VisualAge Pacbase 2.5

DICTIONARY EXTENSIBILITY
REFERENCE MANUAL

DDEXT000251A

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1. GENERAL INTRODUCTION

<u>PRESENTATION</u>

One of the characteristics of the system is that its entities represent specific concepts used during the normal life cycle of one or more applications.

For example, the data element, segment, program, and screen entities represent data that is described according to specific rules within the PACBASE Database.

In using these standard PACBASE entities, it is not possible to develop additional concepts not normally generated by PACBASE without carrying out some difficult operations:

. Choosing an entity whose description is not too restrictive, and to which specific keywords can be associated.

. Using Parameterized Input Aids within the General Documentation to describe the new concepts.

In this way, the user can describe a new concept. But the major drawback to these techniques is that the standard cross-references will not be adapted. For a given entity, it is impossible to customize the data stored in the database, and the results are difficult to manage.

The Dictionary Extensibility function opens up the database to the user so that he/she can:

. define entities to correspond to the new concepts,

. customize their descriptions,

. introduce entity occurrences into the database,

. define the desired relationships between these entities and any other entity (including the user-defined entities).

ENTITIES

The Dictionary Extensibility function is implemented using the following
entities:

```
        .the User Entity            (UE)      (type 'F')

        .the User-Defined Relationship (UR)   (type 'Q')

        .the User Entity Occurrence  (UEO)    (type '$')
```

THE USER ENTITY (UE)

This entity allows the user to:

  . define a new concept to be managed by the database, for example: 'Service',

  . describe this concept through a list of data elements which make it up, for
    example: Name of service, No. of Employees, Geographic Location. This
    description forms the basis for input of User Entity Occurrences: the UE input
    screens are customized according to the User Entity description. For example,
    UE 'INFO' could be described with the following values: Data Processing
    Service, 50 employees, Headquarters.

THE USER-DEFINED RELATIONSHIP (UR)

It allows links to be established between entities managed by the system
(including User Entities).

THE USER ENTITY OCCURRENCE (UEO)

It represents each one of the uses of the User Entity defined above.

The definition and description of a User Entity Occurrence is done on customized data entry screens built automatically by PACBASE, based on the description of the User Entity.

NOTES

The introduction of User Entities does not interfere with the use of entities that already exist in the database. In particular, when a user wishes to add to the content of an existing entity, he/she should use the Parameterized Input Aids and Keywords, and not the User Entities; User Entities are used to add new concepts in the database.

These three entities are managed by the system the same as any other entity. It is possible to:

> .assign keywords,

> .assign general documentation,

> .obtain lists, cross-references, etc.

EXAMPLE

The execution of a batch job involves the use of the following concepts:
```
JOB      --------------------->              USER ENTITY
    STEP          ---------------->              "
         PROGRAM      ------------->      'P' ENTITY
               FILES    ------------->    'D' ENTITY
                     etc.             ...
```
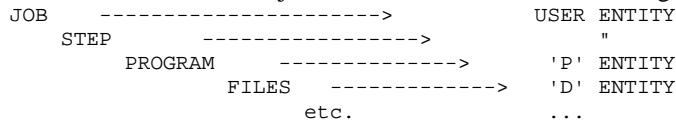
The concepts of JOB and STEP are not standard entities. Thus two User Entities should be defined:

  .a JOB User Entity type, whose description is a series of steps,

  .a STEP User Entity type, whose description is similar to that of a program.

Suppose that job JOB001 calls steps STEPA and STEPB, and STEPA uses Program PGM001 and STEPB uses Program PGM002.

In this case, JOB001 constitutes one occurrence of the JOB User Entity type, and STEPA and STEPB are two occurrences of the STEP User Entity type. PGM001 and PGM002 are two occurrences of the standard Program ('P') entity.

Moreover, User-Relationships can be defined to associate STEPA with PGM001 and STEPB with PGM002. When these Relationships are called in the descriptions of STEPA and STEPB, PACBASE checks the existence of these Programs in the Specifications Dictionary.

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2. THE USER ENTITY   (UE)

2.1. INTRODUCTION   (UE)

<u>INTRODUCTION</u>

The User Entity allows the user to create cutomized entities in the Database.

Once the User Entity is defined and described in the database, it is managed in the same way as any standard entity.

<u>GENERAL CHARACTERISTICS</u>

The User Entity consists of:

. A required Definition screen for entry of general characteristics (clear name, associated keywords and the user-defined type code which identifies the User Entity);

. A Call of Elements screen to list all data elements making up the User Entity. This list will be used to build the input screens of the entity occurrence;

. As for any other entity, a General Documentation screen.

Once the User Entity is defined, the user can define its occurrences on a specific screen.

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2.2. DEFINITION   (UE)

<u>DEFINITION</u>

A User Entity is defined by a mnemonic code, a clear name, a type code, and additional fields used to define the labels of User Entity Occurrence description screens.

The type code is used to identify all of the occurrences of a User Entity. It can be considered as the abbreviated code of the User Entity. Therefore, a type code must correspond to only one User Entity code and vice-versa. The system ensures that the same type code is not assigned to two different User Entities.

NOTE: As a recommendation, avoid using a number as the first character of the type code, because the entities managed by the PACDESIGN and PACBENCH modules use these codes

Refer to Chapter "Entities and User Relations Reserved for the product" for complete information.

<u>CORRESPONDING CHOICE</u>

The User Entity Definition screen is accessed by entering the following in the CHOICE field:
```
CH: Fxxxxxx

where 'xxxxxx' = the User Entity code.
```

```
 -------------------------------------------------------------------------------
 !                        DOCUMENTATION                  *DSDOCMLT.LILI.AN1.881 !
 !                                                                             !
 !                                                                             !
 ! USER ENTITY DEFINITION      :  1 STEP                                       !
 !                                                                             !
 ! USER ENTITY NAME.............:  2 JOBSTRING ELEMENT                         !
 ! TYPE.........................:  3 ST                                        !
 ! USER ENTITY SHORT NAME.......:  4 ADDITIONAL DATA                           !
 !                                                                             !
 ! NAME OF THE DETAIL LINE 1....:  5 CONTENTS                                  !
 ! NAME OF THE DETAIL LINE 2....:  6 EXECUTION                                 !
 ! NAME OF THE DETAIL LINE 3....:  7 FILES                                     !
 ! NAME OF THE DETAIL LINE 4....:  8 REPORTS                                   !
 ! NAME OF THE DETAIL LINE 5....:  9 PACBASE LIB.                              !
 ! NAME OF THE DETAIL LINE 6....: 10                                           !
 ! NAME OF THE DETAIL LINE 7....: 11                                           !
 ! NAME OF THE DETAIL LINE 8....: 12                                           !
 ! NAME OF THE DETAIL LINE 9....: 13                                           !
 !                                                                             !
 !                                                                             !
 ! EXPLICIT KEYWORDS..: 14                                                     !
 !                                                                             !
 !                                                                             !
 !                                                                             !
 ! SESSION NUMBER.....: 0879        LIBRARY......: AN1    LOCK....:             !
 !                                                                             !
 ! O: C1 CH: F STEP                      ACTION:                               !
 -------------------------------------------------------------------------------
```

