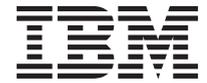


VisualAge Pacbase



Dictionary Extensibility

Version 3.5



VisualAge Pacbase



Dictionary Extensibility

Version 3.5

Note

Before using this document, read the general information under “Notices” on page v.

You may consult or download the complete up-to-date collection of the VisualAge Pacbase documentation from the VisualAge Pacbase Support Center at:

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Second Edition (March 2008)

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Chapter 1. Introduction

Purpose of the Manual

This Manual describes how to customize the VisualAge Pacbase Metamodel via the character-mode interface.

You can also use Administrator workbench to customize your Metamodel. In that case, please refer to its online help.

Presentation of the Customization Entities

VisualAge Pacbase manages standard entities (Data Element, Segment...) which represent concepts used during the normal life cycle of a project. These entities have a standard description.

But you can also adapt the data stored in the Database to the specific needs of your company by creating your own entities.

DEFINING CUSTOMIZATION ENTITIES

Customization entities are preferably defined and described in Administrator workbench, but you can also do it in the character-mode interface.

These entities are:

- Meta Entities,
- User Relations.

The Meta Entity (ME) enables you to:

- Define a new concept (e.g. a 'Service' concept).
- Customize the description of this concept by listing its characteristics, which are defined in the Repository by instances of the Data Element entity (the 'Service' ME is described by 'Service name', 'number of employees' and 'Site').

The User Relation (UR) enables you to create links between two entities (standard entity or Meta Entity). The cross-reference will be automatically managed.

USING CUSTOMIZATION ENTITIES

USING META ENTITIES

You use Meta Entities (ME) via User Entities (UE).

To know how to use them in Administrator workbench, see its online help.

In the character-mode interface, you enter User Entities on a screen whose composition depends on the Meta Entity.

Each UE has Definition and Description screens via which you valorize the Data Elements called in the Meta-Entity.

Example: From the 'Service' ME, you can define an 'Admin' UE with the following values: 'Administration', '50 employees' and 'Site 45'.

The User Entity is constituted of a Definition screen and from 0 to 333 Description screens, depending on the Meta-Entity.

User Entities are managed in the same way as standard entities. So you can:

- Assign keywords to them,
- Assign comments to them,
- Obtain lists, cross-references, etc.

USING USER RELATIONS

You use User Relations to link two entities. The link will be managed automatically.

Example: The Data Element which represents the site can be linked to the 'Site' Meta-Entity defined previously, to check that the site entered by the user is one of the company's site. This way, you set up a link between services and sites.

How to Use the Customization Entities

You can use customization entities in on-line or batch mode.

You can extract them with the Pacbase Access Facility module.

You can also extract their contents formatted as a sequential file with the EXUE procedure (included in the PACX procedure). Refer to the Developer's Procedures Manual.

You can call them in a Volume to print them in a user documentation.

You can finally perform a search on them via the Word Search screen (WS).

Chapter 2. Definition of the Customization entities

Meta-Entities

Presentation

The Meta Entity (ME) enables you to create concepts which are not standardly managed.

Once the ME has been defined and described, it is managed like any other entities.

GENERAL CHARACTERISTICS

The Meta Entity consists of:

- A required Definition, in which you specify its general characteristics (code, name, associated keywords) and its type.
- From 0 to 333 Descriptions, in which you list the Data Elements which make it up. This list will be used to build the input screens of the User Entities, i.e. the ME instances.
- As for any other entity, optional Comments.

Once the Meta Entity has been defined and described, you can enter the User Entity on a customized screen.

Definition

A Meta Entity is defined by a code, a name and a type.

This unique type (a uniqueness check is automatically performed) will be used, after a '\$', to indicate the UEs which come from this ME.

For example, from the 'JOB' ME, whose type is 'JO', you can specify the following UEs: '\$JOJOB1', '\$JOJOB2', '\$JOJOB3' etc...

CORRESPONDING CHOICE

The Meta Entity Definition is accessed by entering:

CH: Fxxxxxx

where 'xxxxxx' = ME code

DOCUMENTATION

*LT.LURE.DOC.7548

META ENTITY CODE..... : 1 STEP

NAME.....: 2 STEPS OF A BATCH JOB

TYPE: 3 ST

EXPLICIT KEYWORDS.: 4

UPDATED BY.....: PDCL ON : 02/10/2007 AT: 15:27:40 LIB: DOC
 SESSION NUMBER.....: 7547 LIBRARY.....: DOC LOCK...: Y

O: C1 CH: FSTEP

ACTION:

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		Meta Entity code
2	36		Meta Entity name
			This name should be as explicit as possible because it is used in the automatic constitution of keywords.
			This name is broken down into keywords as follows:
			. Blanks within the NAME are considered as delimiters; all equals ('=') and asterisks ("*") are replaced with blanks,
			. Words with more than 13 characters are truncated,
			. Only the first 10 words are taken into account,
			. Words of only one character are ignored.
			A certain number of non-keywords, i.e. empty words, are also ignored: THE, AN, AND, OR, OF, IS, ARE, OUT, IN, NOT, AT, BUT, IT, ON, NO, and IF, in the VA Pac English version.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			The French equivalents of those words are also eliminated: LE, LA, LES, UN, UNE, DES, ET, OU, SUR, EST, DE, DU, NE, NI, and EN. For languages other than English and French, empty words are not managed in this VA Pac version.
			For IMS material, uppercase letters are required.
3	2		Meta Entity Type
			It is an alphanumeric code entered upon creation and which characterizes the Meta Entity in all its uses (two Meta Entities cannot have the same type).
			The type cannot be modified if User Entities have already been defined for this ME.
			When used to define or describe a User Entity, this type is preceded by the '\$' character (example: if the 'JOB' ME type is 'JO', the User Entities are referenced by '\$JO.....').
4	55		Explicit keywords
			This field allows you to enter additional (explicit) keywords. By default, keywords are generated from the instance's name (implicit keywords).
			Keywords must be separated by at least one space. Keywords have a maximum length of 13 characters which must be alphanumeric. However, '=' and '*' are reserved for special usage and are therefore ignored in keywords.
			Keywords are not case-sensitive: uppercase and lower-case letters are equivalent.
			NOTE: Accented and special characters can be declared as equivalent to an internal value in order to optimize the search of instances by keywords (Administrator workbench, 'Window' menu, 'Parameters browser' choice, in 'Special Characters' tab).
			A maximum of ten explicit keywords can be assigned to one entity. For more details, refer to the 'Character Mode User Interface' guide, chapter 'Search for Instances', subchapter 'Searching by Keywords'.

Description

From the ME descriptions, you create the UE definition and descriptions (up to 333 descriptions possible).

There is one screen per description.

A ME description is constituted of a header and a list of Data Elements.

Header

The header contains three required fields:

- the description number, which will determine the description number of the UE (number 00 corresponds to the UE definition).
- the description label, which will be displayed in the header of the corresponding description in the UE.
- the description type, which enables you to specify whether the description will contain Data Elements or will only be used to store data from Administrator & Developer workbench or from the VisualAge Pacbase WorkStation.

The header also contains two optional fields:

- an exit-user, which enables you to implement a customized control on the Data Elements called in the description.

To know the Data Elements which you will have to use to write it, refer to chapter 'Appendix'.

For a standard control, refer to the paragraph 'List of Data Elements' hereafter.

- a parent description, which enables you to nest descriptions on various levels.

For example, the execution of a batch job involves the use of the following concepts:

```
JOB
--> Step
    --> Program
        --> etc.
```

The concept of 'job' is not represented by a standard Va Pac entity. Therefore, the ME 'job' should be defined.

Suppose that:

- its Description 01 is a series of steps:
- its Description 02 is the list of programs making up each step.

The Description 02 should be specified as the child of Description 01. This way, it will be possible to view, from an instance of the 'Job' ME, all the Programs it uses.

The nesting link can be viewed in the child description since the first part of its line identifier is the identifier of the parent description.

List of Data Elements

These Data Elements must exist in the Database. They will constitute the structure of the input screens of the UEs created from this ME.

A Data Element can be called only once per ME description.

You can request a standard control (format, presence, value) on a Data Element. To do so, you just have to enter the appropriate value on the Data Element's call line.

Note: You can also specify a customized control via an exit-user.

You can link a Data Element called in a ME to an entity type managed by VA Pac in order to check that a code entered in the UE is really an existing instance code for this entity type. To do so, you must call a User Relation on the Data Element's call line. This Relation, which must exist in the Database, links the Data Element to an entity type (standard or not)

Note: You will always be able to change/delete this call or delete the Description line which bears the Relation, even if User Entities have been created, provided you reorganize the Database (REOR procedure) afterwards.

CORRESPONDING CHOICE

The Meta Entity description is obtained by entering the following choice:

CH: FxxxxxxCE

where 'xxxxxx' = Meta Entity code

DOCUMENTATION *LT.LURE.DOC.7548
 META ENTITY CALL OF ELEMENTS: STEP 1 STEPS OF A BATCH JOB

A: 2 CODE: 00 3 LABEL : called program 4 TYPE: F 5
 PARENT DESCRIPTION: 6 EXIT-USER: 7

8 9	10	11 12	13 14	15 16	17	18 19
A LIN :	ELEM	ID NAT	U F P V	RELAT	TYP NAME	LENGTH I PI
*00 :	JOB COD	AA I U	0	RELJOB	\$CB JOB CODE	X(10)
*50 :	JOB NAM	AB N	0		JOB NAME	X(20)
*80 :	JOB CO1	RL S	0		JOB SHORT CODE	X(4)
100 :	PROGR	AC	0	RELPGM	P PROGRAM CODE	X(6)
120 :	TYPGM	VT L			PROGRAM TYPE	X(1)
130 :	LIB30	GV			LABEL	X(30)
140 :	PGSIZE	LM			PROGRAM SIZE	9(3)

