VisualAge Pacbase 2.5

TANDEM OLSD
REFERENCE MANUAL

DDOTA000021A

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TABLE OF CONTENTS

1. PRESENTATION OF TANDEM TRANSACTIONS

1.1. INTRODUCTION

BRIEF DESCRIPTION OF THIS MANUAL'S CONTENTS

This manual presents a Screen described in and generated by the OLSD function. It is a complement to the ON-LINE SYSTEMS DEVELOPMENT (OLSD) Reference Manual, which is common to all on-line monitors.

This manual first shows the coding and then the organization of the generated programs.

The structure of a generated program is also detailed and commented upon so as to help users insert their own specific procedures that may be needed in the Screen.

It illustrates the following:

. The coding of Data Names,
. Descriptions of segments, screen, work areas, and communication areas,
. A complete lexicon of variables, indexes and fields used by the automatic functions,
. A description of the automatic functions, including their generation conditions. (Refer to Chapter "GENERATED PROGRAM: PROCEDURE DIVISION".)

NOTE: The Screen example described in this manual does not illustrate all generation possibilities provided by the OLSD function: segment accesses, cross-references between segments, access conditions, etc.

This manual does NOT contain an exhaustive presentation of the specific information on the use of the OLSD function.

REMINDERS ON THE OLSD FUNCTION

Based on the Screen descriptions, the OLSD function ensures the following:

- The automatic generation of the Screen map description from layout-type information. (Adaptation to the hardware and on-line monitor is based on an option specified at the Screen level.)

- The automatic generation of the Screen data processing from process-type information:

. Screen Call of Elements (-CE) -> Screen data processing

. Screen Call of Segments (-CS) -> External data processing

. Dialogue Complement (-O) and Dialogue and Screen General Documentation (-G) -> Generation Options

. Structured Code (-P) -> Specific processing

All processing is generated in a program structured in "Reception" and "Display", thus ensuring the complete processing of the Screen data.

The program is generated in COBOL. Adaptation to the hardware and the on-line Monitor is based on the options specified at the Screen level.

This manual describes the information required for description and generation of on-line transactions running on TANDEM computers under the PATHWAY system.

Since these transactions have a specific structure, programs written for another generation variant must be adapted before generation with the TANDEM variant.

1.2. STRUCTURE OF TANDEM TRANSACTIONS

STRUCTURE OF TANDEM TRANSACTIONS

Each screen accessed by end-users is associated with a SERVER and a REQUESTER.

The physical message is received by a REQUESTER which is written in SCOBOL. The requester transforms this message into a logical message and sends it to the associated SERVER which processes it (validation, access to files for update, display preparation, etc.).

Once the processing is complete, the SERVER sends the message back to the REQUESTER which either sends an answer to the terminal or branches to another REQUESTER.

UTILIZATION OF THE OLSD FUNCTION

Each screen of the TANDEM transaction is associated with two PACBASE screens, one being the REQUESTER, the other the SERVER.

The REQUESTER chaining is executed by the dynamic call of SCOBOL sub-programs. In order to facilitate their management and to ensure the conversation's continuity, a specific program is generated for each dialogue. This program manages the sub-program calls as well as the conversation exit.

A screen-chaining MONITOR will thus be generated at the Dialogue level.

2. DESCRIPTION OF A DIALOGUE OR SCREEN

2.1. DEFINITION

TANDEM DIALOGUES

TANDEM dialogues are managed by a monitor described through the Dialogue Definition (O..) and Complement (O..O) screens. Each screen of the dialogue is made up of two PACBASE screens, one being used as a SERVER, the other as a REQUESTER.

DEFINITION

(For more details, refer to the OLSD Reference Manual).

The Dialogue which generates the MONITOR must have the following characteristic:

. Value 'R' for the TYPE OF TP MONITOR field.

The screen which generates the REQUESTER must have the following characteristics:

. Value 'R' for the TYPE OF TP MONITOR field.

. PACBASE code of the associated SERVER for the EXTERNAL NAME OF MAP field.

. Type of terminal for the the TRANSACTION CODE field.

The screen which generates the SERVER must have the following characteristics:

. Value 'S' for the TYPE OF TP MONITOR field.

The associated REQUESTER name should be entered in the EXTERNAL NAME OF MAP field for documentary purpose.

The attributes of the REQUESTER automatically take the default values defined for the SERVER.

DESCRIPTION OF A DIALOGUE OR SCREEN 2
DEFINITION 1

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! ON-LINE SCREEN DEFINITION.........: DO0030                                   !
!                                                                              !
! SCREEN NAME.......................: ***  ORDER INPUT SCREEN  ***            !
!                                                                              !
! SCREEN SIZE (LINES, COLUMNS) .....:   24       080                           !
! LABEL TYPE, TABS, INITIALIZATION...:   L        01     * -                    !
! HELP CHARACTER SCREEN, DATA ELEMENT:   10       11                           !
!                                                                              !
!                                    LABELS   DISPLAY  INPUT  ER.MESS.  ER.FL!
! INTENSITY ATTRIBUTE ..............:   N        N        N        B        B !
! PRESENTATION ATTRIBUTE ...........:   N        N        N        N        N !
! COLOR ATTRIBUTE ..................:   W        W        W        W        W !
!                                                                              !
! TYPE OF COBOL AND MAP TO GENERATE..:   F * S     TANDEM (SERVER)            !
! CONTROL CARD OPTIONS FRONT & BACK..:            (PROGRAM)              (MAP)!
! EXTERNAL NAMES ...................:   DO030SER (PROGRAM)      DO003R   (MAP)!
! TRANSACTION CODE..................:   T16-6530                              !
!                                                                              !
!                                                                              !
! EXPLICIT KEYWORDS..:                                                         !
! SESSION NUMBER.....: 0249        LIBRARY......: ATA    LOCK....:             !
!                                                                    M 1       !
! O: C1 CH: Odo0030                    ACTION:                                 !
--------------------------------------------------------------------------------
```

DESCRIPTION OF A DIALOGUE OR SCREEN 2
DEFINITION 1

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! ON-LINE SCREEN DEFINITION.........: DO03R                                    !
!                                                                              !
! SCREEN NAME.......................: ** ORDERS **  REQUESTER                  !
!                                                                              !
! SCREEN SIZE (LINES, COLUMNS) .....:   24       080                           !
! LABEL TYPE, TABS, INITIALIZATION...:   L        01     * -                    !
! HELP CHARACTER SCREEN, DATA ELEMENT:   10       11                            !
!                                                                              !
!                                    LABELS   DISPLAY  INPUT  ER.MESS.  ER.FL!
! INTENSITY ATTRIBUTE ..............:   N        N        N        B        B !
! PRESENTATION ATTRIBUTE ...........:   N        N        N        N        N !
! COLOR ATTRIBUTE ..................:   W        W        W        W        W !
!                                                                              !
! TYPE OF COBOL AND MAP TO GENERATE..:   F   R     TANDEM (REQUESTER)         !
! CONTROL CARD OPTIONS FRONT & BACK..:           (PROGRAM)              (MAP)!
! EXTERNAL NAMES ...................:   DO030REQ (PROGRAM)      DO0030   (MAP)!
! TRANSACTION CODE..................:   T16-6530                             !
!                                                                              !
!                                                                              !
! EXPLICIT KEYWORDS..:                                                         !
! SESSION NUMBER.....: 0045        LIBRARY......: ATA    LOCK....:             !
! *** END ***                                                                  !
! O: C1 CH: Odo003r                    ACTION:                                 !
--------------------------------------------------------------------------------
```

2.2. DESCRIPTION

DESCRIPTION

The screen is fully described through the SERVER, in order to make the program easily portable between hosts. The REQUESTER Call of Elements (-CE) and Call of Segments (-CS) screens are not used.

```
--------------------------------------------------------------------------------
! PACBASE 8.0.2 B01 TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! ON-LINE DIALOGUE DEFINITION........: DO                                      !
!                                                                              !
! DIALOGUE NAME.....................: PACBASE DOCUMENTATION MANAG.             !
!                                                                              !
! SCREEN SIZE (LINES, COLUMNS) ......:   24       080                         !
! LABEL TYPE, TABS, INITIALIZATION...:   L        01       _                  !
! HELP CHARACTER SCREEN, DATA ELEMENT:   10       11                          !
!                                                                              !
!                                    LABELS   DISPLAY  INPUT  ER.MESS. ER.FLD!
! INTENSITY ATTRIBUTE ..............:   N        N        N        B        B !
! PRESENTATION ATTRIBUTE ...........:   N        N        N        N        N !
! COLOR ATTRIBUTE ..................:   W        W        W        W        W !
!                                                                              !
! TYPE OF COBOL AND MAP TO GENERATE..:   F   R     TANDEM (REQUESTER)         !
! CONTROL CARD OPTIONS FRONT & BACK..:            (PROGRAM)              (MAP)!
! EXTERNAL NAMES ...................:            (PROGRAM)              (MAP)!
! TRANSACTION CODE..................:   T16-6530                             !
!                                                                              !
!                                                                              !
! EXPLICIT KEYWORDS..: DOC                                                     !
! SESSION NUMBER.....: 0045        LIBRARY......: ATA    LOCK....:             !
!                                                                              !
! O: C1 CH: Odo                        ACTION:                                 !
--------------------------------------------------------------------------------
```

```
!                   TANDEM APPLICATION                          *PDMC.NDOC.ATA.2!
! DIALOGUE COMPLEMENT....:  DO PACBASE DOCUMENTATION MANAG.                     !
!                                                                               !
!                                                                               !
! COMMON AREA-DATA STRUCTURE CODE.......: CA                                    !
!                                                                               !
! ERROR MESSAGE FILE CHARACTERISTICS                                            !
!                       ORGANIZATION....: V                                     !
!                       EXTERNAL NAME...: DODOEM                                !
!                                                                               !
! FIRST SCREEN CODE OF THE DIALOGUE.....: 0060                                  !
!                                                                               !
! COMPLEMENTARY COMMON AREA LENGTH......:  700                                  !
!                                                                               !
! CODE OF PSB OR SUB-SCHEMA.............:                                        !
!                                                                               !
!                                                                               !
! OPTIONS : OCF F10 DYNPRT                                                      !
!                                                                               !
!                                                                               !
!                                                                               !
! SESSION NUMBER     : 0109  LIBRARY      : ATA                                 !
!                                                                               !
! O: C1 CH: Odo O                       ACTION:                                 !
```

```
--------------------------------------------------------------------------------
!                   TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! ON-LINE SCREEN GENERAL DOC.     DO     PACBASE DOCUMENTATION MANAG.           !
!                                                                               !
! A LIN : T COMMENT                                                       LIB   !
! . 200 : U DO12 THIS ITEM IS NOT AVAILABLE.                              *ACC  !
! . 220 : U CD30 TECHNICAL PROBLEM  CALL E.D.P. DEPT. (CODE DO-UTI-CD30)  *ACC  !
! . 240 : U CURS INVALID SELECTED LINE                                    *ACC  !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
!       :                                                                       !
! *** END ***                                                                   !
! O: C1 CH: Odo G                                                               !
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! ON-LINE SCREEN GENERAL DOC.     DO0030 ***  ORDER INPUT SCREEN  ***          !
!                                                                              !
! A LIN : T COMMENT                                                      LIB !
! . 020 : C      THIS SCREEN ALLOWS TO ENTER AN ORDER OF PACBASE          *ACC!
! . 030 : C      DOCUMENTATION PLACED BY A REFERENCED CLIENT.             *ACC!
! . 050 : C      FROM THIS SCREEN, YOU MAY ACCESS ANY OTHER SCREEN OF     *ACC!
! . 055 : C      THE DIALOG BY ENTERING THE CORRESPONDING CHOICE FIELD    *ACC!
! . 060 : C      VALUE. THE DIFFERENT VALUES ARE DISPLAYED IN THE         *ACC!
! . 070 : C      BOTTOM PART OF ALL THE DIALOG'S SCREENS.                 *ACC!
! . 120 : S CD05                                                          *ACC!
! . 122 : U F  8 TECHNICAL PROBLEM  CALL E.D.P. DEPT.(CODE 030-CD05 F8)   *ACC!
! . 124 : U F  9 TECHNICAL PROBLEM  CALL E.D.P. DEPT.(CODE 030-CD05 F9)   *ACC!
! . 130 : U G  9 TECHNICAL PROBLEM  CALL E.D.P. DEPT.(CODE 030-CD05 G9)   *ACC!
! . 150 : S CD10 R                                                        *ACC!
! . 152 : U F  8 INCORRECT UPDATE REQUEST.                                *ACC!
! . 154 : U F  9 INCORRECT REQUEST FOR CREATION.                          *ACC!
! . 160 : U G  9 END OF DISPLAY FOR THIS ORDER.                           *ACC!
! . 180 : S ME00 Z                                                        *ACC!
! . 190 : U G  9 TECHNICAL PROBLEM  CALL E.D.P. DEPT.(CODE 030-ME00 G9)   *ACC!
! . 200 : S FO10 R                                                        *ACC!
! . 210 : U F  9 MANUAL DOES NOT BELONG TO PACBASE DOCUMENTATION.         *ACC!
!                                                                              !
! O: C1 CH: Odo0030 G                                                          !
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! ON-LINE SCREEN GENERAL DOC.     DO0030 ***  ORDER INPUT SCREEN  ***          !
!                                                                              !
! A LIN : T COMMENT                                                      LIB !
! . 350 : F CODMVT                                                       *ACC!
! . 360 : C      AN ACTION CODE MUST BE ENTERED.                         *ACC!
! . 400 : F FOURNI                                                       *ACC!
! . 402 : C      THE FIELD 'ITEM' IS ENTERED WITH THE 3-CHARACTER CODE   *ACC!
! . 403 : C      OF THE MANUAL. IT IS NOT POSSIBLE TO ENTER              *ACC!
! . 404 : C      REQUESTS CONCERNING THE BINDERS.                        *ACC!
! . 430 : U    A THIS PROCEDURE DOES NOT PERMIT TO ORDER BINDERS.        *ACC!
! . 450 : F MATE                                                         *ACC!
! . 451 : T    0 DOCUM DD                                                *ACC!
! . 453 : U    5 THIS TYPE OF HARDWARE IS NOT SUPPORTED BY PACBASE.      *ACC!
! . 500 : F QTMAC                                                        *ACC!
! . 510 : C      THE 'QUANTITY ORDERED' FIELD MUST BE ENTERED WITH THE   *ACC!
! . 520 : C      NUMBER OF COPIES NEEDED FOR THE SPECIFIED MANUAL.       *ACC!
! . 530 : C      ACCORDING TO STOCK AVAILABILITY, THE SYSTEM FILLS IN     *ACC!
! . 540 : C      THE 'QUANTITY DELIVERED' AND, IF NEEDED, THE 'QUANTITY  *ACC!
! . 541 : C      OUTSTANDING'.                                           *ACC!
! . 600 : F INFOR                                                        *ACC!
! . 610 : C      THE 'REMARKS' COLUMN ALLOWS TO ENTER SPECIFICS          *ACC!
! . 625 : C      CONCERNING THE LEAD TIMES OF OUTSTANDING ORDERS.        *ACC!
! O: C1 CH:                                                                  !
--------------------------------------------------------------------------------
```

```
!                  TANDEM APPLICATION                          *PDMC.NDOC.ATA.2!
! SCREEN CALL OF ELEM... DO0030 ***  ORDER INPUT SCREEN  ***                    !
!                                                                              !
! A LIN : D.ELEM . PHYSICAL ATTRIBUTES   . VALIDATION UPDATE .  DISPLAY        !
!       :        . P LN COL N L C HR VR  .  P V U UPD TARGET .  S SOURCE     LV!
! ..............................................................................!
! . 050 : DOAP30 . A 01 001 S            .                   .                 !
! . 080 : DOAP04 . A 01 001 S            .                   .                 !
! . 100 : DO0030 . A 01 025 T            .                   .                 !
! . 110 : NUCOM  . A 03 004 P U          .                   .    CA00         !
! . 120 : MATE   .      003 V U          .  R     CD05       .    CD05         !
! . 122 :        .                       .      V SPECIAL    .                 !
! . 125 : RELEA  .      012 V U          .  R     CD05       .    CD05         !
! . 130 : NUCLIE .   01 004 O U          .                   .                 !
! . 140 : RAISOC .      003 P F          .                   .    CA00         !
! . 145 : RUE    .   01 009 V F          .                   .                 !
! . 150 : COPOS  .      003 V F N        .  R   P 93CP       .    WP30         !
! . 155 :        .                       .        CD05COPOS  .    CD05COPOS    !
! . 160 : VILLE  .      003 F F          .                   .    CD05         !
! . 200 : REFCLI .   01 004 V U N        .        CD05       .    CD05         !
! . 210 : DATE   .      003 V U N        .  R     CD05       .    CD05         !
! . 220 : CORRES .   01 005 V U N        .  P     CD05       .    CD05         !
!                                                                              !
! O: C1 CH: Odo0030 CE                                                         !
```

