reverse engineer-ed" 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".
		LTP	(C) List of programs sequenced by type.
		LEP	(C) List of programs sequenced by external name.
		LKP	(2) A list of the programs whose names and/or explicit keywords words contain the keyword(s) specified.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		DSP	(S) Description of the selected Program produced by REVERSE ENGINEERING.
			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 Relationship(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 Relationships with their Functional Integrity Constraints, sequenced by Relationship code.
		LKM	(C) (2) A list of the Method entities whose names and/or explicit keywords contain the keyword(s) specified.
		PCM	Printing of user entities description for a method
			USER ENTITIES ----------
		DCF	(B) A complete description of the User Entity(s). The information is sequenced by User Entity code.
		DCQ	(B) A complete description of the User-Defined Relationship. The information is sequenced by Relationship code.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		DC$	(B) A complete description of the User Entity Occurrence(s). The information is sequenced by user entity type code.
		LCF	(C) List of User Entities sequenced by code.
		LCQ	(C) List of User-Defined Relationships sequenced by code.
		LC$	(C) List of User Entity Occurrences sequenced by User Entity type code.
		LK$	(2) (A) A list of the User Entity Occurrences whose names and/or explicit keywords contain the keyword(s) specified.
		LKF	(2) (C) A list of the User Entities whose names and/or explicit keywords contain the keyword(s) specified.
		LKQ	(2) (C) A list of the User-Defined Relationships 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 by VisualAge Pacbase. ERROR MESSAGES ----------
		FLE	(C) (D) (4) This command is used to specify the job card and end-of-job delimiters: Flow control for error messages. Use the continuation line to define user parameters on the control cards.
		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.
		LED	(A)

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			List the error messages defined for the data structure and for each segment. This list only includes messages that have already been generated.
		LEO	(A) List the error messages defined for the dialogue and for each screen. This list only includes messages that have already been generated.
		GEC	(A) (D) C/S Facility: 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 defined for the Client Dialog only.
		GED	(A) (D) C1 : Error messages generated for a Data Dtructure 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. C2 : Error messages generated through option 1 plus documentary help messages. C3 : Error messages for the Dialog only. C4 : Creation of the file containing the description of the screens to be "revamped" with Pacbase Web Connection. This command is used on a Client Dialog. NOTE: If a segment/screen suffix is entered on the continuation line of one of the four preceding commands, the error messages are generated/printed only for this segment/screen.
			JCL INTRODUCTION ---------- The JCL command can only be entered in the 'C4' screen format option.
		JCL	This indicates that the COMMAND LABEL/SYSTEM RESPONSE field will contain JCL.
			SHIFT TO UPPERCASE ----------
		UPC	This command allows for the automatic transformation

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			of lowercase into uppercase 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 PACBASE 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 User Manuals (U) or 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 for the selective implementation of the UPC command when the execution of several GPRT jobs is requested and the SHIFT TO UPPERCASE must not apply to all of them, in which case the corresponding field(s) must be left blank. JOB STREAM CARDS ----------
		FGC	Stream check: C/S screen
		FGS	Stream check: Business Component
		FLO	Stream check: Screens
		FLS	Stream check: SQL relational Database Blocks
		FLB	Stream check: Database Blocks
		FLD	Stream check: Data Structures
		FLP	Stream check: Programs
		FSP	Stream check: Programs from REVERSE ENGINEERING
		FLV	Stream check: Report
		FLE	Stream check: Error Messages
4	6		ENTITY CODE This field is displayed with the label "ENTITY" on screen format options "1", "2" and "3" of the GP screen. When required, the user enters the entity code which corresponds to the COMMAND FOR PRINT REQUEST.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			On the screen format option "4" of the GP screen, this field is displayed with the label "LINE". The JCL lines will be sorted according to the number entered in this field.
		<600000	JCL lines at the beginning of the job stream.
		>599999	JCL lines at the end of the job stream.
			OPERATION CODE
5	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 ASSIGNED 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.
6	1		PRINT OPTION This field does not appear on the "C4" screen format option. Used to indicate that sub-reports be included.
		1	Default
		2	Add Associated Text to the output, depending upon the value entered in the COMMAND FOR PRINT REQUEST. See the specific Command for Print Request.
7	1		VALIDATION OF COMMAND REQUEST This field does not appear on the "C2" screen format

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			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.
8	1		CONTINUATION OF REQUEST INDICATOR
		blank	No continuation line is requested.
		*	A continuation line is requested (or displayed) for this GP command. For some spcific generation-print requests, this field is automatically filled by VA Pac (for instance when requesting by keywords). You must then fill the print label continuation line yourself. NOTE: Up to five lines are allowed in a GPRT command: the actual command line and four continuation lines.
9	50		COMMAND LABEL / SYSTEM RESPONSE This field has three functions: - With screen format option "1", the system uses this field to display a system response line which is the label for the COMMAND FOR PRINT REQUEST entered. - With certain commands the user is asked to enter additional information. Also see the SYSTEM RESPONSE REQUEST and CONTINUATION LINE fields. - With the 'C4' screen format option, the user can enter JCL lines, which will or will not be taken into account, depending on the value entered in the VALIDATION OF COMMAND REQUEST field.
10	50		CONTINUATION LINE This line is displayed on-line. It represents columns 31 through 80 on Batch Form 'Z'. This line has several functions: - To specify keywords (see COMMAND FOR PRINT REQUEST field, note (2)). - To specify the Screen code within a Dialogue, the last character of the Report code within a Data Structure, or the Segment code within a Data Structure.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			- To specify the user parameters on control cards. See the USER'S Reference Manual, chapter "GENERATION AND/OR PRINTING", subchapter "ON-LINE REQUESTS".
11	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 generation 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.
			SYSTEM RESPONSE REQUEST The following fields appear in the COMMAND LABEL/ SYSTEM RESPONSE field only on the 'C4' screen format option for certain Commands for Print Request. They prompt the user for additional input depending on the command entered.
12	2		TYPE TO SELECT A. TYPE TO SELECT (2-character field): Used to specify the type of text or database block when requesting a list or description sorted by type: LTT, DTT, LTB, DTB. B. FORMAT TO SELECT (1-character field): Used to specify the segment format when entering a DCS command.
		blank or C	Printing of data related to validations and updates performed by user programs on the segment's data elements. In addition, internal and input formats are printed.
		E	Input format only.
		I	Internal format only.
		R	Validations, updates, relational names.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		S	Output format only.
13	1		CARDS IN FRONT PGM/UPPERCASE SHIFT PROGRAM GENERATION ---------- 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. NOTE: This value may be overridden on the various entity definition screens. Also see subchapter "OPTIONAL CONTROL CARDS UPDATING", chapter "DATABASE MANAGEMENT", OPTION CODE field in the USER'S Reference Manual. BATCH INPUT MODE: SHIFT TO UPPERCASE FOR USER-DEFINED DOCUMENTATION ---------- User Manuals ('U' entity) and Volumes ('V' entity) are printed in uppercase characters with the UPC command.
		1	YES.
		0	NO (Default option).
14	1		CARDS IN FRONT MAP/UPPERCASE SHIFT SCREEN GENERATION ---------- The one-character code that identifies the job card to be inserted before each generated screen map. This code is entered on the Dialogue or Screen Definition screen and may be overridden here. Also see: OPTION CODE and INPUT PARAMETERS fields in the "OPTIONAL CONTROL CARDS UPDATING" subchapter, "DATABASE MANAGEMENT" chapter in the USER'S Reference Manual.
		$	No generation of map. (Use this value in conjunction with the CONTROL CARDS IN BACK OF MAP field.) BATCH INPUT MODE: SHIFT TO UPPERCASE FOR ENTITY-RELATED GPRT REQUESTS ---------- The output of entity-related GPRT requests is printed in uppercase characters with the UPC command.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		1	YES.
		0	NO (Default option).
15	1		CARDS IN BACK PGM/UPPERCASE SHIFT PROGRAM GENERATION ---------- 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 NOTE: This value may be overridden on the various entity definition screens. SHIFT TO UPPERCASE FOR ERROR MESSAGE PRINT-OUTS ---------- Error messages are printed in uppercase characters with the UPC command.
		1	YES.
		0	NO (Default option).
16	1		CONTROL CARDS AFTER MAP The one-character code that identifies the job card to be inserted after each generated screen map.
		$	No generation of map.
17	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.
18	1		VOLUME SELECTION FOR PRINTING
		blank	Print the whole volume.
		C	Print the selected chapter.
		S	Print the selected subchapter.
19	2		CODE OF THE CHAPTER TO BE PRINTED Code of the chapter to be printed, or the chapter that contains the subchapter to be printed.
20	2		CODE OF THE SUBCHAPTER TO BE PRINTED Code of the subchapter to be printed.
21	8		USER CODE This field is reserved for on-line use.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			It allows the user to initialize JCL lines for a new user. To do so, when the JCL lines are displayed, the user code displayed must be replaced with the code of the new user and the ENTER key must be pressed. Only the Database administrator (authorization level 4) is allowed to copy JCL lines.