O: C1 CH: -CE00

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		Meta Entity code (REQUIRED)
2	1		Action code
		'C'	Creation of the line
		M	Modification of the line
		D or 'A'	Deletion of the line
		T	Transfer of the line
		B	Beginning of multiple deletion
		G	Multiple transfer
		?	Request for HELP documentation
		E or '-'	Inhibit implicit update
		X	Implicit update without upper/lowercase transformation.
3	2		Description code
			The Data Elements from the description 00 of the ME will be displayed in the UE Definition.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			The Data Elements from the other descriptions of the ME will be displayed in the corresponding description of the UE.
4	15		Short name
5	1		Type
		O	old Indicates that the Description has been defined before Va Pac 3.0
		F	formatted The Description is meant to call Data Elements
		B	container The Description is meant to contain textual information from Developer workbench.
6	2	NUMER.	Parent Description
			You can enter the number of a parent description here. This enables you to nest descriptions on several levels.
			The line identifier of the child description must be a group field constituted of the parent description's identifier followed by the child description's identifier.
7	8		User exit
			You enter here the name of the user exit, if any, which performs a customized control on the Data Elements.
			This user exit only applies to the description on which it has been entered.
			You can write a user exit for the batch updates, and another user exit for the online updates. But you can also use the same user exit for the batch and online modes, provided it contains no 'EXEC CICS'.
			To know the Data Elements used to write a user exit, refer to chapter 'Appendix' in the 'Dictionary Extensibility' Manual.
8	1		Action code
		'C'	Creation of the line
		M	Modification of the line
		D or 'A'	Deletion of the line
		T	Transfer of the line
		B	Beginning of multiple deletion
		G	Multiple transfer
		?	Request for HELP documentation
		E or '-'	Inhibit implicit update

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		X	Implicit update without upper/lowercase transformation.
9	3		Line number
			The number of the first line must be *00. This line contains:
			. the Data Element which is the UE identifier on the description 00 (by default: 'COEU', whose length is 6 characters).
			. the Data Element which represents the identifier of the UE on the other descriptions.
			If it is group field, the elementary Data Elements which make it up must be entered on the next lines, numbered *01 to *49.
			Line *50 must be entered on the description 00 only. It must then contain the Data Element which corresponds to the UE name (by default: 'LOEU', whose length is 30 characters).
			Line *80 is optional. It contains the short identifier of the description. This identifier will make up the first part (i.e. the parent description's identifier) of the group which represents the line identifier of a child description if the long identifier exceeds 6 characters.
			If a description is to be deleted, the identifier lines must be deleted last, but before the header. They cannot be deleted when User Entities exist.
10	6		Data Element code
			Code of the called Data Element. The Data Element must exist in the Database.
			A Data Element can be called only once per description.
			You can call up to 80 Data Elements per description but the total sum of their internal formats cannot exceed 1000.
			You cannot call Unicode-type ('U' type) Data Elements.
			The 'NAME' field displays the Data Elements' short labels. These short labels will be displayed in the UE definition.
			The column labels will be displayed in the EU descriptions.
			If these labels are not defined, the name will be displayed (shortened to 18 characters if necessary).
			The internal format is displayed in the 'LENGTH' field.
11	2		Storage identifier

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			This identifier will be used to view sections of a UE definition or descriptions which do not fit in the screen size.
			This alphanumeric field is required on all the Data Elements' call lines.
		AA	Required value on the 'I'-nature Data Element's call line.
		AB	Required value on the 'N'-nature Data Element's call de nature 'N'.
			On the other lines, the value of this field is free but it must be unique in the description.
12	1		Nature
		I	Required value on the first line of all the ME descriptions (line number *00). On the description 00, it indicates the Data Element which represents the UE identifier. On the other descriptions, it indicates the Data Element which represents the identifier of the UE description line.
		E	Value for elementary Data Elements if the identifier Data Element (value 'I') is a group field (lines number *01 to *49).
		N	Required value. Only on the description 00 of the ME, on the call line of the Data Element which represents the UE name (line number *50).
		S	Optional value which represents the UE short identifier (line number *80). This identifier represents the same as the 'I'-nature identifier but its length is limited to 6 characters. It can be entered when a parent description is used, if the long identifier of the child exceeds 20 characters. The short identifier will then constitute the first part (i.e. the parent description's identifier) of the group field which represents the line identifier in the child description.
		L	Optional value. Only on a line of the description 00 of the ME. It marks a Data Element as a sort criterion for lists (LT\$ choice), beside the code and name criteria, which are automatically available.
		blank	Value for all the other lines.
13	1		Uppercase
			This field impacts the content of the data entered in the User Entity.
		blank	Lowercase letters are not transformed into uppercase.