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! SCREEN CALL OF ELEM... DO0030 ***  ORDER INPUT SCREEN  ***                    !
!                                                                              !
! A LIN : D.ELEM . PHYSICAL ATTRIBUTES   . VALIDATION UPDATE .  DISPLAY        !
!       :        . P LN COL N L C HR VR  .  P V U UPD TARGET .  S SOURCE     LV!
! ..............................................................................!
! . 230 : REMIS  .      003 V U N         .        CD05       .    CD05         !
! . 300 : LINE   . A 10 001 R 1   01 09  .                    .                 !
! . 305 : CODMVT .      003 V   Y         .    I              .                 !
! . 310 : FOURNI .      003 V             .  R T   CD00       .    CD00         !
! . 320 : QTMAC  .      003 V             .  R X   CD10       .    CD10         !
! . 325 :        .                        .      + FO10QTMAM  .                 !
! . 330 : QTMAL  .      002 F             .                   .    CD10         !
! . 335 : QTMAR  .      002 F             .                   .                 !
! . 340 : INFOR  .      001 V             .  P X   CD10       .    CD10         !
! . 350 : END    .      004 Z             .                   .                 !
! . 400 :        . A 20 002 L             .                   .                 !
! . 405 : EDIT   .      001 V F           .    I   CD20       .                 !
! . 415 : DOAP31 . A 20 001 S             .                   .                 !
! . 500 : DOAP02 . A 22 001 S             .                   .                 !
!       :        .                        .                   .                 !
!       :        .                        .                   .                 !
!                                                                              !
! O: C1 CH:                                                                    !
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! SCREEN CALL OF ELEM... DO0030 ***  ORDER INPUT SCREEN  ***                    !
!                                                                              !
! A LIN : D.ELEM . PHYSICAL ATTRIBUTES         . LABEL                         !
!       :        . P LN COL N L HR VR IN PR CO . T LITERALS                    !
! ..............................................................................!
! . 050 : DOAP30 . A 01 001 S                  .                               !
! . 080 : DOAP04 . A 01 001 S                  .                               !
! . 100 : DO0030 . A 01 025 T                  .                               !
! . 110 : NUCOM  . A 03 004 P U                .                               !
! . 120 : MATE   .      003 V U                .                               !
! . 122 :        .                             .                               !
! . 125 : RELEA  .      012 V U                .                               !
! . 130 : NUCLIE .   01 004 O U                .                               !
! . 140 : RAISOC .      003 P F                .                               !
! . 145 : RUE    .   01 009 V F                . P 84, OLD TOWNLINE ROAD       !
! . 150 : COPOS  .      003 V F                .                               !
! . 155 :        .                             .                               !
! . 160 : VILLE  .      003 F F                .                               !
! . 200 : REFCLI .   01 004 V U                .                               !
! . 210 : DATE   .      003 V U                . I ..__..                      !
! . 220 : CORRES .   01 005 V U                .                               !
!                                                                              !
! O: C2 CH: Odo0030 CE                                                         !
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! SCREEN CALL OF ELEM... DO0030 ***  ORDER INPUT SCREEN  ***                    !
!                                                                              !
! A LIN : D.ELEM . PHYSICAL ATTRIBUTES         . LABEL                         !
!       :        . P LN COL N L HR VR IN PR CO . T LITERALS                    !
! ..............................................................................!
! . 230 : REMIS  .      003 V U                .                                !
! . 300 : LINE   . A 10 001 R 1 01 09          .                                !
! . 305 : CODMVT .      003 V                  .                                !
! . 310 : FOURNI .      003 V                  .                                !
! . 320 : QTMAC  .      003 V                  .                                !
! . 325 :        .                             .                                !
! . 330 : QTMAL  .      002 F          B       .                                !
! . 335 : QTMAR  .      002 F                  .                                !
! . 340 : INFOR  .      001 V                  .                                !
! . 350 : END    .      004 Z                  .                                !
! . 400 :        . A 20 002 L                  .   PRINTING OF FORM  :/         !
! . 405 : EDIT   .      001 V F                .                                !
! . 415 : DOAP31 . A 20 001 S                  .                                !
! . 500 : DOAP02 . A 22 001 S                  .                                !
!       :        .                             .                                !
!       :        .                             .                                !
!                                                                              !
! O: C2 CH:                                                                    !
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                          *PDMC.NDOC.ATA.2!
! ON-LINE SCREEN CALL OF SEGM. DO0030 ***  ORDER INPUT SCREEN  ***              !
! ...CA00...CD05...WP30..*CD00..*CD10..*FO10..£CD20.............................!
! A SEGM      :   USE PREC ACCESS KEY     ACCESS     D EXTERNAL LIB. S    :LIB !
! C CODE C LN : G R D SEGM SOURCE         KEY    B O T NAME     SEGM N LV :    !
! . CD05   00 :   M A      SPACES         KEYCD    V   DOCD00   CD05   12 :*ACC!
!   CD05   02 :            "B"            COCARA                          :0021!
!   CD05   04 :            CA00-NUCOM     NUCOM                           :0021!
! . CD10 R 00 :   T        "C"            KEYCD    V   DOCD00   CD10       :*ACC!
!   CD10 R 02 :            CA00-NUCOM     NUCOM                           :0021!
!   CD10 R 04 :            0030-FOURNI    FOURNI                          :0021!
!   CD10 R 06 :     A      SPACES         KEYCD                           :0021!
!   CD10 R 08 :            "C"            COCARA C                        :0021!
!   CD10 R 10 :            CA00-NUCOM     NUCOM  C                        :0021!
! . FO10 R 00 :   M N CD10 0030-FOURNI    CLEFO    V 1 DOFO00   FO10       :*DCC!
!   FO10 R 02 :            CA00-LANGU     LANGU                           :0021!
!   FO10 R 04 :            0030-RELEA     RELEA                           :0021!
!   FO10 R 06 :            0030-MATE      MATE                            :0021!
! . CD20 Z 00 :   X N      SPACES         KEYCD    V   DOCD00   CD20       :*ACC!
!   CD20 Z 02 :            "E"            COCARA                          :0021!
!   CD20 Z 04 :            CA00-NUCOM     NUCOM                           :0021!
! . ME00 Z 00 :   N A      CA00-CLEME     CLEME    V   DOME00   ME00       :*DCC!
!                                                                           !
! O: C1 CH: Odo0030 CS                                                      !
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! ON-LINE SCREEN CALL OF P.M.S.......:     DO0030 ***  ORDER INPUT SCREEN  *** !
!                                                                              !
! A   MACRO  LN C : COMMENTS OR PARAMETER VALUES                    D E        !
! .   AADOCP      : WP/                                                        !
! .   BBDEBR      :                                                            !
! .   BBINIT      :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                 :                                                            !
!                                                                              !
! O: C1 CH: Odo0030 CP                                                         !
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
!                   TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! WORK AREAS.........ENTITY TYPE O DO0030 ***  ORDER INPUT SCREEN  ***         !
!                                                                              !
! CODE FOR PLACEMENT..:      BB                                                !
! A LIN T LEVEL OR SECTION WORK AREA DESCRIPTION                       OCCURS!
! . 200 I 01               WW10-QTMAR                                          !
! . 201                    VALUE ZERO.                                         !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
! O: C1 CH: Odo0030 W                                                          !
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! WORK AREAS.........ENTITY TYPE O DO0030 ***  ORDER INPUT SCREEN  ***         !
!                                                                              !
! CODE FOR PLACEMENT..:      WP                                                !
! A LIN T LEVEL OR SECTION WORK AREA DESCRIPTION                       OCCURS!
! * 000   01                 WP00.                                             !
! * 010    02                WP10.                                             !
! * 020     05               FILLER PIC X(25) VALUE                            !
! * 030                      "23400BRISBANE           ".                       !
! * 040     05               FILLER PIC X(25) VALUE                            !
! * 050                      "56400VICTORIA           ".                       !
! * 060     05               FILLER PIC X(25) VALUE                            !
! * 070                      "76500ALICE SPRINGS      ".                       !
! * 080     05               FILLER PIC X(25) VALUE                            !
! * 090                      "55300MELBOURNE          ".                       !
! * 100     05               FILLER PIC X(25) VALUE                            !
! * 110                      "11000CANBERRA           ".                       !
! * 120     05               FILLER PIC X(25) VALUE                            !
! * 130                      "34500PERTH              ".                       !
! * 140     05               FILLER PIC X(25) VALUE                            !
! * 150                      "85270DARWIN             ".                       !
! * 160     05               FILLER PIC X(25) VALUE                            !
!                                                                              !
! O: C1 CH:                                                                    !
--------------------------------------------------------------------------------
```

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDMC.NDOC.ATA.2!
! WORK AREAS.........ENTITY TYPE O DO0030 ***  ORDER INPUT SCREEN  ***         !
!                                                                              !
! CODE FOR PLACEMENT..:      WP                                                !
! A LIN T LEVEL OR SECTION WORK AREA DESCRIPTION                       OCCURS!
! * 170                      "94000HOBART              ".                      !
! * 180     05               FILLER PIC X(25) VALUE                            !
! * 190                      "89300SYDNEY              ".                      !
! * 300    02                WP20 REDEFINES WP10 OCCURS 9.                 9  !
! * 320 E   05               WP20-COPOS .                                      !
! * 340 E   05               WP20-VILLE .                                      !
! * 400    02                WP30.                                             !
! * 410 I   05               WP30-COPOS .                                      !
! * 500    02                WP40.                                             !
! * 510 E   05               WP40-VILLE.                                       !
! * 520 E   05               WP40-VILLEL.                                      !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
!                                                                              !
! O: C1 CH:                                                                    !
--------------------------------------------------------------------------------
```

```
            FUNCTION : 02
ASF LIN OPE OPERANDS                        LVTY CONDITION
*CP     N   INIT. NUMBER OF LOADED ITEMS    10BL
*CP 100 M   IWP20M IWP20L
--- --- --- ----------------------------------- --------------------
            FUNCTION : 08
ASF LIN OPE OPERANDS                        LVTY CONDITION
*BB     N   NO UPDATE ==> END OF RECEIVE    10IT OPER NOT = "M"
*BB 100 GFT
--- --- --- ----------------------------------- --------------------
            FUNCTION : 15
ASF LIN OPE OPERANDS                        LVTY CONDITION
.AA     N   INITIALIZATION CATM (HEADING)   10IT CATX = SPACE
.AA 100 M   "M" CATM                          AN OPER = "M"
--- --- --- ----------------------------------- --------------------
            FUNCTION : 20
ASF LIN OPE OPERANDS                        LVTY CONDITION
.BB     N   ITEM NOT AVAILABLE              10*A FOURNI
.BB 100 ERR A FOURNI                        99IT I-0030-FOURNI = "CLA"
.BB 110 GF                                    AN CATM NOT = SPACE
--- --- --- ----------------------------------- --------------------
            FUNCTION : 25
ASF LIN OPE OPERANDS                        LVTY CONDITION
.BB     N   ACCESS TO FO10                  12*P CD10
.BB 100 M   "1" CD10-CF
--- --- --- ----------------------------------- --------------------
            FUNCTION : 28
ASF LIN OPE OPERANDS                        LVTY CONDITION
.BH     N   STOCK UPD.: ORDER DELETION/UPD  10IT (CATM = "A" OR "M")
.BH 100 A   CD10-QTMAL FO10-QTMAS             AN CATX = "R"
.BH 120                                       AN CAT-ER = SPACES
--- --- --- ----------------------------------- --------------------
            FUNCTION : 30
ASF LIN OPE OPERANDS                        LVTY CONDITION
.BD     N   QUANTITY PROCESSING             10*P R
--- --- --- ----------------------------------- --------------------
.BF     N   CALC. DELIV. QUANT.   STOCK UPD.12IT CATM = "C" OR "M"
.BF 100 M   I-0030-QTMAC  CD10-QTMAL        99IT FO10-QTMAS NOT <
.BF 110                                         I-0030-QTMAC
.BF 120 M   FO10-QTMAS    CD10-QTMAL        99EL
.BF 130 S   CD10-QTMAL    FO10-QTMAS        99BL
.BF 140 M   CD10-QTMAL    O-0030-QTMAL
--- --- --- ----------------------------------- --------------------
            FUNCTION : 64
ASF LIN OPE OPERANDS                        LVTY CONDITION
*DA     N   PREPARATION DISPLAY DATE/HOUR   10IT CATX = " "
*DA  40 AD6
*DA  80 AD  IM DATOR DAT8C
*DA 120 TIM                                 99BL
*DA 160 TIF TIMCOG TIMDAY
--- --- --- ----------------------------------- --------------------
            FUNCTION : 65
ASF LIN OPE OPERANDS                        LVTY CONDITION
.BB     N   REMAINS TO BE DELIVERED         10*P R
.BB 100 C   WW10-QTMAR =                    99IT CD10-QTMAL NOT = ZERO
.BB 110     CD10-QTMAC - CD10-QTMAL
.BB 120 M   WW10-QTMAR   O-0030-QTMAR
--- --- --- ----------------------------------- --------------------
            FUNCTION : 93
ASF LIN OPE OPERANDS                        LVTY CONDITION
*CP     N   ZIP CODE VALIDATION             10BL
*CP 100 SCH WP20-COPOS WP30-COPOS
*CP 200 M   "5" DEL-ER                      99IT IWP20R > IWP20L
*CP 220 GT  10
--- --- --- ----------------------------------- --------------------
```