9. USER PARAMETER MANAGEMENT

9.1. PRESENTATION

USER PARAMETER MANAGEMENT

The AE and AP files contain data which is external to the Database, but which is necessary to keep the System operational:

```
AE:   -System access keys,
      -User codes and access authorizations, except when the
       site is controlled by a Security System,
      -Text types and their names,
      -Methodology choices,
      -Security system,
      -Association of a PACBASE Database with a DSMS Data-
       base.

AP:   -Fixed parts of standard error messages,
      -Control cards necessary for generation.
      -Special characters for keywords management.
```

The user may update these files by running the PARM batch procedure (see the corresponding Operations Manual) or by accessing the user parameter management on-line screens.

The user may consult or update the AE and AP files on-line using a series of screens accessed with the PARM/PEI (xxEE) transaction, where 'xx' is the root of the Database.

For example, if the database transaction is 'PB00', the PARM/PEI transaction would be 'PBEE'.

When the user enters the 'xxEE' transaction, an initial screen is displayed (similar to the Sign-on screen) on which the user enters the following information:

.User code,

.Password,

.The Database root,

.A CHOICE command.

A set of menus (CH: HP) guide the user through the possible operations. The CHOICE field also allows the authorized user to access the various screens for consultation and/or update.

Updating is conditioned by a level 2, 3 or 4 authorization.

ACTION CODES

The following ACTION CODES can be used on input screens:

.Blank = implicit creation or modification,
. 'B' = multiple deletion on control cards and users,
. 'C' = explicit creation of a line,
. 'D' = deletion of a line.
. 'M' = explicit modification of a line,

FUNCTION KEYS

With systems whose hardware supports the use of function keys, update of user parameter screens is the same as the update of screens. The only difference is that some CHOICE commands and Operation Codes are not applicable for update of user parameters.

Function key assignment is detailed in the chart below. This assignment cannot be modified.

PFKEY	ASSIGNMENT
PF01	Not used
PF02	Not used
PF03	Not used
PF04	Screen documentation request
PF05	Return to general menu, equivalent to CHOICE 'H'
PF06	Return to the initial screen
PF07	Inhibit implicit Action Code
PF08	Data element documentation request
PF09	Not used
PF10	Call of the entity on which the cursor is positioned (from LCPC and LCPU lists) Call of the list on which the cursor is positioned (from PC and PU screens)
PF11	Not used
PF12	Exit current conversation

NOTE: User parameters may also be updated with the PARM batch procedure. For further information on this procedure, refer to the Operations Manual.

USER PARAMETER MANAGEMENT 9
PRESENTATION 1

```
--------------------------------------------------------------------------------
!                            MANAGEMENT OF USER PARAMETERS           PDGEN.D7  !
!                                                                              !
!                         *** MENU ***          ASSOCIATED CHOICE              !
!                                                                              !
! LIST OF CONTROL CARDS.............:          LCPC..         LOC & OPT        !
! LIST OF USER CODES................:          LCPU........   USER CODE        !
! LIST OF METHODS...................:          LCPM..         E/F AND METHOD   !
!                                                                              !
! PACBASE PROGRAMS IDENTIFICATION...:          PD                              !
! OPTIONAL CONTROL CARDS UPDATING...:          PC....         LOC & OPT & LINE!
! TEXT TYPES UPDATING...............:          PT.            E OR F           !
! STANDARD ERROR MESSAGES UPDATING..:          PE.            E OR F           !
! UPDATE OF USER PARAMETERS.........:          PU........     USER CODE        !
! ACCESS KEYS UPDATING..............:          PK                              !
! UPDATE OF SPECIAL CHARACTERS......:          PW.            CHARACTER        !
! UPDATE OF METHOD CHOICES..........:          PM.....        E/F METH. CHOI.  !
! PACBASE ASSOCIATED DSMS DATABASE..:          PB....         DATABASE CODE    !
!                                                                              !
! MANAGEMENT OF USER PARAMETERS MENU:          HP                              !
! BACK TO GENERAL MENU..............:          H                               !
! SIGNOFF...........................:          FT                              !
!                                                                              !
!                                                                              !
! CH: HP                                                                       !
--------------------------------------------------------------------------------
```

9.2. OPTIONAL CONTROL CARDS UPDATING

OPTIONAL CONTROL CARDS UPDATING

Generated job streams of batch or on-line programs, or database descriptions may include the job control card sets necessary for subsequent processing such as program assembly, compilation or link-edit.

NOTE: A job stream is made up of several programs of a given type (batch or on-line program, screen, or database description). It is generated by the system for a specific user, at a given session and from a particular library.

Job control card sets have a two-fold purpose:

. They are used to separate two programs, screens or database descriptions,

. They control the execution of procedures necessary for processing the job stream.

Job control card sets can be placed at different levels in the job stream:

. At the beginning of the generated job stream,
. Just before a program, screen or database description,
. Immediately following a program, screen or database description,
. At the end of the generated job stream.

Each job control card set is identified by a Type and Option code.

Each optional control card is made up of a line of Job Control Language entered in a format such that certain variable data (such as program code, screen code, library code, etc.) can be parameterized. The parameters are inserted into the optional control card by the System at generation time. (See paragraph "PARAMETERIZING THE CONTROL CARDS").

A job control card set and its title can be updated on the Optional Control Cards Updating (PC) screen. This screen is accessed via CHOICE: CH: PC.. (optional input is the Option Type followed by the Option Code).

It is possible to page through the control card sets by pressing the ENTER key.

A list of all the control card option sets can be viewed on the List of Control Cards (LCPC) screen. They are sorted by type. To select a control card from this screen, position the cursor on the respective line and press PF10.

CALL OF CONTROL CARDS

When a user requests the generation of a program, screen or database description, he/she must call the job control card sets necessary to execute the job stream. They are identified by their Option Code in the User Parameter (AP) file.

The user should enter the appropriate option code values as follows:

- On the Library Definition screen in the fields:

  . CONTROL CARDS IN FRONT/BACK OF STREAM,
  . CONTROL CARDS IN FRONT/BACK OF PROGRAMS.

NOTE: These will be the default values for all the programs in a library.

- On the Program Definition screen, if the default values are not suitable.

- On the On-line Screen Definition screen, if the default values are not suitable.

- On the Database Block Definition screen, if the default values are not suitable.