NUM	ELEM	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		U	Lowercase letters are transformed into uppercase. This value is forced on the line where you enter a User Relation which links a standard entity.
14	1		Format control
		Blank	No control No format control
		F	Format control Control on the Data Element's format (numericity, date...)
		9	Numeric control Control on numericity (for an alphanumeric format)
15	1		Presence
			This field impacts the control of the data entered in the User Entity.
		blanc	No presence check
		O	The field must be entered. This value is forced for the identifier Data Elements and the label Data Element.
16	1		Value
			This field impacts the control on the data entered in the User Entity.
		blank	No value check
		E	Check against the values indicated on the Data Element. This check is performed only if the Data Element is present.
17	6		User Relation
			Calling a Relation enables you to link the Data Element specified in the 'ELEM' field to an entity type linked by the Relation (this type is indicated on the Relation definition).
			If you enter an existing Relation and validate, the 'TYPE' field automatically displays the entity type linked by the Relation.
			Then when the corresponding field is entered in the UE, VA Pac will check that the code entered is really a code of this entity type.
			The Data Element's length must correspond to the length of the instances of the entity type linked by the Relation, i.e. 2 characters for a Data Structure, 4 for a Segment...
			You cannot call Relations which do not exist in the Database.
			You can indicate up to 10 Relations per description.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			The Relation codes must be unique in the description. If the same entity type is used twice in the same description, you must specify two different Relations.
			Even if a Meta Entity is used via User Entities, you can modify/delete the Relation code specified on a Data Element, or delete the Description line which bears the Relation. However the Database must then be reorganized (via the REOR procedure) in order to delete all the links.
18	1		Parent ID
		blank	None (Default value)
		I	Long ID (Long ID of the parent Description)
		S	Short ID (Short ID of the parent Description)
		C	Calculated ID (ID calculated from the I-type ID of the parent Description)
19	1		Long ID
		Blank	Default value. VA Pac code, or for a User Entity, its long identifier (I-type line).
		S	Short identifier Reserved to User Relations whose linked entity type is the User Entity (S-type line).

Limitations

The Data Elements called in the Meta Entity Call of Elements will be displayed on the UE definition and descriptions.

The number and length of these Data Elements are limited.

Number of called Data Elements

The number of called Data Elements is limited to 80 per ME description.

Length of called Data Elements

The maximum length of a called Data Element is 159.

The length of the 'long identifier' (nature 'I') Data Element cannot exceed 30 in description 00 and 20 in the other descriptions.

The length of the 'Label' Data Element (in description 00) cannot exceed 36.

The length of the 'short identifier' Data Element (nature 'S') cannot exceed 6.

The length of the Data Element indicated as a sort criterion for lists (nature 'L' in description 00) cannot exceed 6.

Total length of the called Data Elements

The total length of a ME description is the sum of its Data Elements' internal formats, plus 5 characters per Data Element. This length must not exceed 1000.

```

Example  ELEM1 X(20)
          ELEM2 X(14)
          ELEM3 X(3)
          ELEM4 X
    
```

The total length is 25 + 19 + 8 + 6 = 58

Note: The 5 characters to be added for each Data Element correspond to the Data Element's storage value (3 characters) and storage identifier in the ME description (2 characters).

Access Mode

LIST OF META-ENTITIES		
CHOICE	SCREEN	UPDATE
-----	-----	-----
LCFaaaaaa	List of Meta-Entities by code (starting with Meta-Entity 'aaaaaa').	NO
LNFAaaaaaa	List of Meta-Entities by name (starting with Meta-Entity 'aaaaaa') (case sensitive).	NO
LTFaaaaaa	List of Meta-Entities by call type (starting with call code 'aaaaaa').	NO
DESCRIPTION OF META-ENTITY 'aaaaaa'		
CHOICE	SCREEN	UPDATE
-----	-----	-----
Faaaaaa	Definition of Meta-Entity 'aaaaaa'.	YES
FaaaaaaLD	List of Desc. for Meta-Entity 'aaaaaa' (with display of Desc. code, name and type, and parent Desc.).	NO NO
FaaaaaaGCbbb	Comments for Meta-Entity 'aaaaaa' (starting with line number 'bbb').	YES
FaaaaaaATbbbbbb	Text assigned to Meta-Entity 'aaaaaa' (starting with text 'bbbbbb').	NO
FaaaaaaX	X-references of Meta-Entity 'aaaaaa'.	NO
FaaaaaaXVvvvvvv	X-references of Meta-Entity 'aaaaaa' to Documents (starting with Document 'vvvvvv').	NO

FaaaaaaXQrrrrrr	X-references of Meta-Entity 'aaaaaa' to User Relation (starting with Rel. 'rrrrrr').	NO
FaaaaaaCR	Instances called by the Meta-Entity 'aaaaaa' via User Relations.	YES
FaaaaaaCEddnnn	Call of Elements of Meta-Entity 'aaaaaa' (starting with Description 'dd' and line number 'nnn').	YES
FaaaaaaL\$oo..oo	List of User Entities for Meta-Entity 'aaaaaa' (starting with UE 'oo..oo')	NO

After the first 'Faaaaaa' input in the CHOICE field, 'Faaaaaa' may be replaced with '-'.

All notations between parentheses are optional.

Print Commands

LCF: List of Meta-Entities sequenced by codes.

- C1 option: without keywords,
- C2 option: with keywords.