2.3. SIMULATION

SIMULATION

Since the screen is described through the SERVER, the simulation may only be displayed from this screen.

```
--------------------------------------------------------------------------------
!   XXXXXXXX - 0808      ***  ORDER INPUT SCREEN  ***       XXXXXXXXXX 14:45:36!
!                                                                               !
!   ORDER NUMBER: 02345   SYSTEM: IBM.V.OS            RELEASE:                  !
!   CUST.    BEST     D.P. MANAGEMENT                                           !
!        84, OLD TOWNLINE ROAD                       48016   CINCINNATI         !
!   CUST. REF.: LP-KCP  ORDER NUMBER: 05179      ORDER DATE: ..__..             !
!    COORDINATOR: MR. GUY DANCE               DISCOUNT RATE:    12.25          !
!                                                                               !
!  A   ITEM     ORDERED   DELIV.   OUTST. REMARKS                               !
!  C   DLG       3         1        2     REST TO BE DELIVERED : 05/03/93      !
!  .   ...      ..        ..       ..     ..................................   !
!  .   ...      ..        ..       ..     ..................................   !
!  .   ...      ..        ..       ..     ..................................   !
!  .   ...      ..        ..       ..     ..................................   !
!  .   ...      ..        ..       ..     ..................................   !
!  .   ...      ..        ..       ..     ..................................   !
!  .   ...      ..        ..       ..     ..................................   !
!  .   ...      ..        ..       ..     ..................................   !
!                                                                               !
! PRINTING OF FORM  : O            UPD : PF07, ORDERS (NEXT) : PF08,            !
! MENU : PF01, CUSTOMER LIST : PF02, CUST. HIST : PF03, ORDER LIST : PF04,      !
! END : PF12 SCREEN DOC : PF10,  DATA EL. DOC : PF11,                           !
! PLEASE CHECK YOUR MAILBOX, THANK YOU.                                         !
! XXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXXX  !
--------------------------------------------------------------------------------
```

3. GENERATED MONITOR

3.1. INTRODUCTION

INTRODUCTION

The MONITOR, which manages screen branching, is generated from the Dialogue Definition (O..) and Complement (O..O) screens.

In addition to standard fields (refer to Chapter "GENERATED SERVER"), the WORKING-STORAGE SECTION includes the COMMUNICATION MONITOR level, which contains the fields used for communicating with SERVERs and REQUESTERs.

The MONITOR procedure has the following structure:

F01 : Initialization and loading of the first REQUESTER name in a technological field.

F28 : Branching technological field to the various screens by dynmamic call to the various screens by dynamic call and transfer of the communication area, depending on the value of the technological field.

F28 : Branching to the conversation exit routine or another dialogue screen, depending on the value of OPER.

F81 : Abnormal end routine called by CALL.

The user may add specific processing to the automatically genrated program.

3.2. GENERATED PROGRAM

```
IDENTIFICATION DIVISION.                                              
PROGRAM-ID. DO.                                                    DO 
AUTHOR.     PACBASE DOCUMENTATION MANAG.                           DO 
DATE-COMPILED. 03/11/93.                                           DO 
ENVIRONMENT DIVISION.                                              DO 
CONFIGURATION SECTION.                                             DO 
SOURCE-COMPUTER. T16.                                              DO 
OBJECT-COMPUTER. T16,                                              DO 
       TERMINAL IS T16-6530.                                       DO 
DATA DIVISION.                                                     DO 
WORKING-STORAGE SECTION.                                           DO 
01   WSS-BEGIN.                                                    DO 
     05 FILLER PICTURE X(7) VALUE "WORKING".                      DO 
     05 IK     PICTURE X.                                         DO 
     05 BLANC  PICTURE X VALUE SPACE.                             DO 
01   PACBASE-CONSTANTS.                                            DO 
     05 SESSI  PICTURE X(5) VALUE "0314 ".                        DO 
     05 LIBRA  PICTURE X(3) VALUE "ATA".                          DO 
     05 DATGN  PICTURE X(8) VALUE "03/11/93".                     DO 
     05 PROGR  PICTURE X(6) VALUE "DO    ".                       DO 
     05 PROGE  PICTURE X(8) VALUE "DO      ".                     DO 
     05 TIMGN  PICTURE X(8) VALUE "16:54:12".                     DO 
     05 USERCO PICTURE X(8) VALUE "PDSG    ".                     DO 
01      COMMON-AREA.                                               *AA000
     02 K-PROGR  PICTURE X(6).                                     *AA000
     02           CA00.                                           *AA001
       10         CA00-CLECD.                                     *AA001
        15        CA00-NUCOM  PICTURE 9(5).                       *AA001
       10         CA00-CLECL1.                                    *AA001
        15        CA00-NUCLIE PICTURE 9(8).                       *AA001
       10         CA00-ME00.                                      *AA001
        15        CA00-CLEME.                                     *AA001
         20       CA00-COPERS PICTURE X(5).                       *AA001
         20       CA00-NUMORD PICTURE XX.                         *AA001
        15        CA00-MESSA  PICTURE X(75).                      *AA001
       10         CA00-PREM   PICTURE X.                          *AA001
       10         CA00-LANGU  PICTURE X.                          *AA001
       10         CA00-RAISOC PICTURE X(50).                      *AA001
     02   K-SDOC   PICTURE X.                                     *AA002
     02   FILLER   PICTURE X(37).                                 *AA002
     02  FILLER      PICTURE X(0700).                             *AA002
01   PACBASE-INDEXES COMPUTATIONAL.                                *AA200
     05 K01         PICTURE S9(4).                                *AA200
     05    5-CA00-LTH  PICTURE S9(4) VALUE +0147.                 *AA200
01          COMMUNICATION-MONITOR.                                 *00010
       02    S-WWSS.                                             *00010
       10    S-WWSS-CDRET  PICTURE S9(4) COMP.                   *00010
       10    S-WWSS-OPER   PICTURE X.                            *00010
       10    S-WWSS-ICF    PICTURE X.                            *00010
       10    S-WWSS-OCF    PICTURE X.                            *00010
       10    S-WWSS-SCR-ER PICTURE X.                            *00010
       10    S-WWSS-PROGE  PICTURE X(8).                         *00010
       10    S-WWSS-PFKEY  PICTURE XX.                           *00010
       10    FILLER        PICTURE XX.                           *00010
       10    S-WWSS-ERCOD9 PICTURE 999.                          *00010
       10    S-WWSS-CURPOS.                                      *00010
         15  S-WWSS-CPOSL  PICTURE 9(4) COMP.                   *00010
         15  S-WWSS-CPOSC  PICTURE 9(4) COMP.                   *00010
PROCEDURE DIVISION.                                              *99999
           ************************************                  DO 
           *                                  *                  DO 
           *  INITIALIZATIONS                 *                  DO 
           *                                  *                  DO 
           ************************************                  DO 
F01.                                                             DO 
       MOVE SPACE  TO S-WWSS.                                    DO 
       MOVE "DO0060  " TO S-WWSS-PROGE.                          DO 
       MOVE ZERO TO K-SDOC.                                      DO 
F01-FN.      EXIT.                                               DO 
F28.         EXIT.                                               DO 
F28AA.                                                           DO 
       MOVE  "A"  TO  S-WWSS-OPER                                DO 
       MOVE "1"   TO  S-WWSS-ICF S-WWSS-OCF                      DO 
```

```
       MOVE ZERO  TO  S-WWSS-CDRET                          DO
       MOVE 001   TO  S-WWSS-ERCOD9.                        DO
F28AA-FN.    EXIT.                                          DO
F2899.                                                      DO
       CALL S-WWSS-PROGE USING                              DO
       COMMON-AREA COMMUNICATION-MONITOR.                   DO
F2899-FN.    EXIT.                                          DO
F28-FN.      EXIT.                                          DO
F29.                                                        DO
       IF S-WWSS-OPER = "X" GO TO F81ER.                    DO
F2910. IF S-WWSS-OPER NOT = "E" GO TO F2910-FN.             DO
F2910-A. EXIT PROGRAM.                                      DO
F2910-FN.    EXIT.                                          DO
F2980.                                                      DO
       GO TO F28.                                           DO
F2980-FN.    EXIT.                                          DO
F29-FN.      EXIT.                                          DO
F81ER.       EXIT.                                          DO
F81ER-FN.    EXIT.                                          DO
```

4. GENERATED REQUESTER

4.1. INTRODUCTION

INTRODUCTION

Each Dialogue REQUESTER is used as a sub-program of the Monitor.

The REQUESTERs only process message reception and display. Validations are processed by the associated SERVERs.

The REQUESTESs also execute those screen branchings which need no processing; otherwise, they call the associated SERVERs.

4.2. BEGINNING OF PROGRAM

BEGINNING OF THE PROGRAM

The user cannot modify the IDENTIFICATION DIVISION of the generated program.

The ENVIRONMENT DIVISION is automatically adapted to the variant requested for the program.

All clauses that may be necessary in this part of the program are the user's responsibility.

All modifications to this part of the program must be done on the Beginning Insertions (-B) screen, or on Batch Form 'D'. (Refer to the STRUCTURED CODE Reference Manual).

The TERMINAL IS clause of the OBJECT-COMPUTER clause includes the terminal type defined in the TRANSACTION field on the Requester Definition screen.

The SPECIAL-NAMES clause includes the mnemonic names of attributes and PFkeys, according to the terminal type.

```
    IDENTIFICATION DIVISION.
    PROGRAM-ID. DO030REQ.                                          DO003R
    AUTHOR.     ** ORDERS **  REQUESTER.                           DO003R
    DATE-COMPILED. 03/11/93.                                       DO003R
    ENVIRONMENT DIVISION.                                          DO003R
    CONFIGURATION SECTION.                                         DO003R
    SOURCE-COMPUTER. T16.                                          DO003R
    OBJECT-COMPUTER. T16,                                          DO003R
           TERMINAL IS T16-6530.                                   DO003R
    SPECIAL-NAMES.                                                 DO003R
        F1 IS F1, F2 IS F2, F3 IS F3, F4 IS F4, F5 IS F5,          DO003R
        F6 IS F6, F7 IS F7, F8 IS F8, F9 IS F9, F10 IS F10,        DO003R
        F11 IS F11, F12 IS F12, F13 IS F13, F14 IS F14,            DO003R
        F15 IS F15, F16 IS F16, SF1 IS SF1, SF2 IS SF2,            DO003R
        SF3 IS SF3, SF4 IS SF4, SF5 IS SF5, SF6 IS SF6,            DO003R
        SF7 IS SF7, SF8 IS SF8, SF9 IS SF9, SF10 IS SF10,          DO003R
        SF11 IS SF11, SF12 IS SF12, SF13 IS SF13,                  DO003R
        SF14 IS SF14, SF15 IS SF15, SF16 IS SF16,                  DO003R
          ATTENTION IS  NORMAL,                                    DO003R
        DYNBLIN IS (BLINK, NOREVERSE, NOUNDERLINE),                DO003R
        DYNREVE IS (REVERSE, NOBLINK, NOUNDERLINE),                DO003R
        DYNUNDE IS (UNDERLINE, NOBLINK, NOREVERSE),                DO003R
        DYNNORP IS (NOUNDERLINE, NOBLINK, NOREVERSE),              DO003R
        PROTECTED IS PROTECTED, UNPROTECTED IS UNPROTECTED,        DO003R
        HIDDEN IS HIDDEN, NOTHIDDEN IS NOTHIDDEN,                  DO003R
        DIM IS DIM, UNDERLINE IS UNDERLINE, REVERSE IS REVERSE,    DO003R
        BLINK IS BLINK, NORMAL IS NORMAL.                          DO003R
```

4.3. BEGINNING OF WORKING STORAGE SECTION

BEGINNING OF WORKING STORAGE SECTION

The 'WSS-BEGIN' level is generated at the beginning of the WORKING-STORAGE SECTION for all programs.

It contains all variables and keys necessary for automatic processing.

OPER Operation code.

'A' Display.
'M' Update.
'S' Screen continuation.
'E' End
'P' Previous display
'O' Transfer to another screen.

SCR-ER Screen error indicator.

'1' no error.
'4' error.

ICF Input Configuration.

'1' Screen in input.
'0' No screen in input.

OCF Output Configuration.

'1' Screen in output.
'0' No screen in output.

INT Number of input fields.

SH-SEL Selection indicator for variable field attribute modification.

The 'PACBASE-CONSTANTS' level is also generated for all programs. It contains:

. the compilation date of the on-line generator (PACE30 and PACE80), as well as the dates of the related skeleton (these appear as comment lines),

. information on the program and work areas generated according to the procedures executed in the program:

SESSI Session number of the generated program.