The user can override these values at generation time by entering the desired values with the job flow (FLx) card or generation (GCx) commands. Such an override applies only to the current execution.

PARAMETERIZING THE CONTROL CARDS

Job control cards are written in JCL, but certain variable data can be parameterized. At generation time, the real value will replace the parameter.

There are two categories of parameters:

. Those which represent values known to the System (for example, generated program code, library name),

. Those which represent values not know to the System (for example, SYSOUT class, time limit, print class, etc.).

There can be five parameters per line. The parameters are represented on a JCL line by the Insertion Reference Character (see description below). This character will replace the variable data in the JCL line.

The five parameters precede the Insertion Reference Character on the JCL line.

At generation time, the Insertion Reference Character is decoded and the system will replace it with the corresponding parameter values:

. The values known to the System are represented by alphabetical characters (see the description of the INPUT PARAMETERS field below),

. The values not known to the System are represented by numeric characters (see the description of the INPUT PARAMETERS field below).

Deletion of lines related to control cards

Wether in on-line or batch mode, specify value B in the action code of the PC screen to delete all the lines related to a given type of control cards.

EXAMPLE

Suppose the user wishes to insert the following control card before all generated programs:

```
**COMPIL  DATE:MM/DD/YY,PROG:PPPPPP,TIME:D,CLASS:C
```

If '-' is the Insertion Reference Character defined by the user, the card has the following pattern:

**COMPIL DATE:-,PROG:-,TIME:-,CLASS:-

The parameters would be entered as follows:

```
"DP12", where:

    ."D" :  Date determined by the System

    ."P" :  Generated Program Code

    ."1" :  The number '1' parameter entered by the user on
            the Generation and Print Commands screen in the
            format "1=D", either at the job stream level
            (FLP) if it is the default option; or, if not,
            at the program level.

    ."2" :  Replacement parameter number '2' in the format
            "2=C", entered in the same way as parameter '1'
            above.
```

The complete JCL displayed on the screen would then be as follows:

```
**COMPIL  DATE:-,PROG:-,TIME:-,CLASS:-         DP12 -
```

USER PARAMETER MANAGEMENT 9
OPTIONAL CONTROL CARDS UPDATING 2

```
--------------------------------------------------------------------------------
!                       MANAGEMENT OF USER PARAMETERS          SG000008.LI    !
!OPTIONAL CONTROL CARDS UPDATING                                               !
!                                1            2                               !
!A   TITLE:                TYPE: A     OPTION: M                              !
!3 4 BEFORE PGM (DO NOT MODIFY)                                               !
!A LN OPTIONAL CONTROL CARD IMAGE                                   C PARM.R   !
!5 6 7                                                               8 -- 13   !
!  1 //- JOB (-),'-',CLASS=-,MSGCLASS=-                              12U34 -   !
!  2 //DEBJOB EXEC PST7DEBT                                                    !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!*** END ***                                                                   !
!CH: PC                                                                        !
--------------------------------------------------------------------------------
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		TYPE OF OPTION (REQ. IN CREATION)
		A	Beginning of generated program job stream.
		D	Before the generated program.
		F	Following the generated program.
		Z	Following the generated program job stream.
2	1		OPTION CODE (REQ. IN CREATION) Identifies optional job control cards. To be specified for: - The 'Front/Back' of the job stream on the Library Definition screen, - The 'Front/Back' program options on the Library Definition screen or the Program Definition screen, - The 'Front/Back' options for the on-line program and for the map on the Screen Definition screen, - The 'Front/Back' block options on the Block Definition screen.
3	1		ACTION CODE
4	73		TITLE (REQUIRED) This title should succinctly describe the function of the set of Optional Control Card Image lines identified by the TYPE OF OPTION/OPTION CODE set. For the codes defined to PACBASE prior to PACBASE release 7.2, the title displayed by the system is: "--> NOT INITIALIZED <--"
5	1		ACTION CODE
6	2	NUMER.	LINE NUMBER (REQ. IN CREATION) BLANCS ET ZEROS EQUIVALENTS
		BLANK	Option title line:
		0 - 99	Title in the "Optional Card Image" field. Lower-case keying accepted.
		NUMERICAL	Optional control card: It is recommended to leave gaps in a line's number sequence in order to make future insertions possible.
7	67		OPTIONAL CONTROL CARD IMAGE The image of the optional control card is written in compressed format. Parameterized information is represented by the INSERTION REFERENCE CHARACTER(S). The last column of this field (67th) is specified with

NUM LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		the label "C". Any value other than blank entered in this column will be generated in column 72 of the control card. This field accepts lowercase characters.
		INPUT PARAMETERS Each of these parameters selects a data element from the internal or source system library:
	A	Library code ('*' entity, 1 to 3 characters).
	B	Source library name ('*' entity, 1-36 characters).
	C	Current date including century (10 characters).
	D	Current date determined by the system, in eight-character format.
	G	Session number of the database when the job runs (5 characters).
	I	DSMS change number
	J	Name of the job initialized by the System (IMS only).
	K	No. of the job initialized by the System (IMS only).
	L	Parameter required for operation of the VA Pac-Endevor Interface. It may also be used to suit user needs. Its purpose is to select the data provided by Pacbase Constants, in the following format: EEntityNomexterBasBibSessTjj/mm/aahh:mm:ssUsercode With: E (1) = Entity type (O, M for Map, P, or B) Entity (6) = VisualAge Pacbase Entity code Nomexter (8) = External name Base (4) = Database code Bib (3) = Library code Sess (4) = Generation session number T (1) = Session status (T or blank) jj/mm/aa (8) = Generation date or mm/jj/aa, according to the format used in the documentation. hh/mm/ss (8) = Generation time Usercode (8) = User code for generation
	N	Sequence number of program in the generated program job stream (2 characters).
	P	External name of generated program, screen or block.
	Q	Class code of generated program (Batch language generator).

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			Dialog code (dialog generator or C/S dialog)
		R	Clear name of generated program, screen, or block (from definition screen).
		S	Code of generated program, screen or block.
		U	User code.
		V	Job stream number (two-digit value), automatically assigned according to the order of execution.
		1 to 9	Numerical values of input parameters will be decoded according to the values on the GENERATION AND PRINT COMMANDS (GP) screen. NOTE: This field accepts lowercase characters.
8	1		INPUT PARAMETER NO.1 Can take any one of the values as defined above. Can take on any of the values defined above as well as numerical values.
9	1		INPUT PARAMETER NO.2 Can take any one of the values defined above. Can take on any of the values defined above as well as numerical values.
10	1		INPUT PARAMETER NO.3 Can take any one of the values defined above. Can take on any of the values defined above as well as numerical values.
11	1		INPUT PARAMETER NO.4 Can take any one of the values defined above. Can take on any of the values defined above as well as numerical values.
12	1		INPUT PARAMETER NO.5 Can take any one of the values defined above. Can take on any of the values defined above as well as numerical values.
13	1		INSERTION REFERENCE CHARACTER This is a given character that will be replaced, in the generated control card, by the values of the input parameter codes. The first occurrence of this character is replaced by the field selected by the first non-blank input param-

NUM LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		eter. Only the first non-blank characters of the field are taken into account. When the first character in the field is blank, insertion reference is suppressed. This is a given character that will be replaced, in the generated control card, by the values of the input parameter codes. The first occurrence of this character is replaced by the field selected by the first non-blank input parameter. Only the first non-blank characters of the field are taken into account. When the first character in the field is blank, insertion reference is removed (except for parameters B and R). The second occurrence of this character is replaced by the field selected by the second non-blank input parameter. This continues through the last occurrence, until the end of the Optional Control Card Image, or until the length of the line is 71 characters. Insertion Reference Characters which have not been replaced, as well as those which correspond to an erroneous input parameter, will remain unchanged.

LIST OF CONTROL CARDS

This list is accessed by entering the following input in the CHOICE field:

```
CH: LCPC..
```

Optional input after LCPC is the Option Type followed by the Option Code.

From this list it is possible to call the 'PC' screen by positioning the cursor on the desired Control Card line and pressing the PFkey PF10.

USER PARAMETER MANAGEMENT 9
OPTIONAL CONTROL CARDS UPDATING 2

```
--------------------------------------------------------------------------------
!                        MANAGEMENT OF USER PARAMETERS          SG000008.LI    !
!LIST OF CONTROL CARDS                                                         !
!                                                                              !
! T O TITLE                                                                    !
! A D FLOW IDENTIFICATION                                                      !
! A M BEFORE PGM (DO NOT MODIFY)                                               !
! D B BEFORE BATCH PROGRAM                                                     !
! D C CICS DEMO PROGRAM                                                        !
! D G BEFORE IMS MAP                                                           !
! D H BEFORE IMS PROGRAM                                                       !
! D K BMS MAP (OLSD GENERATED)                                                 !
! D N BEFORE DBD OR PSB                                                        !
! D X CICS DEMO PROGRAM                                                        !
! F B AFTER BATCH PROGRAM                                                      !
! F C CICS PROGRAM                                                             !
! F G AFTER MAP                                                                !
! F H AFTER PROGRAM                                                            !
! F K BMS MAP (OLSD GENERATED)                                                 !
! F N AFTER DBD OR PSB                                                         !
! Z A AFTER FLOW                                                               !
! Z Z TITLE Z Z                                                                !
!                                                                              !
!*** END ***                                                                   !
!CH: LCPC                                                                      !
--------------------------------------------------------------------------------
```

9.3. PROGRAM IDENTIFICATION

PROGRAM IDENTIFICATION

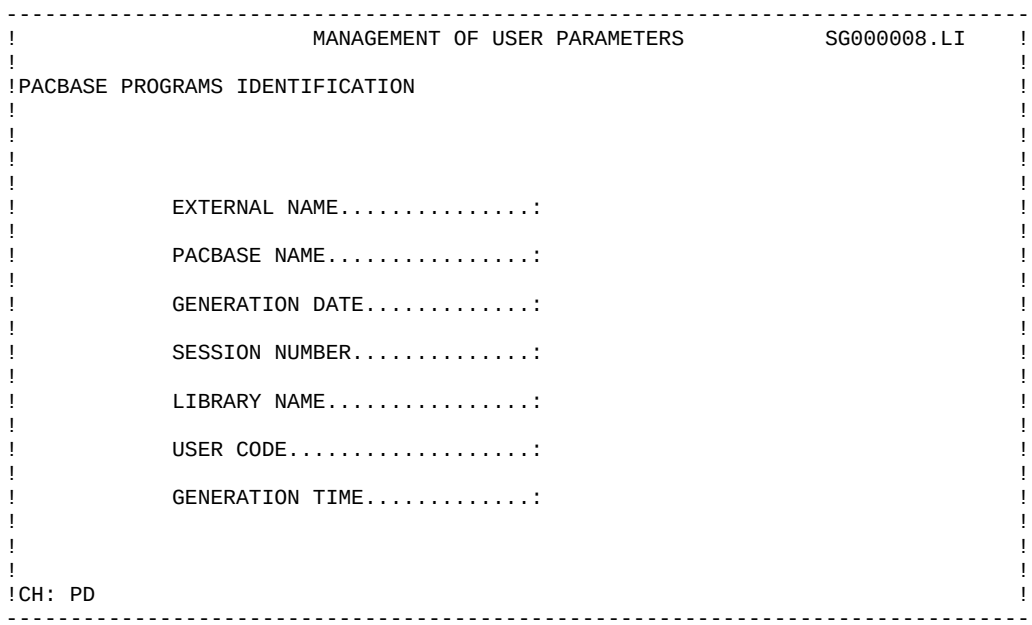
This screen allows the Database Administrator to obtain the references of a System program.

It is accessed with the following input in the CHOICE field:

```
CH: PD
```

The program's external name should be entered, and the System then displays the program's name, generation date, session number, and library name.

NOTE: The Library of Batch Programs must be entered on the CICS JCL lines of the Environment transaction (DFHRPL).


MANAGEMENT OF USER PARAMETERS SG000008.LI
PACBASE PROGRAMS IDENTIFICATION
EXTERNAL NAME.....:
PACBASE NAME.....:
GENERATION DATE.....:
SESSION NUMBER.....:
LIBRARY NAME.....:
USER CODE.....:
GENERATION TIME.....:
CH: PD

9.4. TEXT TYPES UPDATING

TEXT TYPES UPDATING

Each TEXT Definition line in the database contains a TYPE OF TEXT CODE (see the SPECIFICATIONS DICTIONARY Reference Manual).

All TYPE OF TEXT CODE/NAME OF TEXT TYPE sets are stored in the User Parameters file and can be updated on the Text Types Updating Screen, which is accessed by entering the following input in the CHOICE field:

```
CH: PT
```

The update is executed by implicit/explicit creation and modification or standard deletion in this file.

NOTE: If a text type used in the database is deleted, the name assigned to this text type (which will be displayed on Text Definition screens) will become: 'UNKNOWN TYPE'.

USER PARAMETER MANAGEMENT 9
TEXT TYPES UPDATING 4

```
!                       MANAGEMENT OF USER PARAMETERS          SG000008.LI    !
!TEXT TYPES UPDATING       IN ENGLISH                                          !
!1   2       3                                                                !
!A   TYPE    NAME                                                             !
!     ->     -------------->                                                  !
!     AL     INDENTED LINE                                                    !
!     CH     CHAPTER                                                          !
!     CM     COMMENTARY                                                       !
!     CP     STUDY FIELD                                                      !
!     CT     CONSTRAINTS                                                      !
!     DD     DATA                                                             !
!     DG     DIALOGUE                                                         !
!     EC     SCREEN                                                           !
!     ER     EVENT/RESULT                                                     !
!     ET     INPUT                                                            !
!     EV     EVENT                                                            !
!     GE     GENERALITIES                                                     !
!     MC     CONCEPT.PATTERN                                                  !
!     ML     LOGICAL PATTERN                                                  !
!     NR     REALIZ.STANDARD                                                  !
!     NX     OPERAT.STANDARD                                                  !
!     OB     OBJECTIVES                                                       !
!                                                                             !
!CH: PT                                                                       !
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE
2	2		TYPE OF TEXT (REQ. IN CREATION) 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. Default value.
		T	
3	15		NAME OF TEXT TYPE (REQ. IN CREATION) Specify the label to appear with the corresponding Type of Text. NOTE: This label will appear on the Text Definition screen when the corresponding Type of Text is used, and on screens and reports which contain the text. Enter the name to appear with the corresponding Type of Text. This name will appear on the Text Definition screen when the corresponding Type of Text is used.

9.5. ERROR MESSAGE UPDATING

ERROR MESSAGE UPDATING

The System generates standard error messages for batch programs and on-line screens. These messages are made up of two parts:

. a fixed part: the 'nature' of the error message,

. the clear name of the entity to which the error applies.

The first part of the standard error messages can be modified if it is not suitable to a user's needs.

The second part of this error message cannot be modified.

Updating is done on the Standard Error Messages Updating Screen, which is accessed by entering the following input in the CHOICE field:

```
CH: PE
```

If lowercase input is entered on the 'PE' screen, both parts of the message (label and element name) will be displayed in lowercase.

If the user wants the standard error message(s) to be displayed in lowercase, he/she must enter them in lowercase on this screen.