LKF: List of Meta-Entities, sequenced by keywords. This command must be followed by a continuation line where keywords must be entered.

DCF: Description of the Meta-Entity whose code is indicated in the 'Entity code' field. Description of all ME if the field is left blank.

- C1 option: without assigned texts,
- C2 option: with assigned texts.

LNf: List of Meta-Entities sequenced by name.

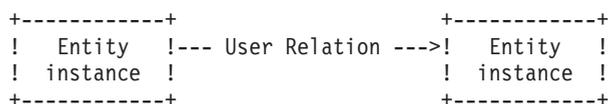
LTF: List of Meta-Entities sequenced by type.

User Relations

Presentation

The purpose of the User Relation 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:



General characteristics

A User Relation is constituted of a definition and comments.

Definition

You access the Definition of a User Relation via the choice:

Q rrrrrr

with: rrrrrr = RU code

On the definition, you:

- name the Relation,
- specify its type,
- indicate the type of the linked entity,
- may indicate a deletion flag.

DOCUMENTATION

*LT.LURE.DOC.7548

RELATION CODE 1 RELPGM

RELATION NAME.....: 2 PROGRAM CODE RELATION

SHORT NAME.....: 3 PROGRAM REL.

RELATION TYPE.....: 4 L

X-REFERENCED ENTITY TYPE.: 5 P

DELETION FLAG.....: 6

EXPLICIT KEYWORDS.: 7

UPDATED BY.....: PDCL

ON : 02/10/2007 AT: 10:27:20 LIB: DOC

SESSION NUMBER.....: 7547

LIBRARY.....: DOC LOCK...: Y

O: C1 CH: QRELPGM

ACTION:

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	6		User Relation code (REQUIRED)
2	36		Relation name (REQUIRED)
			This name should be as explicit as possible because it is used in the automatic constitution of keywords.
			This name is broken down into keywords as follows:
			. Blanks within the NAME are considered as delimiters; all equals ('=') and asterisks ('*') are replaced with blanks,
			. Words with more than 13 characters are truncated,
			. Only the first 10 words are taken into account,
			. Words of only one character are ignored.
			A certain number of non-keywords, i.e. empty words, are also ignored: THE, AN, AND, OR, OF, IS, ARE, OUT, IN, NOT, AT, BUT, IT, ON, NO, and IF, in the VA Pac English version.

NUMLEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		The French equivalents of those words are also eliminated: LE, LA, LES, UN, UNE, DES, ET, OU, SUR, EST, DE, DU, NE, NI, and EN. For languages other than English and French, empty words are not managed in this VA Pac version.
		For IMS material, uppercase letters are required.
3	15	Short name
4	1	User Relation Type (REQUIRED)
	blank	Indicates that the Description has been defined before VA Pac 3.0 You cannot create or modify this type of User Relation. You cannot call such a Relation in the -CR ('Called Entities') screen.
	C	Composition
		If you call a composition User Relation: . in the -CR screen of any entity instance, you must link the User Relation to an instance code that exists for the X-referenced entity type.
		. in a Meta Entity Description, an existing instance code will be required in the User Entity, in the field corresponding to the Data Element linked by the Relation.
		The instance that is X-referenced cannot be deleted if it is linked to this type of User Relation.
	F	Free If you call a free-type User Relation:
		. in the -CR screen of any entity instance, you can link the User Relation to an instance code that does not exist for the X-referenced entity type.
		. in a Meta Entity Description, you will be able to enter, in the User Entity, a code that does not exist, in the field corresponding to the Data Element linked by the Relation.
		A cross-reference with the linked instance is created, even though this instance is not defined in the VA Pac Repository.
		NOTE: A composition UR cannot be changed into a free UR and vice versa, if the UR is used.
5	3	X-Referenced Entity Type (REQUIRED)
	'**'	Library
	B	Database Block
	D	Data Structure
	E	Data Element

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		F	Client Meta Entity
		I	Input Aid
		M	Method
		O	Online Screen
		P	Program
		Q	Client User Relation
		R	Report
		S	Segment
		T	Text
		V	Volume
		ALL	All Such a Relation must have a 'Composition' type. It can be called in a Meta Entity Description, on a 33-character-long Data Element. The entity type will be chosen in the User Entities created from this Meta Entity.
		YCS	eBusiness Application
		YCE	Elementary Component
		YD1	Publishing Document
		YDO	Folder
		YD2	DTD
		YF1	External File
		YMS	Message
		YMC	Communication Monitor
		YOP	Operation
		YPT	Part
		YC1	SCM Interface Tool
		YSV	Service
		YSB	SOAP Binding
		YSI	I/T server
		YVL	Logical View
6	1		Deletion flag
		D	Setting of a deletion flag