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NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		RELATION DEFINITION Alphanumeric code identifying the entity in the PACBASE Database.
2	36		USER ENTITY NAME This name should be as explicit as possible. Words used here become implicit keywords (subject to limitations specified in Subchapter "HOW TO BUILD THE THESAURUS", Chapter "KEYWORDS" in the SPECIFICATIONS DICTIONARY Reference Manual).
3	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 '$' character. EXAMPLE: If the type code of the JOB User Entity is 'JO', the User Entity Occurrences will be coded as: '$JO_____'. In the EXUE sequential output file, the type code is the primary sorting key.
4	15		USER ENTITY SHORT NAME This short name will be displayed in front of the User Entity Occurrence code on the UEO Definition screen. If this field is not entered, the default value is the entry in the USER ENTITY NAME field, truncated to 15 characters.
5	15		NAME OF THE UEO DETAIL LINE 1 This name will be displayed at the top of Description screen 1 (-D1) of User Entity Occurrences associated with this User Entity. If this field is not entered, the default value is the entry in the USER ENTITY NAME field, truncated to 15 characters.
6	15		NAME OF THE UEO DETAIL LINE 2 This name will be displayed at the top of Description screen 2 (-D2) of User Entity Occurrences associated with a User Entity.
7	15		NAME OF THE UEO DETAIL LINE 3

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			This name will be displayed at the top of Description screen 3 (-D3) of User Entity Occurrences associated with a User Entity.
8	15		NAME OF THE UEO DETAIL LINE 4 This name will be displayed at the top of Description screen 4 (-D4) of User Entity Occurrences associated with a User Entity.
9	15		NAME OF THE UEO DETAIL LINE 5 This name will be displayed at the top of Description screen 5 (-D5) of User Entity Occurrences associated with a User Entity.
10	15		NAME OF THE UEO DETAIL LINE 6 This name will be displayed at the top of Description screen 6 (-D6) of User Entity Occurrences associated with a User Entity.
11	15		NAME OF THE UEO DETAIL LINE 7 This name will be displayed at the top of Description screen 7 (-D7) of User Entity Occurrences associated with a User Entity.
12	15		NAME OF THE UEO DETAIL LINE 8 This name will be displayed at the top of Description screen 8 (-D8) of User Entity Occurrences associated with a User Entity.
13	15		NAME OF THE UEO DETAIL LINE 9 This name will be displayed at the top of Description screen 9 (-D9) of User Entity Occurrences associated with a User Entity.
14	55		EXPLICIT KEYWORDS This field allows the user to enter additional (explicit) keywords. By default, keywords are generated from an occurrence's clear name (implicit keywords). This field only exists on-line. In batch mode, keywords are entered on Batch Form 'G'. Keywords must be separated by at least one space. Keywords have a maximum length of 13 characters which must be alphanumeric. However, '=' and '*' are reserved for special usage, and are therefore not permitted in keywords. Keywords are not case-sensitive: upper-case and lower-case letters are equivalent. NOTE: Characters bearing an accent and special characters can be declared as equivalent to an internal value in order to make easy the search of occurrences by keywords.

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NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			Refer to the Operations Manual - Part II 'Administrator's Guide', Chapter 'Database Management Utilities', Subchapter 'PARM : Update of User Parameters'.
			A maximum of ten explicit keywords can be assigned to one entity.
			For more details, refer to the SPECIFICATIONS DICTIONARY Reference Manual, Chapter 'KEYWORDS', Subchapter 'BUILDING THE THESAURUS'.

2.3. DESCRIPTION   (UE)

DESCRIPTION

A User Entity is described via a Call of Elements screen. The data elements used
to describe a User Entity must be defined in the Dictionary. They are used to
build input screens for the User Entity Occurrences.

GENERAL CHARACTERISTICS

On the User Entity Call of Elements (-CE) screen, the following field is used to
indicate to which OEU screen the data elements belong:

DESCRIPTION TYPE field:

.With value '0':
The data elements are part of the definition of the User Entity Occurrence, and
are considered to be the screen-top category;

.With values '1'-'9':
The data elements are part of the description of the User Entity Occurrence, and
are considered to be the repetitive category.

When all of the elements have been entered, the PACBASE system will either
display (in the NAME AND PICTURE column) the short label of the data
element if the element is part of the Definition screen, or the first line of the
column label of the data element if the element is part of the UEO Description
screen. If these labels have not been previously entered, the system displays the
data element clear name, truncated to 18 characters.

The format of the data element used in the User Entity Occurrence is the
Extended Internal Format.

A data element may be called only once per User Entity.

PROCESSING OF NUMERIC DATA ELEMENTS

Within the processing of User Entity Occurrences, a numeric validation is
performed if the data element called has a numeric format.

Input of decimals is not possible and, even when defined in the Dictionary, they
are not taken into account.

However, the full Extended Internal Format is displayed.

EXAMPLE

```
     .Data element format                      S9(6)V9(3)
     .Format displayed on UE 'CE' screen       S9(6)V9(3)
     .UEO input field                          _____
```

RELATIONSHIPS WITH OTHER ENTITIES

The user may wish to link a data element used in the description of a User Entity
with other entities managed by the PACBASE system.

On the User Entity Call of Elements Screen, two fields are used for this purpose:

  . USER-DEFINED RELATIONSHIP CODE field,

  . FULL CALL TYPE field.

The USER-DEFINED RELATIONSHIP CODE field is used to enter the User-
Defined Relationship previously defined in the Dictionary (see Chapter "THE
USER-DEFINED RELATIONSHIP").

The FULL CALL TYPE field is used to enter the entity type to be linked. Two cases may arise:

  . The entity to be linked is a standard PACBASE entity: data element, data structure, program, screen, etc. In this case, the ENTITY TYPE should contain respectively: 'E', 'D', 'P', 'O', etc.

  . The entity to be linked is a User Entity. In the USER ENTITY TYPE field, a '$' should precede the User Entity Type code: if the User Entity Type code is 'PG', this field should be coded as '$PG'.

Any field which corresponds to a linked entity contains uppercases.

If the RELATIONSHIP field is entered, the FULL CALL TYPE field has to be entered also, and vice-versa.

If both fields are entered, the User-Defined Relationship must exist in the PACBASE database, and the FULL CALL TYPE code must contain either a standard PACBASE entity type or a defined User Entity type code.

An entity type (whether standard or not) can be used only once per relationship on the User Entity '-CE' screen.

The length of a data element for which a User-Defined Relationship is indicated must be six characters.