NOTE: Modifications cannot be made for error messages specific to the System. Only error messages related to an application defined in the System can be modified.

Normal default options are taken into account after a record deletion in the User Parameters file.

USER PARAMETER MANAGEMENT 9
ERROR MESSAGE UPDATING 5

```
!                            MANAGEMENT OF USER PARAMETERS       SG000008.LI    !
!STANDARD ERROR MESSAGES UPDATING  IN ENGLISH                                    !
!                                                                               !
!1     2                                                                        !
!A ER  MESSAGE                          STANDARD MESSAGE                        !
!                                                                               !
!  2                                    INVALID ABSENCE FOR THE FIELD           !
!  3                                    INVALID PRESENCE FOR THE FIELD          !
!  4A                                   NON-ALPHABETICAL CLASS FIELD            !
!  4Z                                   NON-NUMERICAL CLASS FIELD               !
!  5                                    INVALID VALUE FOR THE FIELD             !
!  8F                                   INVALID CREATION RECORD                 !
!  9F                                   INVALID DELETE/MODIFY RECORD            !
!  9G                                   END OF LIST                             !
!  DUPL                                 INVALID CREATION RECORD                 !
!  NFND                                 INVALID DELETE/MODIFY RECORD            !
!  END                                  END OF LIST                             !
!  ABSC                                 ABSENCE OF RECORD                       !
!                                                                               !
!                                                                               !
!                                                                               !
!                                                                               !
!*** END ***                                                                    !
!CH: PE                                                                         !
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE
2	30		FIRST PART OF ERROR MESSAGE (REQ. IN CREATION) Enter the message to appear before the erroneous data element name for the corresponding Error Code. Note: This message will be stored in the User Parameter file (AP).
		Blank	Default value with error type code "2": INVALID ABSENCE FOR THE FIELD Default value with error type code "3": INVALID PRESENCE FOR THE FIELD Default value with error type code "4A": This is the constant that will appear in the first part of the standard error message generated by the system. It is stored in the User Parameter file (AP). Default value with error type code "5": INVALID VALUE FOR THE FIELD Default value with error type code "8F": INVALID CREATION RECORD Default value with error type code "9F": INVALID DELETE/MODIFY RECORD Default value with error type code "9G": END OF LIST

9.6. USER PARAMETERS UPDATING

USER PARAMETERS UPDATING

Information on each user (userid, password, library access authorizations) is stored in the User Parameter (PU) file.

User parameters may be consulted and/or updated on the 'PU' screen. This screen is accessed in the Management of User Parameters with the following input in the CHOICE field:

CH: PUuuuuuuuu

Input after 'PU' is the code of the user whose parameters are to be updated.

NOTE: When a Security System is operating on-site, user parameters cannot be managed by the PARM procedure, and cannot be updated on-line, if the resources (libraries) are controlled by the security system.

The list of user codes can be called from the screen 'PUuuuuuuuu' by pressing the PF10 key. The list will be displayed starting with user 'uuuuuuuu'.

NOTE: When the RACF Security System is operating on-site, the LCPU choice is not authorized if the resouces are controlled by the Security System.

NOTE: With PARM, the creation of a new user is forbidden if the total number of users is not equal to the total number of authorized users.

USER CODE AND PASSWORD

REMINDER: Each user is identified by a code and associated password which must be entered in order to access the Database, either on-line or in batch mode.

Passwords cannot be modified on the 'PU.....' screen; they can only be created or deleted on this screen.

A password is modified by its owner on the Sign-On screen (except at sites controlled by a security system).

A user's password is not displayed on the 'PU.....' screen, except for users with a level '4' authorization.

Blanks cannot be used in a password as the system checks for their presence.

PU screens can be used to swap to another user without going through the list again.

ACCESS AUTHORIZATIONS

Library access authorizations are coded as follows:

```
'0': prohibited access
'1': consultation only (current, frozen, and test
     sessions)
'2': '1' + update of current session
'3': '2' + update of test sessions
'4': '3' + database management, which includes:

     - authorization on extracted entities,
     - unlocking and update of locked entities,
     - initializing libraries.
     - update of the Frozen SessionsComment Lines
```

Access authorizations are defined at two different levels:

1. The General Authorization level is a default authorization on ALL libraries of all Pacbase-Paclan-Paclan/X Databases operating on-site.

2. A Library-Specific Authorization is granted in order to qualify (restrict or broaden) a user's General Authorization.

EXAMPLE:

In order to register a new user with a maximum authorization in all libraries except the 'AP1' library (where he/she will have read-only access), the Database Administrator would enter the following input:

.'3' in the GENERAL AUTHORIZATION LEVEL field,

.'1' in the 'AP1' SPECIFIC AUTHORIZATION LEVEL field.

If no value is entered in the GENERAL AUTHORIZATION LEVEL field, only those libraries entered in the SPECIFIC AUTHORIZATION LEVEL field may be consultated/updated by the user.

'Inter-Library' (***) mode access can be indicated in the LIBRARY-SPECIFIC AUTHORIZATION fields.

NOTE: It is recommended to grant a LOW General Authorization and HIGHER Specific Authorizations. This method is simpler and safer than the other way around.

SPECIAL AUTHORIZATIONS

1. AUTHORIZATION TO MANAGE USER PARAMETERS

A special field on the PU screen labelled PARAMETERS AUTH is used to grant a user the authorization to manage other users' parameters.

Several levels of authorizations are available:

```
'0'       :  Access prohibited,
'1'       :  Consultation only,
'2' or '3':  Update,
'4'       :  Update with display of passwords.
```

2. AUTHORIZATION TO MANAGE THE PEI FUNCTION

There are three authorization levels for the management of the Production Environment Interface:

```
'0'       :  Access prohibited,
'1'       :  Consultation only,
'2'       :  Update.
```

A PEI-related authorization is coded using a reserved library code, "$E", entered in the LIBRARY field followed by the relevant authorization level.

3. AUTHORIZATION ON THE PROCEDURES

Global authorization:

```
'0 - 1'   :  No authorization,
'2'       :  Authorization on the EXPJ, EMLD and EMUP
             procedures.
'3'       :  Authorization on the CPSN and ACTI proce-
             dures.
'4'       :  Authorization on the MLIB, REST, SAVE,
             REOR, QREO, STOP, SASN, MESN, INPE, SVPE,
             RSPE, GRPE, ARCH, REAG and SVAG database
             management procedures.
```

The authorizations are checked if the "Batch Procedures Authorization Control" has been activated in the PK screen (refer to Subchpater "ACCESS KEYS UPDATING" in this Chapter) or if it has been explicitely required on record '++SOS' (special record of file AE) by positionning the TOP to 1. This top is positionned by the PARM procedure 'NS' line, in batch only (refer to the OPERATIONS MANUAL for further details).

Authorization on procedure by database (only available at multi-database sites; refer to the OPERATIONS MANUAL):

```
    '0 - 1'   :  No authorization,

    '2'       :  Authorization on the EXLI, EXTR, EXUE
                 TRDQ, PQCE, PQCA, GETA, GETD, RVDE, RVKE,
                 ECSP, PRPE, XPAF and XPDM procedures.

    '3'       :  Authorization on the EXPU, RMEN, EXSN
                 EMSN and SIPE procedures.