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			When, in a Meta Entity Description, two User Entities are linked by a User Relation in which a deletion flag has been specified, the deletion of the first User Entity automatically entails the deletion of the second one. This cascaded deletion is possible only if the second User Entity is not already used.
		Blanc	No deletion flag
7	55		Explicit keywords
			This field allows you to enter additional (explicit) keywords. By default, keywords are generated from the instance's name (implicit keywords).
			Keywords must be separated by at least one space. Keywords have a maximum length of 13 characters which must be alphanumeric. However, '=' and '*' are reserved for special usage and are therefore ignored in keywords.
			Keywords are not case-sensitive: uppercase and lower-case letters are equivalent.
			NOTE: Accented and special characters can be declared as equivalent to an internal value in order to optimize the search of instances by keywords (Administrator workbench, 'Window' menu, 'Parameters browser' choice, in 'Special Characters' tab).
			A maximum of ten explicit keywords can be assigned to one entity. For more details, refer to the 'Character Mode User Interface' guide, chapter 'Search for Instances', subchapter 'Searching by Keywords'.

Access Mode

CHOICE -----	SCREEN -----	UPDATE -----
LCQrrrrrr	List of User Relations by code	NO
LTQrrrrrr	List of User Relations by type	NO
LNQrrrrrr	List of User Relations by name (case sensitive)	NO
DESCRIPTION OF USER RELATION 'rrrrrr'		
CHOICE -----	SCREEN -----	UPDATE -----
Qrrrrrr	Definition of User Relation 'rrrrrr'.	YES
QrrrrrrGCbbb	Comments on User Relation 'rrrrrr' (starting with Comments line number 'bbb').	YES

QrrrrrrCR	Instances called by User Relation 'rrrrrr' through User Relations.	YES
QrrrrrrATbbbbbb	Text assigned to User Relation 'rrrrrr' (starting with text 'bbbbbb').	NO
QrrrrrrX	X-references of User Relation 'rrrrrr'.	NO
QrrrrrrX*	X-references of User Relation 'rrrrrr' in Entities.	NO
QrrrrrrXVvvvvvv	X-references of User Relation 'rrrrrr' to Documents (starting with Document 'vvvvvv').	NO
QrrrrrrXQssssss	X-references of User Relation 'rrrrrr' to Relation 'sssss'.	NO
QrrrrrrXFaaaaaa	X-references of User Relation 'rrrrrr' to Meta-Entities (starting with Meta Entity 'aaaaaa').	NO

After the first 'Qrrrrrr'-type choice, 'Qrrrrrr' can be replaced with '-'. All notations between parentheses are optional.

Print Commands

LCQ: List of User Relations sequenced by code.

- C1 option: without keywords,
- C2 option: with keywords.

LKQ: List of User Relations sequenced by keyword. This command must be followed by a continuation line where keywords must be indicated.

DCQ: Description of the User Relation whose code is indicated in the 'Entity code' field. Description of all the User Relations if the field is left blank.

- C1 option: with assigned texts,
- C2 option: without assigned texts.

LNQ: List of User Relations sequenced by name.

Chapter 3. How to use the Customization Entities

Using Meta-Entities via User Entities

Introduction

Once a Meta-Entity is defined, described and possibly linked through a User Relation, it is managed like a standard entity.

You can then enter its instances, which are called User Entities (UE).

NOTE: You can extract the contents of the UEs in a sequential file with the EXUE procedure (included in PACX). For more details, refer to the Developer's Procedures Manual.

GENERAL CHARACTERISTICS

All the screens of a User Entity contain:

- a header (protected field),
- input fields.

Input in the User Entity is checked if it was requested in the Meta-Entity. Checks can be set on the values, the presence, or the format or can be customized.

For numeric Elements, a numeric validation is automatically performed if the called Element has a numeric format. The input is based on the integer part only.

The length of input fields corresponds to the extended internal format of Data Elements.

If one of the fields included in the User Entity is linked in a constraint way via a User Relation, this field will have to contain the code of an instance defined in the Database. If this field belongs to the User Entity Definition, the instance name will be displayed below the code entered by the user as soon as he/she validates the input. However if the field belongs to a User Entity Description, the instance name will not be displayed. To view it, you are advised to use Developer workbench;

Definition

The Definition of a UE contains a header (protected field) and a number of input fields.

Header

The header is made of:

- the Definition label,
- the call type and the Meta-Entity code,

Input fields

The first two input fields of the UE Definition are the code and label which identify the UE in the Database.

The label of the input lines is the short label of the Elements called in the ME or, if it is not defined, the name truncated to 18 characters.

The Definition of a User Entity may be constituted of more than one screen. To display all the screens in sequence, open the Definition screen and press the ENTER key. You can also display these screens via a specific choice (see the paragraph below 'Corresponding Choice').

If an input field contains more than 56 characters, it is displayed on several lines.