LIBRA Code of the PACBASE library.

DATGN Date of generation of the program.

PROGR PACBASE program code.

PROGE COBOL program-id.

5-scrn-PROGE
Field containing the name of the program called. This field is set during screen branching. ('scrn': last four characters of the screen code). This field is generated if a request for HELP documentation is entered on the Screen Definition screen.

```
DATA DIVISION.                                                  DO003R
WORKING-STORAGE SECTION.                                        DO003R
01   WSS-BEGIN.                                                 DO003R
     05 FILLER PICTURE X(7) VALUE "WORKING".                    DO003R
     05 IK     PICTURE X.                                       DO003R
     05 BLANC  PICTURE X VALUE SPACE.                           DO003R
     05 OPER   PICTURE X.                                       DO003R
     05 SCR-ER PICTURE X.                                       DO003R
     05 ICF    PICTURE X.                                       DO003R
     05 OCF    PICTURE X.                                       DO003R
     05 INT    PICTURE 999 VALUE 045.                           DO003R
     05 SH-SEL.                                                 DO003R
       10 SH-SELECT PICTURE X VALUE "1".                        DO003R
01   PACBASE-CONSTANTS.                                         DO003R
     05 SESSI  PICTURE X(5) VALUE "0314 ".                      DO003R
     05 LIBRA  PICTURE X(3) VALUE "ATA".                        DO003R
     05 DATGN  PICTURE X(8) VALUE "03/11/93".                   DO003R
     05 PROGR  PICTURE X(6) VALUE "DO003R".                     DO003R
     05 PROGE  PICTURE X(8) VALUE "DO030REQ".                   DO003R
     05 TIMGN  PICTURE X(8) VALUE "17:08:38".                   DO003R
     05 USERCO PICTURE X(8) VALUE "PDSG    ".                   DO003R
     05 5-003R-PROGE  PICTURE X(8).                             DO003R
```

4.4. SCREEN DESCRIPTION

SCREEN DESCRIPTION

This part of the program only includes the SCREEN FIELDS level. This level lists the message fields and is sent to the associated SERVER.

GENERATED REQUESTER 4
SCREEN DESCRIPTION 4

```
01          SCREEN-FIELDS.                                    *AA042
   05       R01004  PICTURE X(8).                             *AA042
   05       R01015  PICTURE X(5).                             *AA042
   05       R01060  PICTURE X(10).                            *AA042
   05       R01071  PICTURE X(8).                             *AA042
   05       R03018  PICTURE X(5).                             *AA042
   05       R03034  PICTURE X(8).                             *AA042
   05       R03063  PICTURE X(3).                             *AA042
   05       R04013  PICTURE X(50).                            *AA042
   05       R05009  PICTURE X(40).                            *AA042
   05       R05052  PICTURE X(5).                             *AA042
   05       R05060  PICTURE X(20).                            *AA042
   05       R06016  PICTURE X(30).                            *AA042
   05       R06061  PICTURE X(6).                             *AA042
   05       R07018  PICTURE X(25).                            *AA042
   05       R07061  PICTURE X(8).                             *AA042
   05       R10003  PICTURE X(1).                             *AA042
   05       R10007  PICTURE X(3).                             *AA042
   05       R10016  PICTURE X(2).                             *AA042
   05       R10026  PICTURE X(2).                             *AA042
   05       R10035  PICTURE X(2).                             *AA042
   05       R10042  PICTURE X(35).                            *AA042
   05       R11003  PICTURE X(1).                             *AA042
   05       R11007  PICTURE X(3).                             *AA042
   05       R11016  PICTURE X(2).                             *AA042
   05       R11026  PICTURE X(2).                             *AA042
   05       R11035  PICTURE X(2).                             *AA042
   05       R11042  PICTURE X(35).                            *AA042
   05       R12003  PICTURE X(1).                             *AA042
   05       R12007  PICTURE X(3).                             *AA042
   05       R12016  PICTURE X(2).                             *AA042
   05       R12026  PICTURE X(2).                             *AA042
   05       R12035  PICTURE X(2).                             *AA042
   05       R12042  PICTURE X(35).                            *AA042
   05       R13003  PICTURE X(1).                             *AA042
   05       R13007  PICTURE X(3).                             *AA042
   05       R13016  PICTURE X(2).                             *AA042
   05       R13026  PICTURE X(2).                             *AA042
   05       R13035  PICTURE X(2).                             *AA042
   05       R13042  PICTURE X(35).                            *AA042
   05       R14003  PICTURE X(1).                             *AA042
   05       R14007  PICTURE X(3).                             *AA042
   05       R14016  PICTURE X(2).                             *AA042
   05       R14026  PICTURE X(2).                             *AA042
   05       R14035  PICTURE X(2).                             *AA042
   05       R14042  PICTURE X(35).                            *AA042
   05       R15003  PICTURE X(1).                             *AA042
   05       R15007  PICTURE X(3).                             *AA042
   05       R15016  PICTURE X(2).                             *AA042
   05       R15026  PICTURE X(2).                             *AA042
   05       R15035  PICTURE X(2).                             *AA042
   05       R15042  PICTURE X(35).                            *AA042
   05       R16003  PICTURE X(1).                             *AA042
   05       R16007  PICTURE X(3).                             *AA042
   05       R16016  PICTURE X(2).                             *AA042
   05       R16026  PICTURE X(2).                             *AA042
   05       R16035  PICTURE X(2).                             *AA042
   05       R16042  PICTURE X(35).                            *AA042
   05       R17003  PICTURE X(1).                             *AA042
   05       R17007  PICTURE X(3).                             *AA042
   05       R17016  PICTURE X(2).                             *AA042
   05       R17026  PICTURE X(2).                             *AA042
   05       R17035  PICTURE X(2).                             *AA042
   05       R17042  PICTURE X(35).                            *AA042
   05       R18003  PICTURE X(1).                             *AA042
   05       R18007  PICTURE X(3).                             *AA042
   05       R18016  PICTURE X(2).                             *AA042
   05       R18026  PICTURE X(2).                             *AA042
   05       R18035  PICTURE X(2).                             *AA042
   05       R18042  PICTURE X(35).                            *AA042
   05       R20022  PICTURE X(1).                             *AA042
   05       R23002  PICTURE X(75).                            *AA042
   05       R24002  PICTURE X(72).                            *AA042
01          INPUT-SCREEN-FIELDS REDEFINES SCREEN-FIELDS.      *AA050
     05       I-003R-PROGE  PICTURE X(8).                     *AA050
     05       I-003R-SESSI  PICTURE X(5).                     *AA050
     05       I-003R-DATEM  PICTURE X(10).                    *AA050
     05       I-003R-HEURE  PICTURE X(8).                     *AA050
```

```
      05     I-003R-NUCOM  PICTURE 9(5).                        *AA050
      05     I-003R-MATE   PICTURE X(8).                        *AA050
      05     I-003R-RELEA  PICTURE X(3).                        *AA050
      05     I-003R-RAISOC PICTURE X(50).                       *AA050
      05     I-003R-RUE    PICTURE X(40).                       *AA050
      05     I-003R-COPOS  PICTURE X(5).                        *AA050
      05     I-003R-VILLE  PICTURE X(20).                       *AA050
      05     I-003R-REFCLI PICTURE X(30).                       *AA050
      05     I-003R-DATE   PICTURE X(6).                        *AA050
      05     I-003R-CORRES PICTURE X(25).                       *AA050
      05     E-003R-REMIS.                                      *AA050
      10     I-003R-REMIS  PICTURE S9(4)V99.                    *AA050
      10     FILLER        PICTURE X(2).                        *AA050
      05     J-003R-LINE   OCCURS 9.                            *AA050
      10     FILLER        PICTURE X(45).                       *AA050
      05     I-003R-EDIT   PICTURE X.                           *AA050
      05     I-003R-MESSA  PICTURE X(75).                       *AA050
      05     I-003R-ERMS.                                       *AA050
      10     I-001  OCCURS 1.                                   *AA050
      15     I-003R-ERMSG  PICTURE X(72).                       *AA050
01         OUTPUT-SCREEN-FIELDS REDEFINES SCREEN-FIELDS.       *AA050
      05     O-003R-PROGE  PICTURE X(8).                        *AA050
      05     O-003R-SESSI  PICTURE X(5).                        *AA050
      05     O-003R-DATEM  PICTURE X(10).                       *AA050
      05     O-003R-HEURE  PICTURE X(8).                        *AA050
      05     O-003R-NUCOM  PICTURE 9(5).                        *AA050
      05     O-003R-MATE   PICTURE X(8).                        *AA050
      05     O-003R-RELEA  PICTURE X(3).                        *AA050
      05     O-003R-RAISOC PICTURE X(50).                       *AA050
      05     O-003R-RUE    PICTURE X(40).                       *AA050
      05     O-003R-COPOS  PICTURE X(5).                        *AA050
      05     O-003R-VILLE  PICTURE X(20).                       *AA050
      05     O-003R-REFCLI PICTURE X(30).                       *AA050
      05     O-003R-DATE   PICTURE X(6).                        *AA050
      05     O-003R-CORRES PICTURE X(25).                       *AA050
      05     F-003R-REMIS.                                      *AA050
      10     O-003R-REMIS  PICTURE -(04)9,9(02).                *AA050
      05     P-003R-LINE   OCCURS 9.                            *AA050
      10     FILLER        PICTURE X(45).                       *AA050
      05     O-003R-EDIT   PICTURE X.                           *AA050
      05     O-003R-MESSA  PICTURE X(75).                       *AA050
      05     O-003R-ERMS.                                       *AA050
      10     O-002  OCCURS 1.                                   *AA050
      15     O-003R-ERMSG  PICTURE X(72).                       *AA050
01           REPEAT-LINE.                                       *AA050
      02     I-003R-LINE.                                       *AA050
      05     I-003R-CODMVT PICTURE X.                           *AA050
      05     I-003R-FOURNI PICTURE X(3).                        *AA050
      05     E-003R-QTMAC.                                      *AA050
      10     I-003R-QTMAC  PICTURE 99.                          *AA050
      05     I-003R-QTMAL  PICTURE 99.                          *AA050
      05     I-003R-QTMAR  PICTURE 99.                          *AA050
      05     I-003R-INFOR  PICTURE X(35).                       *AA050
      02     O-003R-LINE.                                       *AA050
      05     O-003R-CODMVT PICTURE X.                           *AA050
      05     O-003R-FOURNI PICTURE X(3).                        *AA050
      05     F-003R-QTMAC.                                      *AA050
      10     O-003R-QTMAC  PICTURE Z(01)9.                      *AA050
      05     O-003R-QTMAL  PICTURE 99.                          *AA050
      05     O-003R-QTMAR  PICTURE 99.                          *AA050
      05     O-003R-INFOR  PICTURE X(35).                       *AA050
```

4.5. DESCRIPTION OF PACBASE INDEXES

DESCRIPTION OF VALIDATION AREAS

K01 Work index.

5-dd00-LTH
Length of the data struture describing the communication area, defined on the Dialogue Complement screen (O..O).

The PFKEY-TAB level is always generated; it initializes the I-PFKEY field with the value of the PFKey used.

```
01   PACBASE-INDEXES COMPUTATIONAL.                          *AA200
     05 K01         PICTURE S9(4).                           *AA200
     05    5-CA00-LTH  PICTURE S9(4) VALUE +0147.            *AA200
01    PFKEY-TAB.                                             *AA240
  10  FILLER PICTURE X(32) VALUE                             *AA240
     "10110107080203040512 00          ".                   *AA240
01    PFKEY-CHECK REDEFINES PFKEY-TAB.                       *AA240
  10  PFKEY-VAL PICTURE X(2) OCCURS 16.                      *AA240
```

4.6. TABLE OF ATTRIBUTES

TABLE OF ATTRIBUTES

. The DE-ATT level corresponds to the VALIDATION-TABLE-FIELD table generated in the server that stores the status of each variable data element of the screen.

. The SH-ATT level is a table including 7 positions for each variable field. These positions correspond to the intensity and presentation attributes.

According to the status of the data elements that has been specified in the DE-ATT table, the position may include the SH-SEL selection indicator, which specifies that the corresponding attribute must be taken into account when displaying the screen map.

. For each variable field, the SH-SCREEN level includes a field, used in the SHADOWED clause of the screen description, that specifies if these variable fields' attributes must be modified.