    '4'       :  Authorization on the EXPJ procedure.
```

For platforms that do not allow database authorizations, do not take the two authorization types into account.

For platforms that allow database authorizations, if this level is not specified, the system performs the check on the global authorization level.

UPDATING ACCESS AUTHORIZATIONS

To modify a Library-Specific Authorization, enter the new authorization in the SPECIFIC AUTHORIZATION LEVEL field for the corresponding library.

A Library-Specific Authorization is cancelled by entering a zero (0) in the SPECIFIC AUTHORIZATION LEVEL field for the corresponding library.

There is no limit to the number of libraries for which a Specific Authorization can be granted. Each numbered line is actually two screen lines where up to 15 library authorizations can be granted. Additional numbered lines may be entered as necessary.

It is possible to limit Library-Specific Authorizations to a single Database. In other words, different authorizations can be granted for identically coded libraries at multi-base sites.

In order to do this the DATABASE CODE field must be entered. For each Database there is one corresponding numbered line and, if necessary, others can be entered.

NOTE: This facility is available at multi-database sites only (refer to the OPERATIONS MANUAL for more information).

Library code values are not validated by the system. If a given library is entered several times with different authorization levels, only the first one is taken into account.

No consistency validation is performed between the General Authorization Level and the Specific Authorization Levels; for a given General Authorization, one can assign an identical Specific Authorization to one or more libraries.

CANCELLATION OF A USER'S REGISTRATION

To cancel a user's registration in the System, the SPECIFIC AUTHORIZATION lines must first be deleted by entering a 'D' in the ACTION CODE field of each such line, and then a 'D' should be entered in the ACTION CODE field of the USER CODE line.

To delete all the lines related to a particular user, specify action code B in the header of the PU screen.

USER PARAMETER MANAGEMENT 9
USER PARAMETERS UPDATING 6

```
!                       MANAGEMENT OF USER PARAMETERS           SG000008.LI    !
!UPDATE OF USER PARAMETERS                                                      !
!1                        2                              3                     !
!A     USER CODE: SG0000084        PASSWORD:          5                        !
!      NAME:                       COMME6TS:         7                 8       !
!      GENERAL AUTHORIZATION FOR UPDATE:   FOR PARM:   FOR PROCEDURES:         !
!A LIN BASE B PRO SPECIFIC AUTHORIZATION                                        !
!      CODE A AUT LIB L                                                        !
!9 10  11   12 13 14  15                                                       !
!  100 LIL1       BI1 4  ... .   ... .   ... .   ... .   ... .   ... .  ... .  !
!  200 LIL2       AL1 2  AL2 2   AL3 0   AL4 2   AL5 0   AL6 2   AL7 2  AL8 0  !
!                 AL9 0  A10 0   ... .   ... .   ... .   ... .   ... .        !
!  300 LIL4       IB3 4  ... .   ... .   ... .   ... .   ... .   ... .  ... .  !
!                                                                               !
!                                                                               !
!                                                                               !
!                                                                               !
!                                                                               !
!                                                                               !
!                                                                               !
!                                                                               !
!                                                                               !
!CH: PUsg000008                                                                 !
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE
2	8		USER CODE (REQUIRED) Each user must be given a personal user code and associated password. For each user code, the system defines the libraries which can be accessed and the actions allowed (read, update of current session, update of all sessions). The user code is stored for each transaction in the Journal. The management of user codes and access authorizations is the responsibility of the Database Administrator, who can be consulted for information on each user's access authorizations.
3	8		USER PASSWORD The password is associated with a user code. Using blanks between two characters is forbidden. 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.
4	30		USER NAME Name may be entered in lower-case print.
5	15		COMMENTS ON USER This may be entered in lower-case print.
6	1		GENERAL AUTHORIZATION LEVEL This authorization grants access to the Database.
		Blank	No global access authorization.
		0	No global access authorization.
		1	Read-only access authorized for both current and all frozen sessions.
		2	Read-write access authorized for the current session and read-only access for all frozen sessions.
		3	Read-write access is authorized for both current and test sessions. NOTE: This authorization is limited by the provisions of the PROTECTION OF EXTRACTED ENTITIES and MODIFICATION OF EXTRACTED LINES fields on the Library Definition screen of the libraries concerned.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		4	Update is authorized on any session. The provisions of the PROTECTION OF EXTRACTED ENTITIES and MODIFICATION OF EXTRACTED LINES fields on the Library Definition screens are NOT taken into account. Moreover, the administrator has the right to initialize libraries, unlock locked entities, and update frozen-session labels.
7	1	NUMER.	USER-PARAMETER UPDATE AUTHORIZATION This level concerns authorizations for the user-parameter management access.
		Blank	Access prohibited.
		0	Access prohibited.
		1	Read-only access.
		2 or 3	Read-write access.
		4	Administrator's authorization.
8	1		GENERAL AUTHORIZATION ON PROCEDURES
		Blank	No authorization on the batch procedures.
		0	No authorization on the batch procedures (default option in creation)
		2	AUTHORIZATION ON STANDARD EXTRACTIONS Level allowing access to standard extractors.
		3	AUTHORIZATION ON SPECIAL EXTRACTIONS "Project Manager" level: Level granting access to special procedures.
		4	MAXIMUM AUTHORIZATION "VisualAge Pacbase Manager" level: Access to the database management, generation-print and PEI file management procedures. NOTE: This level can be granted for a global authorization only.
9	1		ACTION CODE
10	3	NUMER.	LINE NUMBER
11	4		DATABASE CODE FOR MULTI-DATABASE SITES ONLY. Logical name of the database.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			This code is displayed in the identifier which appears in the top right corner of all screens. It is used to establish the relation between a VA-Pacbase database and a DSMS database. No validity check is performed here.
12	1		DATABASE AUTHORIZATION LEVEL
		Blank	No authorization on the database.
		0	No authorization on the database.
		1	Read-only on current session, Read-only on archived sessions.
		2	Read-write on current session, Read-only on archived sessions.
		3	Read-write on current session, Read-write on archived sessions.
		4	All authorizations.
13	1		BATCH PROCEDURE AUTHORIZATION LEVEL
		Blank	No authorization on the batch procedures.
		0	No authorization on the batch procedures.
		2	AUTHORIZATION ON STANDARD EXTRACTIONS on the database.
		3	AUTHORIZATION ON SPECIAL EXTRACTIONS on the database.
			LIBRARY ACCESS TABLE Two access types may be entered: - Access to a Database library, - Access to the Production Environment Interface (PEI function).
14	3		LIBRARY CODE 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 alphanumeric character can be used. INTER-LIBRARY MODE ----------

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		***	Reserved for selection of all the libraries (referred to as 'Inter-library' mode). This is commonly used when viewing the Database. AUTHORIZATION TO MANAGE THE PEI FUNCTION ----------
		$E	A specific library code has been reserved for the management of the Production Environment Interface function. This library does not have to be defined in the Database and cannot be accessed when you log on normally to the Database. ACCESS TO THE USER PARAMETERS ----------
		$P	This library cannot be accessed when you log on to the Database normally.
15	1	NUMER.	SPECIFIC AUTHORIZATION LEVEL
		0	Access not authorized. However, you can view, from a lower Library, the entities defined in this Library.
		1	Consultation of all sessions.
		2	Consultation of all sessions and update of the current session.
		3	Consultation and update of all sessions. NOTE: This authorization is limited by the provisions of the PROTECTION OF EXTRACTED ENTITIES and MODIFICATION OF EXTRACTED LINES fields (library definition).
		4	Consultation and update of all sessions, authorization to perform 'database' management operations but only within the Library specified in the preceding field. NOTE: The provisions of the PROTECTION OF EXTRACTED ENTITIES and MODIFICATION OF EXTRACTED LINES fields (Library Definition) are NOT taken into account. ACCESS TO PEI FUNCTION ($E):
		1	Consultation only.
		2 3 or 4	Consultation and update.

LIST OF USER CODES

This list is accessed by entering the following in the CHOICE field:

```
CH: LCPUuuuuuuuu
```

The list will be displayed starting with user code 'uuuuuuuu' (optional input).

This list displays the codes of all registered System users and their general authorization level.