LABEL DISPLAY

In the UE description, you can ask that the label of the PACBASE (standard or user) entities linked to the Data Elements via a relationship be displayed in the definition or the descriptions of the corresponding UEOs. In the UEO input fields described this way, when the user enters a code and presses the 'ENTER' key, PACBASE checks that this code corresponds to an existing occurrence and displays its label.

You can ask for the automatic display of label in the 'OPT.' field, documented in the comments of the following screen,

EXTRACTION

Once the User Entity is described and Occurrences defined, the user may wish to extract all or part of the information contained in the PACBASE Database. On the User Entity 'CE' screen, the user can select those data elements to be extracted. This selection is made via the DATA ELEMENT EXTRACTION CODE field. The content of all data elements with a 'G' in this field will be extracted upon user request.

NOTE

On the User Entity '-CE' screen, the user can only select data elements to be extracted. The actual extraction requests will be processed by the batch Extraction of User Entities (EXUE) procedure. The output of this procedure is a sequential file accessible to the user (See Subchapter "EXTRACTION", Chapter "THE USER ENTITY OCCURRENCE").

CORRESPONDING CHOICE

The User Entity Call of Elements screen is obtained by entering the following input in the CHOICE field:

CH: FxxxxxxCE

where   'xxxxxx' = the User Entity code

```
--------------------------------------------------------------------------------
!                      DOCUMENTATION              *DSDOCMLT.LILI.AN1.881 !
!                                                                        !
! USER ENTITY CALL OF ELEMENTS   :  1 STEP   JOBSTRING ELEMENT           !
! 2 3    4      5          6        7        89                          !
! A D  LIN : ELEM.  : E :    RELATN : TYPE:   NAME AND PICTURE           !
!   0  100 : JOBNAM : G :    RELJOB : $CB :   JOB NAME          X(6)     !
!   0  120 : PROGR  : G :    RELPGM : P   :   PROGRAM CODE      X(6)     !
!   0  140 : PGSIZE : G :           :     :   PROGRAM SIZE      9(3)     !
!   2  100 : EXTIME : G :           :     :   DURATION (CPU SEC) 9(3)V9  !
!   3  100 : EXCOND : G :           :     :   EXEC. COND.       X(13)    !
!   3  200 : FILCOD :   :    RELAT  : D   :   DS               X(6)     !
!   3  300 : FILNAM : G :           :     :   FILE NAME         X(12)    !
!   3  330 : FDISP  : G :           :     :   UTILIZATION       X(14)    !
!   3  340 : VOLFI  : G :    UNITS  : $UN :   UNIT              X(6)     !
!   5  100 : COMENT :   :    RELAT  : T   :   TEXT              X(6)     !
!          :        :   :           :     :                             !
!          :        :   :           :     :                             !
!          :        :   :           :     :                             !
!          :        :   :           :     :                             !
!          :        :   :           :     :                             !
!          :        :   :           :     :                             !
!          :        :   :           :     :                             !
!          :        :   :           :     :                             !
!                                                                        !
! O: C1 CH: F STEP CE                                                    !
--------------------------------------------------------------------------------
```

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NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		RELATION DEFINITION Alphanumeric code identifying the entity in the PACBASE Database.
2	1		ACTION CODE
3	1		DESCRIPTION TYPE This field is used to distinguish the various description lines related to a User Entity.
		0	UEO Definition line.
		1	Occurrence detail description line D1.
		2	Occurrence detail description line D2.
		3	Occurrence detail description line D3.
		4	Occurrence detail description line D4.
		5	Occurrence detail description line D5.
		6	Occurrence detail description line D6.
		7	Occurrence detail description line D7.
		8	Occurrence detail description line D8.
		9	Occurrence detail description line D9. There may be up to 11 '0'-type lines, and up to 12 lines of each of the other types.
4	3		LINE NUMBER PURE NUMERIC FIELD It is advisable to begin with line number '100' and then number in intervals of 20. This facilitates subsequent line insertions, as necessary.
5	6		DATA ELEMENT CODE Code of the PACBASE data element called in the U.E. description. An element may be called only once per User Entity. The element short label is displayed in the NAME AND PICTURE column if the element is called on the OEU definition screen ('O'-type line). The column label is displayed if the element is called in the OEU description ('1 - 9'-type lines). When these labels are not defined, the element clear name is used and may be truncated.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			These labels will be used in the OEU definition and description.
			The internal format of the element is also displayed in the NAME AND PICTURE column.
6	1		DATA ELEMENT EXTRACTION CODE
			This code is used to select the data elements to be extracted when a user entity extraction is requested.
		blank	Data element is NOT to be extracted.
		G	Data element is to be extracted.
7	6		USER-DEFINED RELATIONSHIP CODE
			This field is used to establish a relationship between the element and an entity type (PACBASE entity or User Entity) through a User-Defined Relationship.
			In this case, when defining or describing a user entity occurrence, PACBASE verifies that the value entered in a field for which a relationship was specified is a valid entity code in the Specifications Dictionary.
			The entity type is entered in the ENTITY TYPE field.
			The element length must be six characters.
			The User-Defined Relationship must have been previously defined.
			If the entity type corresponds to a User Entity, the User Entity must have been previously defined.
			The same Relationship may be called several times, but an entity type may be used only once per Relationship in each User Entity.
			FULL CALL TYPE
8	1		ENTITY TYPE
			Allows input of the entity type to be linked with the Relationship entered in the preceding field. There are two possible cases:
			.The entity to be linked is a standard PACBASE entity: only the entity type is to be entered ('E' for data element, 'P' for program, etc.)
			.The entity to be linked is a User Entity: '$' should be entered in this field, followed by the User Entity type code.
9	2		USER ENTITY TYPE CODE
			Any unique alphanumeric code to identify the User Entity in all of its calls.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			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 '$' character. EXAMPLE: If the type code of the JOB User Entity is 'JO', the User Entity Occurrences will be coded as: '$JO_____'.
			In the EXUE sequential output file, the type code is the primary sorting key.
10	2		LABEL DISPLAY OPTION
			This field is used to display the label of a (standard or user) entity linked, via a relationship, to a Data Element present on the -CE of the UEO.
			To do so, enter, in the 'DATA ELEMENT CODE' field, a Data Element which will receive and display the label corresponding to the code entered by the user in the UEO.
		L*	Display of the label associated with the first occurrence code entered by the user in the screen. NB: this display varies according to the user input.
		Ln	n = 1, 2, ..., 9 Display of the label of the nth occurrence code in the order of the -CE screen (all the lines count, even the Data Elements used to display a label).
			If the nth occurrence code does not correspond to a Data Element call (ex: 'L6', whereas there are only 4 Data Elements in the -CE screen), the 'L*' option is then applied.