. The AT-SV level is a table of correspondence between each variable field defined in the PACBASE description of the associated SERVER and its physical location on the screen map.

```
01          DE-ATT.                                              *AA250
  02        DE-ATT1          OCCURS 5.                           *AA250
    05      DE-AT   PICTURE X                                    *AA250
                  OCCURS 045.                                    *AA250
01          SH-ATT.                                              *AA250
  02        SH-ATT1 OCCURS 8.                                    *AA250
    05      SH-AT   PICTURE X                                    *AA250
                  OCCURS 045.                                    *AA250
01          SH-SCREEN.                                           *AA255
      10 SH-S03034 PICTURE X.                                    *AA255
      10 SH-S03063 PICTURE X.                                    *AA255
      10 SH-S05009 PICTURE X.                                    *AA255
      10 SH-S05052 PICTURE X.                                    *AA255
      10 SH-S06016 PICTURE X.                                    *AA255
      10 SH-S06061 PICTURE X.                                    *AA255
      10 SH-S07018 PICTURE X.                                    *AA255
      10 SH-S07061 PICTURE X.                                    *AA255
      10 SH-S10003 PICTURE X.                                    *AA255
      10 SH-S10007 PICTURE X.                                    *AA255
      10 SH-S10016 PICTURE X.                                    *AA255
      10 SH-S10042 PICTURE X.                                    *AA255
      10 SH-S11003 PICTURE X.                                    *AA255
      10 SH-S11007 PICTURE X.                                    *AA255
      10 SH-S11016 PICTURE X.                                    *AA255
      10 SH-S11042 PICTURE X.                                    *AA255
      10 SH-S12003 PICTURE X.                                    *AA255
      10 SH-S12007 PICTURE X.                                    *AA255
      10 SH-S12016 PICTURE X.                                    *AA255
      10 SH-S12042 PICTURE X.                                    *AA255
      10 SH-S13003 PICTURE X.                                    *AA255
      10 SH-S13007 PICTURE X.                                    *AA255
      10 SH-S13016 PICTURE X.                                    *AA255
      10 SH-S13042 PICTURE X.                                    *AA255
      10 SH-S14003 PICTURE X.                                    *AA255
      10 SH-S14007 PICTURE X.                                    *AA255
      10 SH-S14016 PICTURE X.                                    *AA255
      10 SH-S14042 PICTURE X.                                    *AA255
      10 SH-S15003 PICTURE X.                                    *AA255
      10 SH-S15007 PICTURE X.                                    *AA255
      10 SH-S15016 PICTURE X.                                    *AA255
      10 SH-S15042 PICTURE X.                                    *AA255
      10 SH-S16003 PICTURE X.                                    *AA255
      10 SH-S16007 PICTURE X.                                    *AA255
      10 SH-S16016 PICTURE X.                                    *AA255
      10 SH-S16042 PICTURE X.                                    *AA255
      10 SH-S17003 PICTURE X.                                    *AA255
      10 SH-S17007 PICTURE X.                                    *AA255
      10 SH-S17016 PICTURE X.                                    *AA255
      10 SH-S17042 PICTURE X.                                    *AA255
      10 SH-S18003 PICTURE X.                                    *AA255
      10 SH-S18007 PICTURE X.                                    *AA255
      10 SH-S18016 PICTURE X.                                    *AA255
      10 SH-S18042 PICTURE X.                                    *AA255
      10 SH-S20022 PICTURE X.                                    *AA255
01      AT-SV.                                                   *AA260
      10   FILLER  PICTURE X(8) VALUE "00103034".                *AA260
      10   FILLER  PICTURE X(8) VALUE "00203063".                *AA260
      10   FILLER  PICTURE X(8) VALUE "00305009".                *AA260
      10   FILLER  PICTURE X(8) VALUE "00405052".                *AA260
      10   FILLER  PICTURE X(8) VALUE "00506016".                *AA260
      10   FILLER  PICTURE X(8) VALUE "00606061".                *AA260
      10   FILLER  PICTURE X(8) VALUE "00707018".                *AA260
      10   FILLER  PICTURE X(8) VALUE "00807061".                *AA260
      10   FILLER  PICTURE X(8) VALUE "00910003".                *AA260
      10   FILLER  PICTURE X(8) VALUE "01010007".                *AA260
      10   FILLER  PICTURE X(8) VALUE "01110016".                *AA260
      10   FILLER  PICTURE X(8) VALUE "01210042".                *AA260
      10   FILLER  PICTURE X(8) VALUE "01311003".                *AA260
      10   FILLER  PICTURE X(8) VALUE "01411007".                *AA260
      10   FILLER  PICTURE X(8) VALUE "01511016".                *AA260
      10   FILLER  PICTURE X(8) VALUE "01611042".                *AA260
      10   FILLER  PICTURE X(8) VALUE "01712003".                *AA260
      10   FILLER  PICTURE X(8) VALUE "01812007".                *AA260
      10   FILLER  PICTURE X(8) VALUE "01912016".                *AA260
      10   FILLER  PICTURE X(8) VALUE "02012042".                *AA260
      10   FILLER  PICTURE X(8) VALUE "02113003".                *AA260
      10   FILLER  PICTURE X(8) VALUE "02213007".                *AA260
      10   FILLER  PICTURE X(8) VALUE "02313016".                *AA260
```

```
         10   FILLER  PICTURE X(8) VALUE "02413042".              *AA260
         10   FILLER  PICTURE X(8) VALUE "02514003".              *AA260
         10   FILLER  PICTURE X(8) VALUE "02614007".              *AA260
         10   FILLER  PICTURE X(8) VALUE "02714016".              *AA260
         10   FILLER  PICTURE X(8) VALUE "02814042".              *AA260
         10   FILLER  PICTURE X(8) VALUE "02915003".              *AA260
         10   FILLER  PICTURE X(8) VALUE "03015007".              *AA260
         10   FILLER  PICTURE X(8) VALUE "03115016".              *AA260
         10   FILLER  PICTURE X(8) VALUE "03215042".              *AA260
         10   FILLER  PICTURE X(8) VALUE "03316003".              *AA260
         10   FILLER  PICTURE X(8) VALUE "03416007".              *AA260
         10   FILLER  PICTURE X(8) VALUE "03516016".              *AA260
         10   FILLER  PICTURE X(8) VALUE "03616042".              *AA260
         10   FILLER  PICTURE X(8) VALUE "03717003".              *AA260
         10   FILLER  PICTURE X(8) VALUE "03817007".              *AA260
         10   FILLER  PICTURE X(8) VALUE "03917016".              *AA260
         10   FILLER  PICTURE X(8) VALUE "04017042".              *AA260
         10   FILLER  PICTURE X(8) VALUE "04118003".              *AA260
         10   FILLER  PICTURE X(8) VALUE "04218007".              *AA260
         10   FILLER  PICTURE X(8) VALUE "04318016".              *AA260
         10   FILLER  PICTURE X(8) VALUE "04418042".              *AA260
         10   FILLER  PICTURE X(8) VALUE "04520022".              *AA260
   01      TABLE-SV-AT  REDEFINES AT-SV.                         *AA265
         05   SV-ATT OCCURS 045.                                 *AA265
         10 SV-AT     PICTURE 999.                              *AA265
         10 SV-CPOSL  PICTURE 99.                               *AA265
         10 SV-CPOSC  PICTURE 999.                              *AA265
```

4.7. COMMUNICATION AREA

LINKAGE SECTION

The COMMON AREA level is generated according to the Dialogue Complements.

This level is the common area used by every screen of the dialogue.

. K-001R-PROGR

Always generated; used to store the full code of the screen.

. CA00

Data Structure describing the user Common Area declared on the Dialogue Complement screen (O..O) (if the data structure contains several segments, they are described in 'redefines' clauses).

If a documentation help character has been entered on the Screen Definition screen, the following fields are generated:

. K-S001R-DOC

HELP function indicator:
'0' No backup created for the screen,
'1' Backup created for the screen,
'2' request for screen-level documentation,
'3' request for field-level documentation.

. K-S001R-PROGE

Used to memorize the external name of the calling program.

. K-S001R-CPOSL

Memorizes the cursor position.

. K-S001R-LIBRA

Used to memorize the library code.

. K-S001R-ERCOD, K-S001R-ERTYP, K-S001R-LINUM, K-S001R-XTERM

Technological fields reserved for the 'HELP' Function program.

The COMMUNICATION MONITOR level consists in the description of the Monitor communication area.

```
LINKAGE SECTION.                                                DO003R
01          COMMON-AREA.                                        *00001
     02     K-003R-PROGR  PICTURE X(6).                         *00001
     02          CA00.                                          *00001
       10        CA00-CLECD.                                    *00001
        15       CA00-NUCOM  PICTURE 9(5).                      *00001
       10        CA00-CLECL1.                                   *00001
        15       CA00-NUCLIE PICTURE 9(8).                      *00001
       10        CA00-ME00.                                     *00001
        15       CA00-CLEME.                                    *00001
         20      CA00-COPERS PICTURE X(5).                      *00001
         20      CA00-NUMORD PICTURE XX.                        *00001
        15       CA00-MESSA  PICTURE X(75).                     *00001
       10        CA00-PREM   PICTURE X.                         *00001
       10        CA00-LANGU  PICTURE X.                         *00001
       10        CA00-RAISOC PICTURE X(50).                     *00001
     02     K-S003R-DOC   PICTURE X.                            *00002
     02     K-S003R-PROGE PICTURE X(8).                         *00002
     02     K-S003R-CPOSL PICTURE 999.                          *00002
     02     K-S003R-LIBRA PICTURE XXX.                          *00002
     02     K-S003R-ERCOD PICTURE XXX.                          *00002
     02     K-S003R-ERTYP PICTURE X.                            *00002
     02     K-S003R-LINUM PICTURE 999.                          *00002
     02     K-S003R-XTERM PICTURE X(16).                        *00002
     02      FILLER        PICTURE X(0700).                     *00002
01          COMMUNICATION-MONITOR.                              *00010
       02    S-WWSS.                                           *00010
       10    S-WWSS-CDRET  PICTURE S9(4) COMP.                 *00010
       10    S-WWSS-OPER   PICTURE X.                          *00010
       10    S-WWSS-ICF    PICTURE X.                          *00010
       10    S-WWSS-OCF    PICTURE X.                          *00010
       10    S-WWSS-SCR-ER PICTURE X.                          *00010
       10    S-WWSS-PROGE  PICTURE X(8).                       *00010
       10    S-WWSS-PFKEY  PICTURE XX.                         *00010
       10    FILLER        PICTURE XX.                         *00010
       10    S-WWSS-ERCOD9 PICTURE 999.                        *00010
       10    S-WWSS-CURPOS.                                    *00010
         15  S-WWSS-CPOSL  PICTURE 9(4) COMP.                 *00010
         15  S-WWSS-CPOSC  PICTURE 9(4) COMP.                 *00010
```

4.8. PHYSICAL DESCRIPTION OF THE SCREEN

PHYSICAL DESCRIPTION OF THE SCREEN

The SCREEN SECTION includes a physical description of the screen which is based on the description of the associated SERVER (-CE).

It contains:

001R-SCREEN BASE SCREEN of the physical description.

For each of the fields and labels, the following will be found:

ADVISORY taken into account in the LIERR field which corresponds to the error message;

AT followed by the line and column numbers, relative to the screen beginning;

FILL taken into account for the first display ("DISPLAY BASE");

MNEMONIC NAME declared in the SPECIAL-NAMES clause for the field attribute (varies according to the terminal type);

PICTURE numeric fields are generated with an alphanunumeric format; the numeric validation is performed at the Dialogue level;

TO FROM USING generated according to the nature of the data element which is declared in the Screen Call of Elements screen (-CE) of the associated Server; the corresponding fields are automatically generated in the communication area;

VALUE taken into account for the labels and the initiazation value at first display;

WHEN ABSENT/BLANK

The WHEN ABSENT SKIP clause is taken into account when the MDT-OFF option is selected at the Dialogue level, for terminals which have an MDT; The WHEN BLANK CLEAR clause is always taken into account;

WHEN FULL

The TAB option is always generated.

SHADOWED BY
Indicates whether the field's intensity and presentation attributes should be modified (for instance in case of error on the field).

OVERLAY SCREENS

Overlay screens may be called in the Screen Call of Elements screen (-CE), with value 'W' for the type of screen called. (For more details on this coding, refer to the ON-LINE SYSTEMS DEVELOPMENT Reference Manual, chapter 'SCREEN CALL OF ELEMENTS'.)

With this type of call, the message description of the SCREEN SECTION includes overlays. The send commands of the corresponding message must be written by the user.