The field labeled PARAMETERS AUTH. specifies whether or not a given user has access to manage user parameters. If it is blank, the user does not have this access.

From this list, the Update of User Parameters (PU) screen can be accessed by positioning the cursor on a User line and pressing PFKey PF10.

USER PARAMETER MANAGEMENT 9
USER PARAMETERS UPDATING 6

```
!                        MANAGEMENT OF USER PARAMETERS           SG000008.LI    !
!LIST OF USER CODES                                                             !
!                                                                              !
!    USER    GEN.  PARM  PROC  NAME                                            !
!    CODE    AUTH  AUTH  AUTH                                                  !
!                                                                              !
!  AG          2     2    2    FRANK DURELL                                   !
!  B52         3     3    2    ENOLA GAY                                      !
!  FBI         2     2    2    ELIOT NESS                                     !
!  KGB         2     2    2    YURI POPOV                                     !
!  LMB         3     2    2    SHIRLEY BROWN                                  !
!  MP          4     4    4    ANDREW WHITE                                   !
!  NFL         4     4    4    REBECCA ROWE                                   !
!  OLM         2     2    2    PAUL MARIE                                     !
!  RATP        1     1    1    WILLIAM BRIGHT                                 !
!  SG000008    3     3    2    FRANK ROBERTSON                                !
!  SNCF        4     4    3    MIRYAM DEARDEN                                 !
!  UFO         3     3    3    ISABEL BRIGGS                                  !
!  ULM         3     2    2    MARY A. BANKER                                 !
!  U2          3     2    2    PAUL HEWSON                                    !
!  ZZTOP       2     2    2    TERENCE MALVERN                                !
!                                                                              !
!                                                                              !
!CH: LCPU                                                                       !
```

9.7. ACCESS KEYS UPDATING

ACCESS KEYS UPDATING

In order to operate the System, the Administrator must specify the access key at the time of installation. The access key is calculated by IBM, according to the number of CPU's and the System functions in use at a site.

Once the key has been calculated, it is given to the Database Administrator who must enter it into the system. The access key is entered and updated on the Access Keys Updating (PK) screen, which is accessed via the following CHOICE:

CH: PK.

Users with a level '1', '2' or '3' access authorization may view the access keys, but only users with a level '4' access authorization may update them.

Several interconnected machines may be operating simultaneously. Therefore, several batch access keys can be entered.

USER PARAMETER MANAGEMENT 9
ACCESS KEYS UPDATING 7

```
!                            MANAGEMENT OF USER PARAMETERS             PDGEN.D7!
!                                                                               !
! ACCESS KEYS UPDATING                                                          !
! 1  2            3                                    4                        !
! A LIN   FIRST ACCESS KEY FOR ON-LINE, FOLLOWING KEYS : BATCH ACCESS           !
!                                                                               !
!     0   OYNSG4JZWCU6GFVGUKMSPGTOMGUIXN   MXJPBWBRUBQ3B7N8UKMSPGTOMGUGIX       !
!     1   OYNSG4JZWCU6GFVGUKMSPGTOMGUGIX   MXJPBWBRUBQ3B7N8UKMSPGTOMGUGIX       !
!     2   MYJXJBV2ZFX9L3YGU4MS9GTOMEUXI3   NO BATCH MODULE                      !
!     5   OYJXJ8V2ZFX9L3YGU4MS9GTOMEUXI2   DIDKOSIEHDLS                         !
!    10   HHHKHHHZWCU6GGPGUKMSPGTOMGUGSC   MXJPBWBRUBQ3B8H8UKMSPGTOMGUGSC       !
!    11   JDJSFKQJFJFQDKJFKQJF             FALSE KEY                           !
!    13   KFIRURNFHBSFZTGDK                                                    !
!                                                                               !
!                                                                               !
!  SECURITY SYSTEM..............:   TYPE........: 5     CLASS.......: 6        !
!                       CONTROL..:   RESOURCES...: 7     USER........: 8        !
!                                                                               !
!  BLANK PASSWORDS AUTHORIZATION..............:   NO  9                         !
!  BATCH PROCEDURES AUTHORIZATION CONTROL.....:   YES 10                        !
!  DATABASE UNDER DSMS CONTROL................:   NO  11                        !
!                                                                               !
!                                                                               !
! CH: PK                                                                        !
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE
2	3		LINE NUMBER
3	30		ON-LINE ACCESS KEY Input in this field is required. The on-line access key is only the first field of the first line.
4	30		BATCH ACCESS KEY FOR FIRST CPU
5	1		SECURITY SYSTEM - TYPE
		BLANK	No security system
		R	RACF
		S	TOPSECRET
6	4		SECURITY SYSTEM - CLASS This is the class to which the PACBASE resources belong. The code you input in this field must be the code indicated in the security system.
7	1		SECURITY SYSTEM - RESOURCES
		P	Definition of resources in VisualAge Pacbase
		BLANK	Definition of resources in RACF or TOPSECRET tables
8	1		SECURITY SYSTEM - USER
		BLANK	Possible to enter another user code/password on the initial screen and on * lines.
		N	Not possible to enter another user code/password.
9	3		BLANK PASSWORDS AUTHORIZATION
		YES	Blank passwords are authorized
		NO	Blank passwords are not authorized
10	3		BATCH PROC. AUTHORIZATION CONTROL The levels of authorization on the procedures determine which procedures each user may run. For more information, refer to the paragraph "SPECIAL AUTHORIZATIONS" of the Sub-chapter "USER PARAMETERS UPDATING" in this Chapter.
		YES	Control on authorizations
		NO	No control on authorizations
11	3		DATABASE UNDER DSMS CONTROL This line can be viewed only on some platforms: PACLAN, PACLAN/X, DPS7, DPS8, IMS, UNISYS and DEC VMS.
		YES	DSMS control
		NO	No DSMS control

9.8. SPECIAL CHARACTERS FOR KEYWORDS MANAGEMENT

SPECIAL AND ACCENTED CHARACTERS FOR KEYWORDS MANAGEMENT

A special or accented character is any character different from a-->z, A-->Z or 0-->9. (A lower case is considered equivalent to its upper case, and vice-versa).

The management of accented and special characters is perfomed by the AE error message file, so that it is independent from the operating system and limits risks of error in a keyword search.

Through the PW screen of the PARM transaction, you can assign each accented or special character an internal value which will be used by the system for memorization and keyword search. You can also assign accented characters their correponding upper case characters. So whether they contain accented characters or their corresponding upper case values, keywords are strictly equivalent.

EXAMPLE:

Let us take for example the keyword "écran" (French word for "screen") stored in the Database as "éCRAN" or "ECRAN". If "é" has been indicated equivalent to "E" in the PW screen, you will be able to search for "éCRAN" or "ECRAN". The result of your search will be the same: all the entity occurrences with the keyword "écran", written with the accented letter or its corresponding upper case letter, will be selected.

The PW screen shows three lists that may be used to specify the initial value of the character, its internal, system value and its upper case equivalent.

CAUTION: the following characters cannot be entered: * and =.

USER PARAMETER MANAGEMENT 9
SPECIAL CHARACTERS FOR KEYWORDS MANAGEMENT 8

```
!                            MANAGEMENT OF USER PARAMETERS            PDGEN.D7!
! UPDATE OF SPECIAL CHARACTERS FOR KEYWORD MANAGEMENT                          !
! 1      2           3          4                                            !
! A    SPECIAL    INTERNAL   UPPERCASE                                        !
!     CHARACTER    VALUE                                                     !
!        à+          A          A                                           !
!        '                                                                   !
!        &                                                                   !
!        é¦          E          E                                           !
!        è-          E          E                                           !
!         Ð                                                                  !
!         Ð                                                                  !
!         Ð                                                                  !
!         ð                                                                  !
!                                                                            !
!                                                                            !
!                                                                            !
!         ¼                                                                  !
!         Ô                                                                  !
!         +                                                                  !
!                                                                            !
!                                                                            !
!                                                                            !
! CH: PW                                                                     !
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE
		C	Create
		M	Modify
		D	Delete
		blank	Implicit create or modify
2	1		VALUE OF SPECIAL CHARACTER (REQ. IN CREATION) "External" value of the character. It must be different from 0-->9, a-->z and A-->Z (upper case and lower case are always equivalent).
3	1		INTERNAL VALUE OF SPECIAL CHARACTER Value assigned to the character for System management in keyword searches.
4	1		UPPERCASE Upper case equivalent of the accented character. Whether keywords contain accented characters or their corresponding upper cases, they are strictly equivalent.