2.4. DESCRIPTION CONSTRAINTS (UE)

USER ENTITY DESCRIPTION CONSTRAINTS

Data elements called on the User Entity Call of Elements appear on the
Definition or Description screens of User Entity Occurrences.

The number and format of these data elements are limited due to screen size and
their internal management.

These limits are different depending on whether the data elements appear on the
Definition or on the Description screen of the User Entity Occurrence.

UEO DEFINITION ('0'-type lines)

The length of a data element cannot exceed 57 characters.

The maximum number of data elements for the Definition is 11.

The total length of elements on the Definition cannot exceed 195. The total
length is calculated by adding together all data element formats + 7 for each data
element. $.LIM

EXAMPLE

CORUB1 PICTURE X(20)
CORUB2 PICTURE X(14)
CORUB3 PICTURE X(3)
CORUB4 PICTURE X

The total length is 27 + 21 + 10 + 8 = 66 bytes.

NOTE: The seven characters added to each data element correspond to the data
element code (six characters) plus a delimiter character.

DESCRIPTION ('1-9'-type lines)

The length of a data element cannot exceed 66 characters.

In each description, the maximum number of data elements is 12.

The total length of elements for a description cannot exceed 100. The total
length of all data elements is calculated by adding together all data element
formats + 7 for each data element.

EXAMPLE

ELEM1 PICTURE X(20)
ELEM2 PICTURE X(14)
ELEM3 PICTURE X(3)
ELEM4 PICTURE X
ELEM5 PICTURE X(12)
ELEM6 PICTURE X(8)

The total length is 27 + 21 + 10 + 8 + 19 + 16 = 100.

NOTE

For a given User Entity, up to nine User-Defined Relationships are allowed for
the definition and for all descriptions.

3. THE USER-DEFINED RELATIONSHIP

3.1. INTRODUCTION   (UR)

<u>INTRODUCTION</u>

The purpose of the User-Defined Relationship entity is to link entities. The
resulting link is added to the cross-references already managed by the system.

This type of linking is illustrated in the diagram below:

```
+-----------+                   +--------------+
!   entity  !--- user-defined --->! type + entity !
! occurrence !   relationship    !  occurrence  !
+-----------+                   +--------------+
```
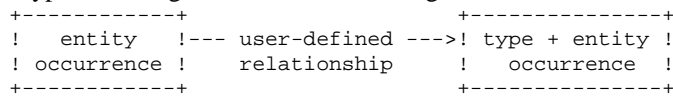
It is possible to link an entity occurrence to another entity occurrence (whether
or not it is a user entity) through a User-Defined Relationship. Therefore, for a
given entity occurrence (program code, screen code, etc.), the following
information must be entered in the Database:

 .code of the User-Defined Relationship,

 .type of entity to be linked,

 .occurrence of the entity to be linked.

A User-Defined Relationship code qualifies the link.

<u>GENERAL CHARACTERISTICS</u>

The User-Defined Relationship includes:

 . a Definition screen where the user enters the code, clear name, and explicit
  keywords;

 . as for any other entity, a General Documentation screen.

A User-Defined Relationship entity may be used in order to:

 .link user entities,

 .link other entities.

3.2. DEFINITION   (UR)

<u>DEFINITION</u>

A User-Defined Relationship entity has a relation definiton, a relation name and a short name.

This is the only information needed in order to define a relationship, no further description is required.

<u>CORRESPONDING CHOICE</u>

In order to access the User-Defined Relationship, enter the following input in the CHOICE field:

     CH: Qrrrrrr

where 'rrrrrr' = User-Defined Relationship code.

```
 -------------------------------------------------------------------------------
 !                     DOCUMENTATION                 *DSDOCMLT.LILI.AN1.881 !
 !                                                                          !
 !                                                                          !
 !                                                                          !
 ! RELATION DEFINITION.....: 1 UNITS                                        !
 !                                                                          !
 !                                                                          !
 ! RELATION NAME...........: 2 FILE UNITS (DISK AND TAPES)                  !
 !                                                                          !
 ! SHORT NAME..............: 3 UNIT                                         !
 !                                                                          !
 !                                                                          !
 !                                                                          !
 !                                                                          !
 !                                                                          !
 !                                                                          !
 ! EXPLICIT KEYWORDS..: 4                                                   !
 !                                                                          !
 !                                                                          !
 ! SESSION NUMBER.....: 0879        LIBRARY......: AN1    LOCK....:         !
 !                                                                          !
 ! O: C1 CH: Q UNITS                       ACTION:                          !
 -------------------------------------------------------------------------------
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		USER-DEFINED RELATIONSHIP CODE (REQUIRED) Alphanumeric code identifying the entity in the PACBASE Database.
2	36		RELATION NAME (REQ. IN CREATION) This name should be as explicit as possible. Words used here become implicit keywords (subject to limitations specified in Subchapter "HOW TO BUILD THE THESAURUS", Chapter "KEYWORDS" in the SPECIFICATIONS DICTIONARY Reference Manual).
3	15		SHORT NAME The short label is displayed on the General Documenta-tion line of the entity which calls the Relationship.
4	55		EXPLICIT KEYWORDS This field allows the user to enter additional (ex-plicit) keywords. By default, keywords are generated from an occurrence's clear name (implicit keywords). This field only exists on-line. In batch mode, key-words are entered on Batch Form 'G'. Keywords must be separated by at least one space. Keywords have a maximum length of 13 characters which must be alphanumeric. However, '=' and '*' are reser-ved for special usage, and are therefore not permitted in keywords. Keywords are not case-sensitive: upper-case and lower-case letters are equivalent. NOTE: Characters bearing an accent and special characters can be declared as equivalent to an internal value in order to make easy the search of occurrences by keywords. Refer to the Operations Manual - Part II 'Adminis-trator's Guide', Chapter 'Database Management Utili-ties', Subchapter 'PARM : Update of User Parameters'. A maximum of ten explicit keywords can be assigned to one entity. For more details, refer to the SPECIFICATIONS DICTIONARY Reference Manual, Chapter 'KEYWORDS', Subchapter 'BUILDING THE THESAURUS'.

3.3. PRINCIPLES OF USE   (UR)

PRINCIPLES OF USE

Once the User-Defined Relationship has been defined, it can be used at two different levels:

      1. in the description of a User Entity,

      2. in any entity (including user entities).

1. USER ENTITY DESCRIPTION

The cross-reference, established by a User-Defined Relationship, between an entity (whether or not it is a user entity) and a data element used in the User Entity description, allows the system to check that the content of the data element (entered in the UEO) is consistent with the PACBASE Database.

See Chapter, "THE USER ENTITY OCCURRENCE", Subchapter "DEFINITION", paragraph "THE USER-DEFINED RELATIONSHIP".

2. ENTITY

Any entity can be linked to another entity through a User-Defined Relationship via an 'R'-type line on the entity's General Documentation (-G) screen.

The 'R'-type line is a formatted line which facilitates input of:

  . the User-Defined Relationship code,

  . the Entity Type of the entity to be linked,

  . the Name (Code) of the entity to be linked.

EXAMPLE

Let's take a Data Element AAAAAA. On one of its General Documentation
lines, enter an 'R' in the TYPE field as illustrated below:

```
  LIN   T
  100   R
```

The system displays the following formatted line:

```
  LIN   T COMMENT
  100   R            REL: _____ENT.TYPE: __NAME: _____
```
If the user's input is:

```
  LIN   T COMMENT
  100   R            REL: RELAT   ENT.TYPE: $ET NAME: CPTA03
```

The Data Element will be linked to the $ET CPTA03 occurrence of the user
entity by the Relationship RELAT.
```
If the user's input is:
```

```
  LIN   T COMMENT
  100   R            REL: RELAT  ENT.TYPE: F   NAME: ETAPE
```

The Data Element AAAAAA will be linked to the User Entity F ETAPE by the
User-Defined Relationship RELAT.

The link thus established can be viewed on the cross-reference (-X) screen of the
User-Defined Relationship and on the Cross Reference to User-Defined
Relationships (-XQ) screen of the linked entities:

                                                              DDEXT000251A

```
--------------------------------------------------------------------------
!                    TESTS ET PROGRAMMES DOC.        *DSDOCMLT.LILI.AN1.881  !
! X-REFERENCE TO ENTITIES USING            RELAT                             !
!                                                                            !
! CALLING ENTITY     CALLING LINE              LINE    CALLED ENTITY    LIB!
!   E    AAAAAA      DOC.                      100    $ET CPTA03        224!
!   E    AAAAAA      DOC.                      120    F   ETAPE         224!
!   $ET CPTA03       M. A. J. HISTORIQUE COMPT 100    P   GC            193!
!                    FICHIERS                                               !
!   $ET CPTA03       M. A. J. HISTORIQUE COMPT 200    P   PA            193!
!                    FICHIERS                                               !
!   $ET CPTA03       M. A. J. HISTORIQUE COMPT 300    P   PA            193!
!                    FICHIERS                                               !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
! O: C1 CH: Q RELAT X                                                        !
--------------------------------------------------------------------------
```

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```
--------------------------------------------------------------------------
!                    TESTS ET PROGRAMMES DOC.       *DSDOCMLT.LILI.AN1.881  !
! X-REFERENCE TO ENTITIES USING    USER ENTITY ITEM      ET CPTA03          !
!                                                                           !
! RELATIONSHIP         CALLING LINE              LINE    CALLED ENTITY   LIB!
!   RELAT             DOC.                       100   E   AAAAAA        224!
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
!                                                                           !
! O: C1 CH: $ET CPTA03 XQ                                                   !
--------------------------------------------------------------------------
```

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THE USER-DEFINED RELATIONSHIP   3
PRINCIPLES OF USE   (UR)   3

```
--------------------------------------------------------------------------------
!                01   TESTS ET PROGRAMMES DOC.         *DSDOCMLT.LILI.AN1.881  !
! X-REFERENCE TO ENTITIES USING        USER ENTITY           ETAPE             !
!                                                                              !
! RELATIONSHIP         CALLING LINE               LINE    CALLED ENTITY    LIB!
!   RELAT             DOC.                          120    E   AAAAAA       224!
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
! O: C1 CH: F ETAPE XQ                                                         !
--------------------------------------------------------------------------------
```

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4. THE USER ENTITY OCCURRENCE

4.1. INTRODUCTION   (UEO)

INTRODUCTION

Once the User Entity is both defined and described, the PACBASE system manages it like any other standard entity.

The user may then enter User Entity Occurrences that will be processed like the other entities.

GENERAL CHARACTERISTICS

The definition and description of a User Entity Occurrence is dependent on the User Entity description:

. If the User Entity does not have description lines or its description only contains a definition line (DESCRIPTION TYPE = 0), the UEO will have a Definition screen that has a fixed part (not related to the User Entity description) which contains the UEO code and clear name, plus a variable part built directly from the User Entity description.

. If it contains description lines (DESCRIPTION TYPE = '1' to '9'), the UEO will have from 1 to 9 description screens built directly from the User Entity description. These description screens will display a series of detail lines which contain the corresponding data elements called in the User Entity description (-CE screen).

DYNAMIC MODIFICATIONS

The UEO Definition screen is built dynamically: if the User Entity description is modified (such as, a change in the characteristics of a data element, added data elements or User-Defined Relationships), the structure of the corresponding screens related to the UEO will be automatically modified accordingly.

However, the system cannot modify the information already entered at the occurrence level: it is only when the user updates this occurrence that the new structure is taken into account.

In particular, if the user adds a Relationship to a User Entity description, and in the meantime some Occurrences have already been entered, the system does not check if the data already stored complies with the constraints imposed by the new User-Defined Relationship. This validation is performed by the system only when an update is executed on each Occurrence.

4.2. DEFINITION   (UEO)

DEFINITION

A User Entity Occurrence is defined with a mnemonic code and a clear name, which are entered in the fixed part of the UEO Definition screen.

The name displayed before the UEO code is the short name entered on the User Entity Definition screen.

PACBASE also displays the UE Type and the code of the corresponding User Entity. These two fields cannot be modified.

The other input information displayed on the screen is taken directly from the User Entity description.
Each data element making up the definition of the UEO is displayed as follows:

  . The data element's Short Label. If the Short Label has not been entered for this data element, the first 18 characters of the data element's clear name will be displayed.

  . An input field identified by underscores. Its length is the same as the Extended Internal Format of the data element. Input of decimals is not permitted.

NOTES

The length of the input field is not delimited: the user can enter data beyond the underscores. However, once the ENTER key is pressed, the system truncates the input to the initial length of the field.

The system does not check that the user's input is consistent with what is contained in the Dictionary. If a data element has specific values, the system does not check that the input actually corresponds to one of these values.

THE USER-DEFINED RELATIONSHIP

If in the User Entity description, a link has been established with an entity type through a User-Defined Relationship, the system checks that the data entered for the element input field corresponds to the code of an entity of this type in the database. If it does not, the update is rejected with an error message.

NOTE: The system only validates the field if it contains data.

EXAMPLE

Let's take a User Entity description line which is designated as part of the UEO Definition:

        ...

        110 COPRO   REL001 P PROGRAM CODE X(6)

        ...

In this case, the user wants to check, via the 'REL001' User-Defined Relationship, that data entered in the 'COPRO' field corresponds to a Program ('P' entity) in the Database.

On the UEO Definition screen, the system displays the following input field:

        ...

        PROGRAM CODE: _____

        ...

The user can enter data in this field. If the program code does not exist in the database, the system cannot perform the update and displays the following error message:

            "UNKNOWN VALUE FOR ......"