Only one OVERLAY may be associated with each part of the screen. In order to redefine the OVERLAY, the user must override the SCREEN SECTION description as well as the send commands for this message.

```
SCREEN SECTION.                                                         *00200
01        003R-SCREEN  BASE SIZE 24, 80.                                *00200
   05     S01004 AT 1, 4 PICTURE X(8) DIM                               *00200
                    FROM  R01004.                                       *00200
   05     FILLER  AT 1, 13 DIM                                          *00200
            VALUE    "-".                                             *00200
   05     S01015 AT 1, 15 PICTURE X(5) DIM                              *00200
                    FROM  R01015.                                       *00200
   05     FILLER  AT 1, 25 DIM                                          *00200
            VALUE    "***  ORDER INPUT SCREEN  ***  ".                 *00200
   05     S01060 AT 1, 60 PICTURE X(10) DIM                             *00200
                    FROM  R01060.                                       *00200
   05     S01071 AT 1, 71 PICTURE X(8) DIM                              *00200
                    FROM  R01071.                                       *00200
   05     FILLER  AT 3, 4  DIM                                          *00200
            VALUE    "ORDER NUMBER:".                                 *00200
   05     S03018 AT 3, 18 PICTURE X(5) DIM                              *00200
                    FROM  R03018.                                       *00200
   05     FILLER  AT 3, 26 DIM                                          *00200
            VALUE    "SYSTEM:".                                       *00200
   05     S03034 AT 3, 34 PICTURE X(8) DIM                              *00200
                    SHADOWED BY SH-S03034                               *00200
                    USING R03034                                        *00200
                    WHEN BLANK CLEAR                                    *00200
                    FULL TAB                                            *00200
                    FILL "-".                                           *00200
   05     FILLER  AT 3, 54 DIM                                          *00200
            VALUE    "RELEASE:".                                      *00200
   05     S03063 AT 3, 63 PICTURE X(3) DIM                              *00200
                    SHADOWED BY SH-S03063                               *00200
                    USING R03063                                        *00200
                    WHEN BLANK CLEAR                                    *00200
                    FULL TAB                                            *00200
                    FILL "-".                                           *00200
   05     FILLER  AT 4, 4  DIM                                          *00200
            VALUE    "CUST.".                                         *00200
   05     S04013 AT 4, 13 PICTURE X(50) DIM                             *00200
                    FROM  R04013.                                       *00200
   05     S05009 AT 5, 9 PICTURE X(40) DIM                              *00200
                    SHADOWED BY SH-S05009                               *00200
                    USING R05009                                        *00200
                    WHEN BLANK CLEAR                                    *00200
                    FULL TAB                                            *00200
                    FILL "-".                                           *00200
   05     S05052 AT 5, 52 PICTURE X(5) DIM                              *00200
                    SHADOWED BY SH-S05052                               *00200
                    USING R05052                                        *00200
                    WHEN BLANK CLEAR                                    *00200
                    FULL TAB                                            *00200
                    FILL "-".                                           *00200
   05     S05060 AT 5, 60 PICTURE X(20) DIM                             *00200
                    FROM  R05060.                                       *00200
   05     FILLER  AT 6, 4  DIM                                          *00200
            VALUE    "CUST. REF.:".                                   *00200
   05     S06016 AT 6, 16 PICTURE X(30) DIM                             *00200
                    SHADOWED BY SH-S06016                               *00200
                    USING R06016                                        *00200
                    WHEN BLANK CLEAR                                    *00200
                    FULL TAB                                            *00200
                    FILL "-".                                           *00200
   05     FILLER  AT 6, 49 DIM                                          *00200
            VALUE    "ORDER DATE:".                                   *00200
   05     S06061 AT 6, 61 PICTURE X(6) DIM                              *00200
                    SHADOWED BY SH-S06061                               *00200
                    USING R06061                                        *00200
                    WHEN BLANK CLEAR                                    *00200
                    FULL TAB                                            *00200
                  VALUE "..__..".                                       *00200
   05     FILLER  AT 7, 5  DIM                                          *00200
            VALUE    "COORDINATOR:".                                  *00200
   05     S07018 AT 7, 18 PICTURE X(25) DIM                             *00200
                    SHADOWED BY SH-S07018                               *00200
                    USING R07018                                        *00200
                    WHEN BLANK CLEAR                                    *00200
                    FULL TAB                                            *00200
                    FILL "-".                                           *00200
   05     FILLER  AT 7, 46 DIM                                          *00200
            VALUE    "DISCOUNT RATE:".                                *00200
```

```
05      S07061 AT 7, 61 PICTURE X(8) DIM                        *00200
                  SHADOWED BY SH-S07061                         *00200
                  USING R07061                                  *00200
                  WHEN BLANK CLEAR                              *00200
                  FULL TAB                                      *00200
                  FILL "-".                                     *00200
05      FILLER  AT 9, 3  DIM                                    *00200
          VALUE    "A".                                       *00200
05      FILLER  AT 9, 7  DIM                                    *00200
          VALUE    "ITEM  ".                                  *00200
05      FILLER  AT 9, 16 DIM                                    *00200
          VALUE    "ORDERED ".                                *00200
05      FILLER  AT 9, 26 DIM                                    *00200
          VALUE    "DELIV. ".                                 *00200
05      FILLER  AT 9, 35 DIM                                    *00200
          VALUE    "OUTST.".                                  *00200
05      FILLER  AT 9, 42 DIM                                    *00200
          VALUE    "REMARKS                              ".   *00200
05      S10003 AT 10, 3 PICTURE X(1) DIM                        *00200
                  SHADOWED BY SH-S10003                         *00200
                  USING R10003                                  *00200
                  WHEN BLANK CLEAR                              *00200
                  FULL TAB                                      *00200
                  FILL "-".                                     *00200
05      S10007 AT 10, 7 PICTURE X(3) DIM                        *00200
                  SHADOWED BY SH-S10007                         *00200
                  USING R10007                                  *00200
                  WHEN BLANK CLEAR                              *00200
                  FULL TAB                                      *00200
                  FILL "-".                                     *00200
05      S10016 AT 10, 16 PICTURE X(2) DIM                       *00200
                  SHADOWED BY SH-S10016                         *00200
                  USING R10016                                  *00200
                  WHEN BLANK CLEAR                              *00200
                  FULL TAB                                      *00200
                  FILL "-".                                     *00200
05      S10026 AT 10, 26 PICTURE X(2)                           *00200
                  FROM  R10026.                                 *00200
05      S10035 AT 10, 35 PICTURE X(2) DIM                       *00200
                  FROM  R10035.                                 *00200
05      S10042 AT 10, 42 PICTURE X(35) DIM                      *00200
                  SHADOWED BY SH-S10042                         *00200
                  USING R10042                                  *00200
                  WHEN BLANK CLEAR                              *00200
                  FULL TAB                                      *00200
                  FILL "-".                                     *00200
05      S11003 AT 11, 3 PICTURE X(1) DIM                        *00200
                  SHADOWED BY SH-S11003                         *00200
                  USING R11003                                  *00200
                  WHEN BLANK CLEAR                              *00200
                  FULL TAB                                      *00200
                  FILL "-".                                     *00200
05      S11007 AT 11, 7 PICTURE X(3) DIM                        *00200
                  SHADOWED BY SH-S11007                         *00200
                  USING R11007                                  *00200
                  WHEN BLANK CLEAR                              *00200
                  FULL TAB                                      *00200
                  FILL "-".                                     *00200
05      S11016 AT 11, 16 PICTURE X(2) DIM                       *00200
                  SHADOWED BY SH-S11016                         *00200
                  USING R11016                                  *00200
                  WHEN BLANK CLEAR                              *00200
                  FULL TAB                                      *00200
                  FILL "-".                                     *00200
05      S11026 AT 11, 26 PICTURE X(2)                           *00200
                  FROM  R11026.                                 *00200
05      S11035 AT 11, 35 PICTURE X(2) DIM                       *00200
                  FROM  R11035.                                 *00200
05      S11042 AT 11, 42 PICTURE X(35) DIM                      *00200
                  SHADOWED BY SH-S11042                         *00200
                  USING R11042                                  *00200
                  WHEN BLANK CLEAR                              *00200
                  FULL TAB                                      *00200
                  FILL "-".                                     *00200
05      S12003 AT 12, 3 PICTURE X(1) DIM                        *00200
                  SHADOWED BY SH-S12003                         *00200
                  USING R12003                                  *00200
                  WHEN BLANK CLEAR                              *00200
```

```
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S12007 AT 12, 7 PICTURE X(3) DIM                    *00200
                    SHADOWED BY SH-S12007                   *00200
                    USING R12007                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S12016 AT 12, 16 PICTURE X(2) DIM                   *00200
                    SHADOWED BY SH-S12016                   *00200
                    USING R12016                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S12026 AT 12, 26 PICTURE X(2)                       *00200
                    FROM  R12026.                           *00200
05      S12035 AT 12, 35 PICTURE X(2) DIM                   *00200
                    FROM  R12035.                           *00200
05      S12042 AT 12, 42 PICTURE X(35) DIM                  *00200
                    SHADOWED BY SH-S12042                   *00200
                    USING R12042                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S13003 AT 13, 3 PICTURE X(1) DIM                    *00200
                    SHADOWED BY SH-S13003                   *00200
                    USING R13003                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S13007 AT 13, 7 PICTURE X(3) DIM                    *00200
                    SHADOWED BY SH-S13007                   *00200
                    USING R13007                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S13016 AT 13, 16 PICTURE X(2) DIM                   *00200
                    SHADOWED BY SH-S13016                   *00200
                    USING R13016                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S13026 AT 13, 26 PICTURE X(2)                       *00200
                    FROM  R13026.                           *00200
05      S13035 AT 13, 35 PICTURE X(2) DIM                   *00200
                    FROM  R13035.                           *00200
05      S13042 AT 13, 42 PICTURE X(35) DIM                  *00200
                    SHADOWED BY SH-S13042                   *00200
                    USING R13042                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S14003 AT 14, 3 PICTURE X(1) DIM                    *00200
                    SHADOWED BY SH-S14003                   *00200
                    USING R14003                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S14007 AT 14, 7 PICTURE X(3) DIM                    *00200
                    SHADOWED BY SH-S14007                   *00200
                    USING R14007                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S14016 AT 14, 16 PICTURE X(2) DIM                   *00200
                    SHADOWED BY SH-S14016                   *00200
                    USING R14016                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S14026 AT 14, 26 PICTURE X(2)                       *00200
                    FROM  R14026.                           *00200
05      S14035 AT 14, 35 PICTURE X(2) DIM                   *00200
                    FROM  R14035.                           *00200
05      S14042 AT 14, 42 PICTURE X(35) DIM                  *00200
                    SHADOWED BY SH-S14042                   *00200
                    USING R14042                            *00200
                    WHEN BLANK CLEAR                        *00200
```

```
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S15003 AT 15, 3 PICTURE X(1) DIM                    *00200
                    SHADOWED BY SH-S15003                   *00200
                    USING R15003                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S15007 AT 15, 7 PICTURE X(3) DIM                    *00200
                    SHADOWED BY SH-S15007                   *00200
                    USING R15007                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S15016 AT 15, 16 PICTURE X(2) DIM                   *00200
                    SHADOWED BY SH-S15016                   *00200
                    USING R15016                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S15026 AT 15, 26 PICTURE X(2)                       *00200
                    FROM  R15026.                           *00200
05      S15035 AT 15, 35 PICTURE X(2) DIM                   *00200
                    FROM  R15035.                           *00200
05      S15042 AT 15, 42 PICTURE X(35) DIM                  *00200
                    SHADOWED BY SH-S15042                   *00200
                    USING R15042                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S16003 AT 16, 3 PICTURE X(1) DIM                    *00200
                    SHADOWED BY SH-S16003                   *00200
                    USING R16003                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S16007 AT 16, 7 PICTURE X(3) DIM                    *00200
                    SHADOWED BY SH-S16007                   *00200
                    USING R16007                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S16016 AT 16, 16 PICTURE X(2) DIM                   *00200
                    SHADOWED BY SH-S16016                   *00200
                    USING R16016                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S16026 AT 16, 26 PICTURE X(2)                       *00200
                    FROM  R16026.                           *00200
05      S16035 AT 16, 35 PICTURE X(2) DIM                   *00200
                    FROM  R16035.                           *00200
05      S16042 AT 16, 42 PICTURE X(35) DIM                  *00200
                    SHADOWED BY SH-S16042                   *00200
                    USING R16042                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S17003 AT 17, 3 PICTURE X(1) DIM                    *00200
                    SHADOWED BY SH-S17003                   *00200
                    USING R17003                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S17007 AT 17, 7 PICTURE X(3) DIM                    *00200
                    SHADOWED BY SH-S17007                   *00200
                    USING R17007                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S17016 AT 17, 16 PICTURE X(2) DIM                   *00200
                    SHADOWED BY SH-S17016                   *00200
                    USING R17016                            *00200
                    WHEN BLANK CLEAR                        *00200
                    FULL TAB                                *00200
                    FILL "-".                               *00200
05      S17026 AT 17, 26 PICTURE X(2)                       *00200
                    FROM  R17026.                           *00200
```

```
05      S17035 AT 17, 35 PICTURE X(2) DIM                    *00200
                    FROM  R17035.                            *00200
05      S17042 AT 17, 42 PICTURE X(35) DIM                   *00200
                    SHADOWED BY SH-S17042                    *00200
                    USING R17042                             *00200
                    WHEN BLANK CLEAR                         *00200
                    FULL TAB                                 *00200
                    FILL "-".                                *00200
05      S18003 AT 18, 3 PICTURE X(1) DIM                     *00200
                    SHADOWED BY SH-S18003                    *00200
                    USING R18003                             *00200
                    WHEN BLANK CLEAR                         *00200
                    FULL TAB                                 *00200
                    FILL "-".                                *00200
05      S18007 AT 18, 7 PICTURE X(3) DIM                     *00200
                    SHADOWED BY SH-S18007                    *00200
                    USING R18007                             *00200
                    WHEN BLANK CLEAR                         *00200
                    FULL TAB                                 *00200
                    FILL "-".                                *00200
05      S18016 AT 18, 16 PICTURE X(2) DIM                    *00200
                    SHADOWED BY SH-S18016                    *00200
                    USING R18016                             *00200
                    WHEN BLANK CLEAR                         *00200
                    FULL TAB                                 *00200
                    FILL "-".                                *00200
05      S18026 AT 18, 26 PICTURE X(2)                        *00200
                    FROM  R18026.                            *00200
05      S18035 AT 18, 35 PICTURE X(2) DIM                    *00200
                    FROM  R18035.                            *00200
05      S18042 AT 18, 42 PICTURE X(35) DIM                   *00200
                    SHADOWED BY SH-S18042                    *00200
                    USING R18042                             *00200
                    WHEN BLANK CLEAR                         *00200
                    FULL TAB                                 *00200
                    FILL "-".                                *00200
05      FILLER  AT 20, 2 DIM                                 *00200
          VALUE    "PRINTING OF FORM  :".                    *00200
05      S20022 AT 20, 22 PICTURE X(1) DIM                    *00200
                    SHADOWED BY SH-S20022                    *00200
                    USING R20022                             *00200
                    WHEN BLANK CLEAR                         *00200
                    FULL TAB                                 *00200
                    FILL "-".                                *00200
05      FILLER  AT 20, 35 DIM                                *00200
          VALUE    "UPD : PF07,".                           *00200
05      FILLER  AT 20, 47 DIM                                *00200
          VALUE    "ORDERS (NEXT) : PF08,".                 *00200
05      FILLER  AT 21, 2 DIM                                 *00200
          VALUE    "MENU : PF01, CUSTOMER LIST :".          *00200
05      FILLER  AT 21, 31 DIM                                *00200
          VALUE    "PF02, CUST. HIST : PF03, ORDER".        *00200
05      FILLER  AT 21, 62 DIM                                *00200
          VALUE    "LIST : PF04,".                          *00200
05      FILLER  AT 22, 2 DIM                                 *00200
          VALUE    "END : PF12".                            *00200
05      FILLER  AT 22, 13 DIM                                *00200
          VALUE    "SCREEN DOC : PF10, ".                   *00200
05      FILLER  AT 22, 33 DIM                                *00200
          VALUE    "DATA EL. DOC : PF11,".                  *00200
05      S23002 AT 23, 2 PICTURE X(75)                        *00200
                    FROM  R23002.                            *00200
05      S24002 AT 24, 2 PICTURE X(72)                        *00200
                    ADVISORY                                 *00200
                    FROM  R24002.                            *00200
```

4.9. PROCEDURE

PROCEDURE DIVISION

F01 : INITIALIZATIONS

The INITIALIZATIONS (F01) function is always generated.

It initializes the work areas using the values obtained in the LINKAGE SECTION.

The fields delared in the PROCDEURE DIVISION USING clause correspond to the fields described in the WORKING STORAGE SECTION of the transaction Monitor.

This function processes the first display, which appears at the beginning of the program execution.

It ensures the cursor position for the first display.

F05 READING OF MESSAGE IN INPUT

This function is only executed once a first display has been performed.

The F0510 sub-function contains the message reception procedure and the initialization of PFKeys, cursor positioning, etc.

The F0520 sub-function is generated if the special PFKEY data element is defined as an Operation Code on the Screen Call of Elements: the value of this element may cause direct branching to another screen. The F0520 sub-function only includes processing associated with direct branching.

F40 END-OF-RECEPTION PROCESSING

The END-OF-RECEPTION PROCESSING (F40) function is always generated. It is executed when there is a message in input or if a display preparation is to be executed.

Within this function, there are three sub-functions which correspond to three automatically generated procedures that are conditioned by the value of the Operation Code.

F4004:
Beginning of a TMF transaction if the TMF option has been coded at the Dialog Complement screen level.