9.9. UPDATE OF METHODOLOGY CHOICES

UPDATE OF METHODOLOGY CHOICES

You may view this screen but it is especially designed for the product use, to solve technical problems, if any.

It gives the correspondences between the WorkStation local choices and the host choices. These correspondences are set by IBM and must not be modified. If you want to know the list of correspondences, you can refer to the end of the manual "Description of User Entities Dedicated to the WorkStation".

You can view this screen by entering:

CH : PMabccc

abccc being optional input, with:

a = language code (E for English, F for French),

b = methodology code (ex: M for Merise, D for YSM...),

ccc = entity local code from which the screen will be displayed.

For standard methodologies, the information of this screen is supplied in the AE file, and for non-standard methodologies it is supplied in a separate file.

```
-------------------------------------------------------
! WARNING: you must not modify any data of this screen,!
! unless expressly asked to do so by IBM, to solve     !
! technical problems, if any.                          !
-------------------------------------------------------
```

USER PARAMETER MANAGEMENT 9
UPDATE OF METHODOLOGY CHOICES 9

```
!                            MANAGEMENT OF USER PARAMETERS            PDGEN.D7!
! UPDATE OF METHOD CHOICES                                                     !
!   3        4                    1                2                         !
! A     NAME         LANGUAGE CODE        METHOD CODE                         !
! 5   6      7      8     9    10   11      12   13    14   15  16     17      !
! A  LOCAL CHOICE   SUB  TYPE  DN  RELAT.   H-CODING           ENT.  CARD     !
!   ENTITY TYPE   ENTITY U.E. X-R           POS   LG   POS   LG TYPE  CODE     !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
! CH: PM                                                                       !
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		LANGUAGE INDICATOR
		F	French.
		E	English.
2	1		METHODOLOGY CODE
3	1		ACTION CODE
		C	Creation
		M	Modification
		D	Deletion
4	60		METHODOLOGY NAME
5	1		ACTION CODE
		C	Create
		M	Modify
		D	Delete
		blank	Implicit create or modify
6	3		ENTITY LOCAL CODE
7	2		CHOICE TYPE 2nd part of the WorkStation choice which specifies if it is a definition, a description or a cross-reference.
		BLANK	Definition
		Dn	Description, with n from 1 to 9
		Xn	Cross-reference, with n from 1 to 9
8	3		SUB-ENTITY Indicated only for cross references. Specifies the local code of the entity which is the target of the cross-reference.
9	2		USER ENTITY TYPE CODE Any unique alphanumeric code to identify the User Entity in all of its calls. The type code must be unique to each User Entity, i.e. two User Entities cannot have the same type code. Once the User Entity is created, the type code cannot be modified. When it is used to define or describe a User Entity Occurrence, it is preceded by the '$' character. EXAMPLE: If the type code of the JOB User Entity is

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			'JO', the User Entity Occurrences will be coded as: '$JO_____'. In the EXUE sequential output file, the type code is the primary sorting key.
10	2		2ND PART OF SERVER CHOICE Corresponds to the code of the User Entity description or cross-reference on the mainframe.
11	5		USER RELATIONSHIP Corresponds to the code of the User Relationship which describes the cross-reference, for the lines whose 'CHOICE TYPE' is 'Xn' and whose '2ND PART OF SERVER CHOICE' (field 10) is 'XQ'.
		NUMER.	HCODING - POSITION Reserved for internal use.
12	2	NUMER.	HCODING - LENGTH Reserved for internal use.
13	3	NUMER.	HCODING - POSITION Reserved for internal use.
14	2	NUMER.	HCODING - LENGTH Reserved for internal use.
15	1	 L G O R J I M F D P T	IMAGE U.E. IDENTIFIER Reserved field, related to the use of PAF-PDM. Corresponds to the description type: Non-formatted description Graph Object Relationship Image without cross-reference Image with cross-reference Parent Formatted description Free Entity Property Textual description
16	2		CARD CODE Internal reserved field, related to the use of PAF-PDM. Indicates which PAF Table will be used.

LIST OF METHODOLOGIES

This list is accessed by entering the following in the CHOICE field:

CH: LCPM

This list displays the codes of all the methodology installed on the site, with their language version (E for English or F for French) and their full name.

USER PARAMETER MANAGEMENT 9
UPDATE OF METHODOLOGY CHOICES 9

```
!                            MANAGEMENT OF USER PARAMETERS            PDGEN.D7!
! LIST OF METHODS                                                              !
!                                                                             !
!    E/F METHOD   METHOD'S NAME                                               !
!     E     A     SSADM                                                      !
!     E     D     YSM                                                        !
!     E     F     FAA                                                        !
!     E     I     IAA                                                        !
!     E     M     MERISE                                                     !
!     E     N     NSS                                                        !
!     E     Y     YOURDON                                                    !
!     F     D     YSM                                                        !
!     F     G     AGOSI-GICAB                                                !
!     F     M     MERISE                                                     !
!     F     Y     YOURDON                                                    !
!                                                                             !
!                                                                             !
!                                                                             !
!                                                                             !
!                                                                             !
!                                                                             !
!                                                                             !
!                                                                             !
! CH: LCPM                                                                    !
```

9.10. ASSOCIATION OF A PACBASE DBASE WITH A DSMS DBASE

ASSOCIATION OF A PACBASE DATABASE WITH A DSMS DATABASE

This screen allows you to put a PACBASE Database under the control of a DSMS Database.

You can access it by entering the following in the CHOICE field:

CH : PB

You cannot access this screen on platforms where the control by DSMS is indicated by 'YES' in the PK screen (PACLAN(/X), DPS7, DPS8, UNISYS, IMS and DEC VMS). On the other hand you can access this screen on the CICS/OS/MVS platform.

Users with a level 1, 2 or 3 authorization may view this screen but only users with a level 4 authorization may update it.

USER PARAMETER MANAGEMENT 9
ASSOCIATION OF A PACBASE DBASE WITH A DSMS DBASE 10

```
!                            MANAGEMENT OF USER PARAMETERS            PDGEN.D7!
! PACBASE DATABASE NAME AND ASSOCIATED DSMS DATABASE NAME                      !
! 1          2             3                                                 !
! A         PACBASE      DSMS DATABASE                                       !
!        DATABASE NAME        NAME                                          !
!                                                                            !
!            D6D8             D60E                                          !
!            FSQD             D609                                          !
!            PDEV             D60F                                          !
!                                                                            !
!                                                                            !
!                                                                            !
!                                                                            !
!                                                                            !
!                                                                            !
!                                                                            !
!                                                                            !
!                                                                            !
!                                                                            !
!                                                                            !
!                                                                            !
!                                                                            !
! CH: PB                                                                     !
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	1		ACTION CODE
		C	Create
		M	Modify
		D	Delete
		blank	Implicit create or modify
2	4		TRANSACTION CODE
3	4		LOGICAL DATABASE CODE