CORRESPONDING CHOICE

If 'tt' is the ME type, enter the following input in the choice field to access the UE Definition screen:

```
$ttx...xx IDii
```

where xx...xx = UE code (30 characters max.)

ii = storage identifier from which the definition is displayed. To know its value, contact your Administrator.

```

DOCUMENTATION                                *LT.LURE.DOC.7548

called program                                TYPE : ST                                META ENTITY : STEP

JOB CODE                                     : 1 ACCOUNT003
JOB NAME                                     : 2 ACCOUNTING UPDT

JOB SHORT CODE                             : | 0003
PROGRAM CODE                               : | MA03TA
PROGRAM TYPE                               : 3 INEXC1
LABEL                                       : | INVENTORY MANAGEMENT PROGRAM
PROGRAM SIZE                               : | 127

EXPLICIT KEYWORDS.: 4

UPDATED BY.....: PDCL                      ON : 05/10/2007 AT: 10:27:20 LIB: DOC
SESSION NUMBER.....: 7547                  LIBRARY.....: DOC LOCK...: Y

O: C1 CH: $ST ACCOUNT003                    ACTION:

```

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
1	30		User Entity Code
			It is an alphanumeric code of 1 to 30 characters which is used to reference the User Entity in the database.
			Warning: upper and lowercases are not equivalent.
2	36		User Entity name
			This name should be as explicit as possible because it is used in the automatic constitution of keywords.
			This name is broken down into keywords as follows:
			. Blanks within the NAME are considered as delimiters; all equals (=) and asterisks (*) are replaced with blanks,
			. Words with more than 13 characters are truncated,
			. Only the first 10 words are taken into account,
			. Words of only one character are ignored.
			A certain number of non-keywords, i.e. empty words, are also ignored: THE, AN, AND, OR, OF, IS, ARE, OUT, IN, NOT, AT, BUT, IT, ON, NO, and IF, in the VA Pac English version.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
			The French equivalents of those words are also eliminated: LE, LA, LES, UN, UNE, DES, ET, OU, SUR, EST, DE, DU, NE, NI, and EN. For languages other than English and French, empty words are not managed in this VA Pac version.
			For IMS material, uppercase letters are required.
3	58		Continuation of UE Definition
			The rest of the UE Definition is built directly from the Meta-Entity Description.
			Each Data Element is displayed on a line and is preceded by its short label.
4	55		Explicit keywords
			This field allows you to enter additional (explicit) keywords. By default, keywords are generated from the instance's name (implicit keywords).
			Keywords must be separated by at least one space. Keywords have a maximum length of 13 characters which must be alphanumeric. However, '=' and '*' are reserved for special usage and are therefore ignored in keywords.
			Keywords are not case-sensitive: uppercase and lower-case letters are equivalent.
			NOTE: Accented and special characters can be declared as equivalent to an internal value in order to optimize the search of instances by keywords (Administrator workbench, 'Window' menu, 'Parameters browser' choice, in 'Special Characters' tab).
			A maximum of ten explicit keywords can be assigned to one entity. For more details, refer to the 'Character Mode User Interface' guide, chapter 'Search for Instances', subchapter 'Searching by Keywords'.

Description

Each screen is composed of repetitive lines. Each line contains:

- An Action code field,
- A line identifier,
- An input space.

The input space is constituted of fields represented by underscores. The length of each field is based on the extended internal format of the Element which defines it.

Data can be entered outside the assigned input fields. However this data is truncated to the field length after validation.

Input fields are separated by a space.

The header of each input field is the column label of the Elements, on one line (see chapter 'Data Elements', subchapter 'Description' in the 'Data Dictionary' Manual).

NOTE: If a UE has a Parent Description as well as a Child Description, the Parent Description cannot be deleted if the Child Description has been filled in.

If the input field(s) exceed 67 characters, the Description is split up on more than one screen. To visualize the input screens which are too large to be fully displayed in the frame, position your cursor in a column and specify the storage identifier of the corresponding Element in the ME Description (see the paragraph below, 'Corresponding Choice').

CORRESPONDING CHOICE

The choice corresponding to the Description screen of a UE is the following:

```
$ttxx...xx Dnnll...ll IDii
```

with tt = UE type,

xx...xx = UE code (30 characters max.),

nn = number of the called Description
(optional),

ll...ll = Line number (optional, 20 characters max.)

ii = identifier from which the line is
displayed. To know the identifier's value,
contact your Administrator.

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
3	20		Line identifier
			It is an alphanumeric code that consists of 1 to 20 characters.
4	71		Continuation of UE Description
			All the Data Elements are displayed on one line and separated by a space. Each input field is identified by underscores ('_').
			Each Data Element is topped by its column name, on one line.

Access Mode

LIST OF USER ENTITIES

CHOICE -----	SCREEN -----	UPDATE -----
LC\$tt000000	List of UEs by code (starting with type 'tt', code '000000')	NO
LN\$tt000000	List of UEs by name (starting with type 'tt', code '000000') (case sensitive)	NO

If the 'U' field (Uppercase) is indicated in a Meta Entity description, the codes of the User entities belonging to the Meta Entity are automatically converted into uppercase when they are entered in lowercase letters.