F4005 : SERVER CALL

The message and the information included in the communication area are sent to the SERVER which will process them (validation, file updating, screen display) and return the message to be sent to the Monitor or trigger the function to be executed in case of conversation exit or branching to another screen.

F4006
End of TMF transaction if the option has been specified at the Dialog Complement screen level.

F4030 : END OF TRANSACTION

This is executed for an end-of-transaction operation:

. Transfer of the Operation Code to the COMMUNICATION MONITOR area,

. Call of the Monitor which terminates the conversation.

F4040 : TRANSFER TO ANOTHER SCREEN

This is executed for a transfer to another screen operation:

. Transfer of the Operation Code and the name of the program which will process the next screen to the COMMUNICATION MONITOR area,

. Call of the Monitor.

F8Z DISPLAY AND END OF PROGRAM

The DISPLAY AND END OF PROGRAM (F8Z) function is always generated.

F8Z10 : DISPLAY

This sub-function sends the message wether an error was found or not. It sends the new cursor position before the display execution. In case of error, it sends the error message once the F8145 sub-function, which modifies the erroneous field's attribute, has been called by PERFORM.

F8Z20 : END OF PROGRAM

The F8Z20 sub-function contains the branching to the beginning of the program for a new iteration.

F81 PERFORMED VALIDATIONS FUNCTIONS

The PERFORMED VALIDATIONS FUNCTIONS (F81) are always generated.

F81ER contains the abnormal end routine.

It is executed when an error is found and is either called by the SERVER, the F40 function or the F8Z function. It includes :

. The transfer of the Operation Code to the COMMUNICATION MONITOR with value 'X',

. The call of the Monitor.

F81ES Processing in case of error on activation of a transaction (generated if the TMF option has been coded at the Dialogue Complement screen level).

F8145 modifies the attributes of the erroneous field.

```
PROCEDURE DIVISION USING                                          *99999
          COMMON-AREA, COMMUNICATION-MONITOR.                     *99999
           ************************************                   DO003R
           *                                  *                   DO003R
           *  INITIALIZATIONS                 *                   DO003R
           *                                  *                   DO003R
           ************************************                   DO003R
F01.         EXIT.                                                DO003R
F0101.                                                            DO003R
       MOVE ZERO TO S-WWSS-ICF.                                   DO003R
       DISPLAY  BASE    003R-SCREEN.                              DO003R
F0101-FN.    EXIT.                                                DO003R
F0110.                                                            DO003R
       MOVE S-WWSS-ICF TO ICF                                     DO003R
       MOVE S-WWSS-OCF TO OCF                                     DO003R
       MOVE "1" TO SCR-ER S-WWSS-SCR-ER.                          DO003R
       MOVE "A" TO OPER.                                          DO003R
           MOVE      009 TO S-WWSS-ERCOD9.                        DO003R
F0110-FN.    EXIT.                                                DO003R
F01-FN.      EXIT.                                                DO003R
           ************************************                   DO003R
           *                                  *                   DO003R
           *  RECEPTION                       *                   DO003R
           *                                  *                   DO003R
           ************************************                   DO003R
F05.   IF ICF = ZERO GO TO F05-FN.                                DO003R
F0510.                                                            DO003R
       ACCEPT  003R-SCREEN  UNTIL                                 DO003R
       F10  F11  F1   F7   F8   F2   F3   F4   F5   F12.          DO003R
       MOVE TERMINATION-STATUS TO K01                             DO003R
       MOVE PFKEY-VAL (K01) TO S-WWSS-PFKEY.                      DO003R
       MOVE OLD-CURSOR-ROW TO S-WWSS-CPOSL                        DO003R
       MOVE OLD-CURSOR-COL TO S-WWSS-CPOSC.                       DO003R
       MOVE LOGICAL-TERMINAL-NAME TO K-S003R-XTERM                DO003R
       MOVE  S-WWSS-CPOSL  TO K-S003R-CPOSL                       DO003R
       MOVE  S-WWSS-CPOSC  TO K-S003R-LINUM.                      DO003R
F0510-FN.    EXIT.                                                DO003R
           ************************************                   DO003R
           *                                  *                   DO003R
           *  VALIDATION OF OPERATION CODE    *                   DO003R
           *                                  *                   DO003R
           ************************************                   DO003R
F0520.                                                            DO003R
          IF  S-WWSS-PFKEY     = "01"                             DO003R
       MOVE  "DO0000  "  TO S-WWSS-PROGE                         DO003R
       MOVE  "O"  TO  OPER       GO TO F0520-FN.                  DO003R
          IF  S-WWSS-PFKEY     = "02"                             DO003R
       MOVE  "DO0010  "  TO S-WWSS-PROGE                         DO003R
       MOVE  "O"  TO  OPER       GO TO F0520-FN.                  DO003R
          IF  S-WWSS-PFKEY     = "03"                             DO003R
       MOVE  "DO0020  "  TO S-WWSS-PROGE                         DO003R
       MOVE  "O"  TO  OPER       GO TO F0520-FN.                  DO003R
          IF  S-WWSS-PFKEY     = "04"                             DO003R
       MOVE  "DO0040  "  TO S-WWSS-PROGE                         DO003R
       MOVE  "O"  TO  OPER       GO TO F0520-FN.                  DO003R
          IF  S-WWSS-PFKEY     = "05"                             DO003R
       MOVE  "DO0050  "  TO S-WWSS-PROGE                         DO003R
       MOVE  "O"  TO  OPER       GO TO F0520-FN.                  DO003R
          IF  S-WWSS-PFKEY     = "12"                             DO003R
       MOVE  "DO0070  "  TO S-WWSS-PROGE                         DO003R
       MOVE  "O"  TO  OPER       GO TO F0520-FN.                  DO003R
          IF  S-WWSS-PFKEY     = "00"                             DO003R
       MOVE  "        "  TO S-WWSS-PROGE                         DO003R
       MOVE  "E"  TO  OPER       GO TO F0520-FN.                  DO003R
F0520-FN.    EXIT.                                                DO003R
F05-FN.      EXIT.                                                DO003R
F40. IF OCF = ZERO GO TO END-OF-RECEPTION.                        DO003R
           ************************************                   DO003R
           *                                  *                   DO003R
           *   CALL SERVER                    *                   DO003R
           *                                  *                   DO003R
           ************************************                   DO003R
F4005.     IF OPER = "E" OR "O" GO TO F4005-FN.                   DO003R
       MOVE ICF TO S-WWSS-ICF                                     DO003R
       MOVE OCF TO S-WWSS-OCF                                     DO003R
       SEND COMMUNICATION-MONITOR, COMMON-AREA,                   DO003R
       SCREEN-FIELDS, DE-ATT TO "DO030SER" REPLY CODE 0           DO003R
       YIELDS COMMUNICATION-MONITOR, COMMON-AREA,                 DO003R
```

```
       SCREEN-FIELDS, DE-ATT ON ERROR GO TO F81ER.                DO003R
       MOVE S-WWSS-OPER  TO OPER                                  DO003R
       MOVE S-WWSS-SCR-ER TO SCR-ER.                              DO003R
F4005-FN.    EXIT.                                                DO003R
           ************************************                   DO003R
           *                                  *                   DO003R
           *  END OF TRANSACTION              *                   DO003R
           *                                  *                   DO003R
           ************************************                   DO003R
F4030.     IF OPER NOT = "E" GO TO F4030-FN.                       DO003R
       MOVE OPER TO S-WWSS-OPER.                                  DO003R
F4030-A.   EXIT PROGRAM.                                          DO003R
F4030-FN.    EXIT.                                                DO003R
           ************************************                   DO003R
           *                                  *                   DO003R
           *  TRANSFER TO ANOTHER SCREEN      *                   DO003R
           *                                  *                   DO003R
           ************************************                   DO003R
F4040.     IF OPER NOT = "O" GO TO F4040-FN.                       DO003R
       MOVE OPER TO S-WWSS-OPER.                                  DO003R
       IF   K-S003R-DOC = "2" OR "3"                              DO003R
       MOVE  PROGE         TO K-S003R-PROGE.                      DO003R
F4040-A.   EXIT PROGRAM.                                          DO003R
F4040-FN.    EXIT.                                                DO003R
F40-FN.      EXIT.                                                DO003R
END-OF-RECEPTION.      EXIT.                                      DO003R
F8Z.         EXIT.                                                DO003R
           ************************************                   DO003R
           *                                  *                   DO003R
           *  DISPLAY                         *                   DO003R
           *                                  *                   DO003R
           ************************************                   DO003R
F8Z10. MOVE "1" TO S-WWSS-ICF S-WWSS-OCF                          DO003R
       IF S-WWSS-ERCOD9 > ZERO AND NOT > INT                      DO003R
       MOVE SV-CPOSL (S-WWSS-ERCOD9) TO NEW-CURSOR-ROW            DO003R
       MOVE SV-CPOSC (S-WWSS-ERCOD9) TO NEW-CURSOR-COL.           DO003R
       IF DE-ATT NOT = SPACE PERFORM F8145 THRU F8145-FN.         DO003R
       IF SCR-ER NOT  > "1"                                       DO003R
       DISPLAY      003R-SCREEN.                                  DO003R
       IF SCR-ER     > "1"                                        DO003R
       DISPLAY S24002.                                            DO003R
F8Z10-FN.    EXIT.                                                DO003R
           ************************************                   DO003R
           *                                  *                   DO003R
           *  END OF PROGRAM                  *                   DO003R
           *                                  *                   DO003R
           ************************************                   DO003R
F8Z20.                                                            DO003R
        GO TO F0110.                                              DO003R
F8Z20-FN.    EXIT.                                                DO003R
F8Z-FN.      EXIT.                                                DO003R
F81.         EXIT.                                                DO003R
           ************************************                   DO003R
           *                                  *                   DO003R
           *  ABNORMAL END PROCEDURE          *                   DO003R
           *                                  *                   DO003R
           ************************************                   DO003R
F81ER.                                                            DO003R
       MOVE TERMINATION-STATUS TO S-WWSS-CDRET                    DO003R
       MOVE "X" TO S-WWSS-OPER.                                   DO003R
F81ER-A.  EXIT PROGRAM.                                           DO003R
F81ER-FN.    EXIT.                                                DO003R
F8145.                                                            DO003R
       MOVE LOW-VALUE TO SH-ATT.                                  DO003R
       MOVE 1 TO K01.                                             DO003R
F8145-A.                                                          DO003R
       IF K01 > INT GO TO F8145-B.                                DO003R
       IF DE-AT (1, K01) = "N" MOVE SH-SEL TO SH-AT (1, K01).     DO003R
       IF DE-AT (1, K01) = "B" MOVE SH-SEL TO SH-AT (2, K01).     DO003R
       IF DE-AT (1, K01) = "D" MOVE SH-SEL TO SH-AT (3, K01).     DO003R
       IF DE-AT (2, K01) = "N" MOVE SH-SEL TO SH-AT (4, K01).     DO003R
       IF DE-AT (2, K01) = "B" MOVE SH-SEL TO SH-AT (5, K01).     DO003R
       IF DE-AT (2, K01) = "R" MOVE SH-SEL TO SH-AT (6, K01).     DO003R
       IF DE-AT (2, K01) = "U" MOVE SH-SEL TO SH-AT (7, K01).     DO003R
       IF DE-AT (5, K01) = "F" MOVE SH-SEL TO SH-AT (8, K01).     DO003R
       ADD 1 TO K01 GO TO F8145-A.                                DO003R
F8145-B.                                                          DO003R
       IF SH-ATT1 (1) NOT = LOW-VALUE                             DO003R
```

```
           MOVE SH-ATT1 (1) TO SH-SCREEN                          DO003R
           TURN TEMP DIM      IN 003R-SCREEN SHADOWED.            DO003R
           IF SH-ATT1 (2) NOT = LOW-VALUE                         DO003R
           MOVE SH-ATT1 (2) TO SH-SCREEN                          DO003R
           TURN TEMP NORMAL   IN 003R-SCREEN SHADOWED.            DO003R
           IF SH-ATT1 (3) NOT = LOW-VALUE                         DO003R
           MOVE SH-ATT1 (3) TO SH-SCREEN                          DO003R
           TURN TEMP HIDDEN   IN 003R-SCREEN SHADOWED.            DO003R
           IF SH-ATT1 (4) NOT = LOW-VALUE                         DO003R
           MOVE SH-ATT1 (4) TO SH-SCREEN                          DO003R
           TURN TEMP DYNNORP  IN 003R-SCREEN SHADOWED.            DO003R
           IF SH-ATT1 (5) NOT = LOW-VALUE                         DO003R
           MOVE SH-ATT1 (5) TO SH-SCREEN                          DO003R
           TURN TEMP DYNBLIN  IN 003R-SCREEN SHADOWED.            DO003R
           IF SH-ATT1 (6) NOT = LOW-VALUE                         DO003R
           MOVE SH-ATT1 (6) TO SH-SCREEN                          DO003R
           TURN TEMP DYNREVE  IN 003R-SCREEN SHADOWED.            DO003R
           IF SH-ATT1 (7) NOT = LOW-VALUE                         DO003R
           MOVE SH-ATT1 (7) TO SH-SCREEN                          DO003R
           TURN TEMP DYNUNDE  IN 003R-SCREEN SHADOWED.            DO003R
           IF SH-ATT1 (8) NOT = LOW-VALUE                         DO003R
           MOVE SH-ATT1 (8) TO SH-SCREEN                          DO003R
           TURN TEMP PROTECTED IN 003R-SCREEN SHADOWED.           DO003R
       F8145-FN.    EXIT.                                         DO003R
       F81-FN.      EXIT.                                         DO003R
```

5. GENERATED SERVER : DATA DIVISION

5.1. INTRODUCTION

INTRODUCTION

A SERVER is associated with each of the Dialogue REQUESTERs.

The SERVER validates the input fields' contents, controls accesses to files, formats the messages to be sent to the REQUESTER and supports user specific procedures.

5.2. BEGINNING OF PROGRAM

BEGINNING OF THE PROGRAM

The user cannot modify the IDENTIFICATION DIVISION of the generated program.

The ENVIRONMENT DIVISION is automatically adapted to the variant requested for the program.

The clause 'DECIMAL POINT IS COMMA' is generated if, on the Library Definition screen, the value in the DECIMAL POINT PRESENTATION CHARACTER field is a comma (,).