If the program code is defined in the database, the update is executed.

DESCRIPTION CONSTRAINTS

See the corresponding Subchapter in Chapter "THE USER ENTITY", paragraph
"UEO DEFINITION ('0'-TYPE LINES)".

CORRESPONDING CHOICE

To access the User Entity Occurrence Definition screen, enter the following
input in the CHOICE field:
                  CH: $ttxxxxxx

where: 'tt' = User Entity Type code,
       'xxxxxx' = UEO code.

```
 -------------------------------------------------------------------------------
 !                       DOCUMENTATION                  *DSDOCMLT.LILI.AN1.881 !
 !                                                                             !
 ! TYPE...............: ST           USER ENTITY........: STEP                 !
 ! -----------------------------------------------------------------------------
 ! ADDITIONAL DATA     1 CPTA03                                                !
 ! U.E. ITEM NAME.....: 2 ACCOUNTING UPDATE                                    !
 !                                                                             !
 ! JOB NAME         : ! CPTA01                                                 !
 ! PROGRAM CODE     : 3 CPT100                                                 !
 ! PROGRAM SIZE     : ! 127                                                    !
 !                                                                             !
 !                                                                             !
 !                                                                             !
 !                                                                             !
 !                                                                             !
 !                                                                             !
 !                                                                             !
 ! EXPLICIT KEYWORDS..: 4                                                      !
 !                                                                             !
 ! SESSION NUMBER.....: 0879      LIBRARY......: AN1    LOCK....:              !
 !                                                                             !
 ! O: C1 CH: $ST CPTA03                    ACTION:                            !
 -------------------------------------------------------------------------------
```

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NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		UEO CODE Alphanumeric code identifying the entity in the PACBASE Database.
2	36		UEO NAME This name should be as explicit as possible. Words used here become implicit keywords (subject to limitations specified in Subchapter "HOW TO BUILD THE THESAURUS", Chapter "KEYWORDS" in the SPECIFICATIONS DICTIONARY Reference Manual).
3	58		UEO DEFINITION LINE The UEO definition line is directly built from the UE description. There are as many fields as there are data elements called in the screen-top category (0-type lines) of the UE description. Each data element is displayed on a line and is preceded by its short name. The input field is identified by underscores ('_'). For further details on the data elements' length and number, refer to Subchapter "DESCRIPTION CONSTRAINTS", Chapter "THE USER ENTITY".
4	55		EXPLICIT KEYWORDS This field allows the user to enter additional (explicit) keywords. By default, keywords are generated from an occurrence's clear name (implicit keywords). This field only exists on-line. In batch mode, keywords are entered on Batch Form 'G'. Keywords must be separated by at least one space. Keywords have a maximum length of 13 characters which must be alphanumeric. However, '=' and '*' are reserved for special usage, and are therefore not permitted in keywords. Keywords are not case-sensitive: upper-case and lower-case letters are equivalent. NOTE: Characters bearing an accent and special characters can be declared as equivalent to an internal value in order to make easy the search of occurrences by keywords. Refer to the Operations Manual - Part II 'Administrator's Guide', Chapter 'Database Management Utilities', Subchapter 'PARM : Update of User Parameters'. A maximum of ten explicit keywords can be assigned to one entity.

THE USER ENTITY OCCURRENCE   4
DEFINITION   (UEO)   2

NUM LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE For more details, refer to the SPECIFICATIONS DICTIONARY Reference Manual, Chapter 'KEYWORDS', Subchapter 'BUILDING THE THESAURUS'.

4.3. DESCRIPTION   (UEO)

<u>DESCRIPTION</u>

The UEO description lines allow input of all information corresponding to the data elements called on '1-9'-type lines of the User Entity description (-CE screen).

<u>GENERAL CHARACTERISTICS</u>

The UEO description is composed of one screen per detail line specified on the User Entity Definition screen and element(s) called in the User Entity description (-CE). Each screen is composed of repetitive lines which contain:

> .an Action Code field,
> .a line number (key),
> .an input field(s).

Each screen contains an input field per data element called for its description on the UE '-CE' screen. Each input field is displayed with underscores; the length of each field is the Extended Internal Format of the corresponding data element.

Each of the fields is separated by a space.

The heading of each input field is the Column Label of the corresponding data element if entered, otherwise it is the element clear name truncated to the field length.
(See Subchapter "DESCRIPTION", Chapter "DATA ELEMENTS" in the SPECIFICATIONS DICTIONARY Reference Manual).

The general screen heading displays the label entered in the NAME OF THE DETAIL LINE Dn field on the User Entity Definition screen.

NOTES

The points enumerated in the "NOTES" paragraph in the "DEFINITION"
Subchapter also apply to the UEO description, namely:

> .the input field length is not delimited,
> .no validation of input vis-a-vis the Dictionary.

Likewise, the validations associated with the User-Defined ships also apply,
except that on a UEO description line, several elements may be linked to other
entities, but the existence vaildation is the same for each element.

DESCRIPTION CONSTRAINTS

See the corresponding Subchapter in Chapter "THE USER ENTITY", paragraph
"DESCRIPTION ('1-9'-type lines)".

CORRESPONDING CHOICE

To access a User Entity Occurrence Description screen, enter the following input
in the CHOICE field:

```
                CH: $ttxxxxxxDnlll

where: 'tt' = User Entity Type code,
   'xxxxxx' = code of User Entity Occurrence,
        'n' = no. of description screen (1-9),
      'lll' = line number (optional).
```

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```
-------------------------------------------------------------------------------
!                       DOCUMENTATION            *DSDOCMLT.LILI.AN1.881 !
!                                       1                              !
! FILES                        ST CPTA03 3 ACCOUNTING UPDATE          !
! 2 3     <----------------------------- 4 ----------------------------> !
! A LIN : EXEC. COND.   DS      FILE NAME   UTILIZATION     UNIT       !
!   100 : NONE_____ UA____  CUSTOMER_B__ CONSULTATION__ CTF010     !
! E 110 : NIGHT_____ PA____  INVOICE T2__ UPDATE_____ CFT010     !
!   200 : NIGHT_____ PA____  INVOICE T2__ UPDATE_____ CTF010     !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!       : _____ _____  _____ _____ _____      !
!         UNKNOWN VALUE FOR   FILE UNIT                               !
! O: C1  CH: $ET CPTA03 D3                                            !
-------------------------------------------------------------------------------
```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		UEO CODE Alphanumeric code identifying the entity in the PACBASE Database.
2	1		ACTION CODE
3	3		NUMERO DE LIGNE (ALPHANUMERIC)
4	71		UEO DESCRIPTION LINE The UEO description line is directly built from the UE description. There are as many input fields as there are data element call lines ('1'- '9'-type lines) in the UE description. All elements are displayed on one line and separated by a space. Each input field is identified by under-scores ('_'). Each element has a column label header. For further details on the data elements' length and number, refer to Subchapter "DESCRIPTION CONSTRAINTS", Chapter "THE USER ENTITY".

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4.4. EXTRACTION   (EXUE)

EXTRACTION

The User Entity is used to add into the PACBASE Dictionary important
concepts necessary for the design and development of data processing
applications (methodology, planning, etc.), and for their implementation (setting
up of operating files, statistics, etc.).

The Extraction of User Entities (EXUE) procedure is used to extract UEO
information.

The EXUE procedure extracts data simply as records in a sequential file.

USER INPUT

An '*'-line per library to be consulted for the extraction:

```
---------------------------------------------------------
!POS.!LEN.! VALUE    ! MEANING                           !
---------------------------------------------------------
! 1 ! 1 ! ' '      ! BLANK                               !
! 2 ! 1 ! '*'      ! LINE CODE                           !
! 3 ! 8 ! uuuuuuuu ! USER CODE                           !
! 11 ! 8 ! pppppppp ! USER PASSWORD                      !
! 19 ! 3 ! bbb      ! LIBRARY CODE                       !
! 22 ! 4 ! nnnn     ! SESSION NUMBER                     !
! 26 ! 1 ! T        ! VERSION OF THE SESSION             !
---------------------------------------------------------
```

One command line per user entity:

```
---------------------------------------------------------
!POS.!LEN.! VALUE  ! MEANING                             !
---------------------------------------------------------
! 1 ! 1 ! ' '    ! BLANK                                 !
! 2 ! 4 ! 'W1EX' ! LINE CODE                             !
! 6 ! 1 ! '$'    ! EXTRACTION IDENTIFIER                 !
! 7 ! 1 !        ! LIBRARY SELECTION CODE:               !
!   !   ! 'U'    ! SELECTED LIBRARY                      !
!   !   ! 'C'    ! SELECTED LIBRARY & HIGHER LEVEL ONES  !
! 8 ! 2 ! tt     ! USER ENTITY TYPE CODE                 !
---------------------------------------------------------
```

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PRINTED OUTPUT

An extraction review is printed each time the EXUE procedure is executed and
indicates the number of extracted lines per library.

OUTPUT RESULT

The result of the EXUE procedure is a sequential file which contains the
selected UEO information.

The EXUE output file is sequentially organized and can be accessed by the user.
It is sorted in ascending sequence, the UE Type code being the major sort key,
and the session version the minor key.

EXUE OUTPUT FILE DESCRIPTION

The COMMON PART contains all of the PACBASE characteristics needed to
identify each extracted OEU line.

The format of the segment SPECIFIC PART depends on the UEO's extracted.
As a general rule, to define the various specific parts, the user should refer to the
description of the associated user entities.

However, data elements used in the description of user entities for which an
extraction code has not been entered, should be ignored.

Also, the format of numeric data elements must be entered with USAGE = D
(display), and must not contain decimals. (Refer to Chapter "THE USER
ENTITY", Subchapter "DESCRIPTION", paragraph "PROCESSING OF
NUMERIC DATA ELEMENTS".)

See the description of the EXUE output file below.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	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 '$' character. EXAMPLE: If the type code of the JOB User Entity is 'JO', the User Entity Occurrences will be coded as: '$JO_____'. In the EXUE sequential output file, the type code is the primary sorting key.
2	6		UEO CODE Alphanumeric code identifying the entity in the PACBASE Database.
3	2		SCREEN TOP/REPETITIVE IDENTIFIER
		Y3	Screen top: UEO's definition line.
		Y4	Repetitive category: UEO's description line.
4	1		DESCRIPTION TYPE This field is used to distinguish the various description lines related to a User Entity.
		0	UEO Definition line.
		1	Occurrence detail description line D1.
		2	Occurrence detail description line D2.
		3	Occurrence detail description line D3.
		4	Occurrence detail description line D4.
		5	Occurrence detail description line D5.
		6	Occurrence detail description line D6.
		7	Occurrence detail description line D7.
		8	Occurrence detail description line D8.
		9	Occurrence detail description line D9.
			There may be up to 11 '0'-type lines, and up to 12

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NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			lines of each of the other types.
5	3		LINE NUMBER
		blank	On the UEO screen-top, identifies the line containing the UEO name.
		000	On the UEO screen-top, identifies the line containing the UEO's definition.
		nnn	In the UEO's repetitive category, indicates the line number entered on-line.
6	1		NUMBER OF RECORDS
			This field indicates the number of database records which correspond to the extracted line (depending on the UE description, there may be from 1 to 3 records for each UEO definition and for each UEO description).
		blank	1 record.
		1	2 records.
		2	3 records.
7	3		U.E ITEM LIBRARY CODE
			Code of the library where the user entity occurrence is defined.
8	4		SESSION NUMBER
9	1		VERSION OF THE SESSION
			The 'version' pertains to historical or 'frozen' sessions only. (Ignore when accessing the current session).
		Z	Initial version This is used to consult a previously frozen session. The version will be in the same state as 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.
10	1		FILLER
11	80		SPECIFIC PART
			The description of the specific part depends on the description of the user entities processed by the EXUE procedure.
			- Data elements describing a user entity for which an

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			extraction code has not been entered should be ig-nored.
			- The format of numeric data elements must be entered with USAGE = D (display) and cannot contain deci-mals.

5. ACCESS MODE

5.1. ON-LINE ACCESS MODE

<u>USER ENTITIES</u>

LIST OF USER ENTITIES

```
CHOICE          SCREEN                              UPDATE
------          ------                              ------

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

DESCRIPTION OF USER ENTITY 'aaaaaa'

```
CHOICE          SCREEN                              UPDATE
------          ------                              ------

Faaaaaa         Definition of User Entity 'aaaaaa'.    YES

FaaaaaaGbbb     General Documentation for User Entity  YES
                'aaaaaa' (starting with line number
                'bbb').

FaaaaaaATbbbbbb Text assigned to User Entity 'aaaaaa'   NO
                (starting with text 'bbbbbb').

FaaaaaaX        X-references of User Entity 'aaaaaa'.   NO

FaaaaaaXVvvvvvv X-references of User Entity 'aaaaa' to  NO
                volumes (starting with volume 'vvvvvv').

FaaaaaaXQrrrrrr List of entities linked to User Entity  NO
                'aaaaaa' through User-Defined Relation-
                ship 'rrrrrr'.

FaaaaaaCEdnnn   Call of Elements of User Entity 'aaaaaa' YES
                (starting with description type 'd' and
                 line number 'nnn').

FaaaaaaL$oooooo List of occurrences for User Entity      NO
                'aaaaaa' (starting with occurrence 'oooooo')
```

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

All notations between parentheses are optional.