LT\$tt000000	List of UEs by type (starting with type 'tt', code '000000')	NO
--------------	--	----

DESCRIPTION OF UE ('tt'TYPE and '000000' CODE)

CHOICE -----	SCREEN -----	UPDATE -----
\$tt000000 IDii	Definition of UE 'tt000000' (starting with identifier 'ii' (optional))	YES
\$tt000000GCbbb	Comments of UE 'tt000000' (starting with Comments line number 'bbb').	YES
\$tt000000ATbbbbbb	Text Assigned to UE 'tt000000' (starting with text 'bbbbbb')	NO
\$tt000000X	Cross-references of UE 'tt000000'	NO
\$tt000000XVvvvvvv	Cross-references of UE 'tt000000' to Volumes (starting with Volume 'vvvvvv').	NO

NUM	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		X	Implicit update without upper/lowercase transformation.
3	3		Line number
			NUMERIC FIELD
4	6		User Relation code
			This code must be that of an existing Relation.
			You cannot validate if you have not entered the instance code of the called entity.
			Once you have validated, the short name of the Relation and the type of the X-referenced entity will be automatically displayed according to the information entered in the Relation Definition.
5	30		Called entity code
			If the Relation is a Composition-type Relation (indicated on the Relation Definition), you must enter an existing instance code for the called entity type.
			However you can enter a code that does not exist if it is a free-type Relation (indicated on the Relation Definition).
			NOTE: If the called entity is a User entity, you only need to enter its code, without its call type.

How to view the uses of User Relations

The uses of User Relations can be seen on the 'Entities List Using...' screen.

This list displays all the linked entity instances, sequenced according to the X-references indicated on these occurrences's -CR.

This list displays the Relation code, the 'entities call' mention and the instance code on whose -CR the Relation is indicated.

TESTS AND PROGRAMS DOC.				*LT.LURE.DOC.7548
ENTITIES LIST USING	PROGRAM	COMPT1		
RELAT.	CALLING LLINE	LINE	CALLED ENTITY	LIBR
RELPGM	ENTITIES CALL	010	E RESULT	224
COMPTA	GENERAL ACCOUNTING current operations		P GENACC	

O: C1 CH: PCOMPT1 XQ

Chapter 4. Appendix: The Communication Area

To describe a user sub-program which controls the input in the User Entity, you need to know the composition of the communication area (with the length of its constituent Data Elements).

Note: This area is identical for the batch and online execution modes. For online CICS, it constitutes the whole DFHCOMMAREA.

POS	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	6		Meta Entity code
	2		META-ENTITY CALL TYPE
	2		DESCRIPTION NUMBER
	30		USER ENTITY CODE
	3	NUMER.	NUMBER OF DATA EL. IN DESCRIPTION
	3		Reserved field
	2		PARENT DESCRIPTION
		Blank	No parent description
	6		Reserved field
	1		ERROR GRAVITY
		'E'	Error (by default)
		W	Warning
	11		Reserved field
	66		ERROR MESSAGE
			ZONE GROUPE DESCRIPTION NUMBER OF REPETITIONS : 80
	6		DATA ELEMENT CODE
	2		RANK OF DATA ELEMENT IDENTIFIER
			This identifier is a reference point which enables you to display the Definition or a Description of a User Entity which exceeds the width of the input screen.
	1		DATA ELEMENT NATURE
		I	Long identifier
		N	Label
		S	Short identifier

POS	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
		L	Type
	1		FORMAT CHECK
		F	Check against the Data Element format
		9	Numericity check for an alphanumeric Data Element
		Blank	No check
	1		VALUE CHECK
		E	Value check
		blank	No value check
	1		PRESENCE CHECK
		blank	No presence check
		O	Presence required
	6		User Relation code
	10		DATA ELEMENT INTERNAL FORMAT
	3	NUMER.	DATA ELEMENT OUTPUT LENGTH
	1		RELATION TYPE
		blank	User Relation prior to VA Pac 3.0
		C	Composition User Relation (the instance linked by this Relation type must exist)
		L	Free User Relation (no existence constraint)
	3		TYPE OF LINKED ENTITY
	159		DATA ELEMENT VALUE BEFORE UPDATE
	159		DATA ELEMENT VALUE
	1		IDENTIFIER CALLED BY RELATION
		blank	VA Pac code or, for a User Entity, long identifier (I-type line).
		S	Short identifier (S-type line).
	1		Parent ID
		blank	None (Default value)
		I	Long ID (Long ID of the parent Description)
		S	Short ID (Short ID of the parent Description)
		C	Calculated ID (ID calculated from the I-type ID of the parent Description)
	3		LIBRARY CODE

POS	LEN	CLASS VALUE	DESCRIPTION OF FIELDS AND FILLING MODE
	4		SESSION NUMBER
	3		Reserved field
	1		SESSION STATUS
		blank	Initial session
		T	Test session
	4		Physical code of VA Pac Database
	1		LANGUAGE INDICATOR
		F	French.
		E	English.
	79		Reserved field
	1		Type of check to be carried out
			This field enables Exit-Users to:
			. know the origin of the request:
		B	Batch request (UPDT or UPDP procedure)
		P	Character-mode on-line request
		S	PUF request for syntactic checks
			. set a request for consistency check
		C	This value triggers consistency checks in the Termination server.
	132		Reserved field



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