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 rela-tionship 'rrrrrr'.	YES
QrrrrrrGbbb	General documentation for user-defined relationship 'rrrrrr' (starting with general documentation line number 'bbb').	YES
QrrrrrrATbbbbbb	Text assigned to user-defined rela-tionship 'rrrrrr' (starting with text 'bbbbbb').	NO
QrrrrrrX	X-references of user-defined rela-tionship 'rrrrrr'.	NO
QrrrrrrX*	X-references of user-defined rela-tionship 'rrrrrr' in Entities.	NO
QrrrrrrXVvvvvvv	X-references of user-defined re-lationship '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 rela-tionship '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.

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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.

5.2. BATCH ACCESS MODE

USER ENTITY DEFINITION

BATCH FORM

Batch Form 'Y1' is used to define a User Entity.

ACTION CODES

. C = Line creation in the library,

. M = Modification of the line,

. Blank = Creation or modification, depending on the state of the library,

. X = Creation or modification with the possibility to insert the '&' character,

. A = Deletion of the User Entity if it has no dependent lines,

. B = Deletion of the User Entity, of its label and description lines and of all of
 its uses.

NOTE: A User Entity cannot be deleted if it has dependent U.E.O's.

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DETAIL LINE DEFINITION

BATCH FORM

Batch Form 'Y6' is used to define the UEO detail lines of the User Entity.
$.Y6

ACTION CODES

    . C = Line creation in the library,

    . M = Modification of the line,

    . Blank = Creation or modification, depending on the state of the library,

    . X = Creation or modification with the possibility to insert the '&' character,

    . A = Deletion of the line,

    . B = Multiple deletion starting with this line,

    . L = End of the multiple deletion.

<u>DESCRIPTION</u>

<u>BATCH FORM</u>

Batch Form 'Y2' is used to describe the User Entity.

<u>ACTION CODES</u>

. C = Line creation in the library,

. M = Modification of the line,

. Blank = Creation or modification, depending on the state of the library,

. X = Creation or modification with the possibility to insert the '&' character,

. A = Deletion of the line,

. B = Multiple deletion starting with this line,

. L = End of the multiple deletion.

DEFINITION OF USER-DEFINED
RELATIONSHIP

BATCH FORM

Batch Form 'Y5' is used to define a User-Defined Relationship.

ACTION CODES

. C = Line creation in the library,

. M = Modification of the line,

. Blank = Creation or modification depending on the state of the library,

. X = Creation or modification with the possibility to insert the '&' Character,

. A = Deletion of the Relationship if it is not used,

. B = Deletion of the Relationship and all of its uses.

<u>DEFINITION OF USER ENTITY OCCURRENCE</u>

<u>BATCH FORM</u>

Batch Form 'Y3' is used to define a UEO.

<u>ACTION CODES</u>

   . C = Line creation in the library,

   . M = Modification of the line,

   . Blank = Creation or modification depending on the state of the library,

   . X = Creation or modification with the possibility to insert the '&' Character,

   . A = Deletion of the UEO if it has no description line,

   . B = Deletion of the UEO and of all its description lines and uses.

<u>DETAIL LINE DESCRIPTION</u>

<u>BATCH FORM</u>

Batch Form 'Y4' is used to describe the detail lines of a UEO.

<u>ACTION CODES</u>

. C = Line creation in the library,

. M = Modification of the line,

. Blank = Creation or modification depending on the state of the library,

. X = Creation or modification with the possibility to insert the '&' Character,

. A = Deletion of the line,

. B = Multiple deletion starting with this line,

. L = End of the multiple deletion.

5.3. GENERATION AND/OR PRINTING

GENERATION AND/OR PRINTING

Lists and description reports may be obtained by entering certain commands, either on-line on the Generation and Print Commands (GP) screen, or in batch mode using Batch Form 'Z'. The COMMANDS FOR PRINT REQUEST are listed below.

LISTS

LCF: List of all User Entities, sequenced by code.

.C1 OPTION: Without keywords,
.C2 OPTION: With explicit keywords.

LKF: List of all User Entities, by keywords. The user may limit the keywords to explicit or implicit only. Keywords are specified on a continuation line, or in columns 31 to 80 in batch mode.

LCQ: List of all User-defined Relationships, sequenced by code.

.C1 OPTION: Same as LCF,
.C2 OPTION: Same as LCF.

LKQ: List of all User-defined Relationships, by keywords. The user may limit the keywords to explicit or implicit only. Keywords are specified on a continuation line, or in columns 31 to 80 in batch mode.

LC$: List of all User Entity Occurences sequenced by their type and code.

.C1 OPTION: Same as LCF.
.C2 OPTION: Same as LCF.

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<u>DESCRIPTIONS</u>

DCF: Definition, description and general documentation for   the User Entity
     entered in the ENTITY CODE field. If no code is specified, ALL User Entities
     are listed.

> .C1 OPTION: Provides definition, description, general
> documentation, and X-references,
> .C2 OPTION: With assigned text.

DCQ: Definition and general documentation for the User-defined Relationship
     entered in the ENTITY CODE field. If no code is specified, ALL User-
     defined Relationships are listed.

> .C1 OPTION: Provides definition, general documentation,
> and X-references,
> .C2 OPTION: With assigned text.

DC$: Definition, description and general documentation for the User Entity whose
     type is entered in the ENTITY CODE field; definition, description and general
     documentation for all User Entity Occurrences of this type.

> .C1 OPTION: Provides definition, description, general
> documentation, and X-references
> NOTE: Page skips generated between UEOs
> .C2 OPTION: Same as C1 plus assigned text.
> NOTE: Page skips generated between UEOs
> .C3 OPTION: Without assigned text and without page skip
> between UEOs
> .C4 OPTION: With assigned text and without page skip
> between UEOs

6. USER ENTITIES AND RELATIONS RESERVED FOR THE PRODUCT

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RESERVED CODES

The VisualAge Pacbase WorkStation, the PACBASE Access Facility (PAF+),
the PACBENCH Quality Control (PQC) and the PACBENCH-ENDEVOR
Interface use specific User Entities and Relations supplied with the product
when these modules are installed.

The codes of these User Entities and Relations begin with a period '.'.

To avoid conflict with these User Entities and Relations, it is highly
recommended NOT to create User Entities and Relations with codes beginning
with a period '.'.

Furthermore, for the same reason, it is also NOT recommended to create types
of User Entities whose code begins with a number.

The VisualAge Pacbase WorkStation User Entity codes (and their types) may be
printed via the GPRT batch procedure (PCM command associated with the code
identifying the Methodology in use).

For the following functions, the reserved codes are:
```
  - PACBASE Access Facility (PAF)
      F .PPTEX    type:  $ 7E

  - PACBENCH Quality Control (PQC)
      F .QPAQC    type:  $ 5Q

  - PACBENCH-ENDEVOR Interface
      F .NDVLM    type:  $ 7N
      Q .NDVRL
```