In the FILE-CONTROL of the INPUT-OUTPUT SECTION, there are the SELECT clauses of the files for which an access is defined on the Screen Call of Segments (-CS) screen as well as those of the $RECEIVE file.

All other clauses that may be necessary in this part of the program are the user's responsibility.

All modifications to this part of the program must be done on the Beginning Insertions (-B) screen, or on Batch Form 'D'. (Refer to the STRUCTURED CODE Reference Manual).

```
    IDENTIFICATION DIVISION.
    PROGRAM-ID. DO030SER.                                          DO0030
    AUTHOR.     ***  ORDER INPUT SCREEN  ***.                      DO0030
    DATE-COMPILED. 03/11/93.                                       DO0030
    ENVIRONMENT DIVISION.                                          DO0030
    CONFIGURATION SECTION.                                         DO0030
    SOURCE-COMPUTER. T16.                                          DO0030
    OBJECT-COMPUTER. T16.                                          DO0030
    SPECIAL-NAMES.                                                 DO0030
         DECIMAL-POINT IS COMMA.                                   DO0030
    INPUT-OUTPUT SECTION.                                          DO0030
    FILE-CONTROL.                                                  DO0030
         SELECT    CD-FILE                                         DO0030
         ASSIGN TO "DOCD00  "                                      DO0030
         ORGANIZATION INDEXED                                      DO0030
         ACCESS IS DYNAMIC                                         DO0030
         RECORD KEY IS CD00-KEYCD                                  DO0030
         FILE STATUS 1-CD00-STATUS.                                DO0030
         SELECT        EM-FILE                                     DO0030
         ASSIGN  TO   "DODOEM  "                                   DO0030
         ORGANIZATION INDEXED                                      DO0030
         ACCESS IS DYNAMIC                                         DO0030
         RECORD KEY IS EM00-EMKEY                                  DO0030
         FILE STATUS 1-EM00-STATUS.                                DO0030
         SELECT    FO-FILE                                         DO0030
         ASSIGN TO "DOFO00  "                                      DO0030
         ORGANIZATION INDEXED                                      DO0030
         ACCESS IS DYNAMIC                                         DO0030
         RECORD KEY IS FO10-CLEFO                                  DO0030
         FILE STATUS 1-FO00-STATUS.                                DO0030
         SELECT  HE-FILE    ASSIGN TO "SAVESCR "                   DO0030
         ORGANIZATION INDEXED                                      DO0030
         ACCESS IS DYNAMIC                                         DO0030
         RECORD KEY IS HE00-XTERM                                  DO0030
         FILE STATUS 1-HE00-STATUS.                                DO0030
         SELECT    ME-FILE                                         DO0030
         ASSIGN TO "DOME00  "                                      DO0030
         ORGANIZATION INDEXED                                      DO0030
         ACCESS IS DYNAMIC                                         DO0030
         RECORD KEY IS ME00-CLEME                                  DO0030
         FILE STATUS 1-ME00-STATUS.                                DO0030
         SELECT MESSAGE-SCREEN  ASSIGN TO $RECEIVE                 DO0030
         FILE STATUS IS RECEIVE-STATUS.                            DO0030
    RECEIVE-CONTROL.                                               DO0030
         TABLE OCCURS 10.                                          DO0030
```

5.3. SEGMENT DESCRIPTION

SEGMENT DESCRIPTION

This part of the program is generated when at least one segment is used on the screen in 'V' organization.

The segment DESCRIPTION TYPE is defined by the user on the Screen Call of Segments (-CS) screen. The types of calls are:

. Complete segment (Common part and specific part in redefinition);

. Specific part only;

. Complete segment with variable length (common part and specific part in redefinition without FILLER).

Backup screen for documentation call

This file is used to save variable fields before branching to the documentation screen. '1,936' must be the length of the file, because the size of the biggest screen is '1,920'. It is built as follows:

```
01          HEOO.
     05     HEOO-XTERM     PICTURE X(16).
     05     HEOO-SCREEN    PICTURE X(1920).
```

'HE' is the internal name used by default, and 'SAVESCR' is the external name used in the SELECT clause of the FILE SECTION. The user may change these names using On-line screen General Documentation (-G) lines with the C2 option (O:C2):

```
05        XX EXTFF
```

(XX being the new 2-character internal name, and EXTFF the new external name).

The FILE SECTION also includes the description of the $RECEIVE file which is used to transfer the logical message to the REQUESTER.

```
DATA DIVISION.                                                  DO0030
FILE SECTION.                                                   DO0030
FD              CD-FILE                                         DO0030
           LABEL RECORDS OMITTED.                               DO0030
01              CD00.                                           DO0030
      10        CD00-KEYCD.                                     DO0030
       15       CD00-COCARA PICTURE X.                          DO0030
       15       CD00-NUCOM  PICTURE 9(5).                       DO0030
       15       CD00-FOURNI PICTURE X(3).                       DO0030
      10        CD00-SUITE.                                     DO0030
       15       FILLER      PICTURE X(00157).                   DO0030
01              CD05.                                           DO0030
      10        FILLER      PICTURE X(00009).                   DO0030
      10        CD05-NUCLIE PICTURE 9(8).                       DO0030
      10        CD05-DATE   PICTURE X(6).                       DO0030
      10        CD05-RELEA  PICTURE X(3).                       DO0030
      10        CD05-REFCLI PICTURE X(30).                      DO0030
      10        CD05-RUE    PICTURE X(40).                      DO0030
      10        CD05-COPOS  PICTURE X(5).                       DO0030
      10        CD05-VILLE  PICTURE X(20).                      DO0030
      10        CD05-CORRES PICTURE X(25).                      DO0030
      10        CD05-REMIS  PICTURE S9(4)V99.                   DO0030
      10        CD05-MATE   PICTURE X(8).                       DO0030
      10        CD05-LANGU  PICTURE X.                          DO0030
      10             FILLER PICTURE X(5).                       DO0030
01              CD10.                                           DO0030
      10        FILLER      PICTURE X(00009).                   DO0030
      10        CD10-QTMAC  PICTURE 99.                         DO0030
      10        CD10-QTMAL  PICTURE 99.                         DO0030
      10        CD10-INFOR  PICTURE X(35).                      DO0030
      10        CD10-ADFOU  PICTURE X(100).                     DO0030
      10        FILLER      PICTURE X(00018).                   DO0030
01              CD20.                                           DO0030
      10        FILLER      PICTURE X(00009).                   DO0030
      10        CD20-EDIT   PICTURE X.                          DO0030
      10        FILLER      PICTURE X(00156).                   DO0030
FD              EM-FILE                                         DO0030
           LABEL RECORD IS OMITTED.                             DO0030
01              EM00.                                           DO0030
     05         EM00-EMKEY.                                     DO0030
      10        EM00-LIBRA  PICTURE X(3).                       DO0030
      10        EM00-ENTYP  PICTURE X.                          DO0030
      10        EM00-XEMKY.                                     DO0030
       15       EM00-PROGR  PICTURE X(6).                       DO0030
       15       EM00-ERCOD.                                     DO0030
        20      EM00-ERCOD9 PICTURE 9(3).                       DO0030
       15       EM00-ERTYP  PICTURE X.                          DO0030
      10        EM00-LINUM  PICTURE 9(3).                       DO0030
     05         EM00-ERLVL  PICTURE X.                          DO0030
     05         EM00-ERMSG  PICTURE X(66).                      DO0030
     05         FILLER      PICTURE X(6).                       DO0030
FD              FO-FILE                                         DO0030
           LABEL RECORDS OMITTED.                               DO0030
01              FO10.                                           DO0030
      10        FO10-CLEFO.                                     DO0030
       15       FO10-FOURNI PICTURE X(3).                       DO0030
       15       FO10-MATE   PICTURE X(8).                       DO0030
       15       FO10-RELEA  PICTURE X(3).                       DO0030
       15       FO10-LANGU  PICTURE X.                          DO0030
      10        FO10-QTMAS  PICTURE S9(4)                       DO0030
                     COMPUTATIONAL.                             DO0030
      10        FO10-QTMAM  PICTURE 9(4).                       DO0030
      10        FO10-LIBFO  PICTURE X(20).                      DO0030
      10        FO10-DATE   PICTURE X(6).                       DO0030
      10        FO10-HEURE  PICTURE X(8).                       DO0030
      10             FILLER PICTURE XX.                         DO0030
FD              HE-FILE                                         DO0030
           LABEL RECORD IS OMITTED.                             DO0030
01              HE00.                                           DO0030
     05         HE00-XTERM  PICTURE X(16).                      DO0030
     05         HE00-SCREEN PICTURE X(1920).                    DO0030
FD              ME-FILE                                         DO0030
           LABEL RECORDS OMITTED.                               DO0030
01              ME00.                                           DO0030
      10        ME00-CLEME.                                     DO0030
       15       ME00-COPERS PICTURE X(5).                       DO0030
       15       ME00-NUMORD PICTURE XX.                         DO0030
      10        ME00-MESSA  PICTURE X(75).                      DO0030
```

```
FD        MESSAGE-SCREEN                                    DO0030
        LABEL RECORD IS OMITTED.                            DO0030
01   ENTRY-REPLY.                                           DO0030
     02  SERVER-MONIT   PICTURE X(26).                      DO0030
     02     K-S0030-PROGR PICTURE X(6).                      DO0030
     02            CA00.                                     DO0030
       10          CA00-CLECD.                               DO0030
        15         CA00-NUCOM  PICTURE 9(5).                 DO0030
       10          CA00-CLECL1.                              DO0030
        15         CA00-NUCLIE PICTURE 9(8).                 DO0030
       10          CA00-ME00.                                DO0030
        15         CA00-CLEME.                               DO0030
         20        CA00-COPERS PICTURE X(5).                 DO0030
         20        CA00-NUMORD PICTURE XX.                   DO0030
        15         CA00-MESSA  PICTURE X(75).                DO0030
       10          CA00-PREM   PICTURE X.                    DO0030
       10          CA00-LANGU  PICTURE X.                    DO0030
       10          CA00-RAISOC PICTURE X(50).                DO0030
     02     K-S0030-DOC   PICTURE X.                         DO0030
     02     K-S0030-PROGE PICTURE X(8).                      DO0030
     02     K-S0030-CPOSL PICTURE 999.                       DO0030
     02     K-S0030-LIBRA PICTURE XXX.                       DO0030
     02     K-S0030-ERCOD PICTURE XXX.                       DO0030
     02     K-S0030-ERTYP PICTURE X.                         DO0030
     02     K-S0030-LINUM PICTURE 999.                       DO0030
     02     K-S0030-XTERM PICTURE X(16).                     DO0030
     02  SERVER-COMMON.                                     DO0030
     05  FILLER        PICTURE X(0700).                     DO0030
     02  SERVER-MSG.                                        DO0030
     05  FILLER  PICTURE X(0784).                           DO0030
     02  SERVER-ATT.                                        DO0030
     05  FILLER  PICTURE X(0225).                           DO0030
```

5.4. BEGINNING OF WORKING STORAGE SECTION

BEGINNING OF WORKING-STORAGE

The 'WSS-BEGIN' level is generated at the beginning of the WORKING-STORAGE SECTION for all programs.

It contains all the variables and keys necessary for automatic processing.

IK Error indicator for file accesses.

'0' No error.
'1' Error.

OPER Operation code.

'A' Display.
'M' Update.
'S' Screen continuation.
'E' End.
'P' Previous display.
'O' Transfer to another screen.

OPERD Operation code for deferred branching.

Transferred to OPER in F40.

'O' Deferred call of another screen.

OPER and OPERD: If they correspond to a Data Element defined as an Operation Code on the Screen Call of Elements (-CE) screen (value 'O' in the VALIDATION CONDITIONS/SET VARIABLES field), they are processed in the F0520 function. If not, they are processed in the F20 function.

CATX Code of the category being executed.

'0' Beginning of reception or display.
' ' Screen-top.
'R' Repetitive.
'Z' Screen-bottom.

CATM Transaction code.

'C' Creation.
'M' Modification.
'A' Deletion.

'X' Implicit update.

ICATR Indicator for current category being processed.

(Repetitive category only)

SCR-ER Screen error indicator.

'1' no error.
'4' error.

FT End of repetitive category indicator.

'0' Lines to display.
'1' No more lines to display.

ICF Input Configuration.

'1' Screen in input.
'0' No screen in input.

OCF Output Configuration.

'1' Screen in output.
'0' No screen in output.

CAT-ER Ongoing error indicator for current category.

' ' No error.
'E' Error.

I-PFKEY Stores the function key.

INA Number of Data Elements in the screen-top category.

INR INA + Number of Data Elements in the repetitive category.

INZ INR + Number of Data Elements in the screen-bottom category.

IRR Number of repetitions in the repetitive category.

INT Number of input fields.

IER Number of error messages on the screen.

DEL-ER Memorizes Data Element error (work variable).

The 'CONSTANTS' level is also generated for all programs. It contains:

. The compilation date of the on-line generator (PACE30 and PACE80), as well as the date of the related skeleton (these appear as comment lines),

. Information on the program and work areas generated according to the procedures executed in the program:

SESSI Session number of the generated program.
LIBRA Code of the library.
DATGN Generated program date.
PROGR System program code.
PROGE COBOL program-id.
TIMGN Generated program time.
USERCO User code.
COBASE Database code.

If a request for HELP documentation is entered on the Screen Definition screen, the following fields are generated:

PRDOC: External name of the 'HELP SCREEN' program.

5-scrn-PROGE: Field containing the name of called program.
This field is filled during a screen branching operation ('scrn' = the last four characters of the screen code).

DATCE This field includes the CENTUR field (containing the value of the current century) and a blank date area (DATOR) in which the user can store the processing date in a year-month-day format (DATOA-DATOM-DATOJ).

Note: if the year is less than '61', the CENTUR field is automatically set to '20'.

DAT6 Fields for date formatting (MMDDYY or DDMMYY) and
DAT7 printing (for example DD/MM/YY).
DAT8 These fields are generated if a date processing operator is used in the '-P' lines of the program or if a variable data element ('V') has a date format.

DATSEP This field contains the separator used for dates. The default value ('/') can be modified by via Procedural Code (-P) lines.

DATSET This field contains the separator used for the Gregorian date.

The default value ('-') can be modified via Procedural Code (-P) lines.

DATCTY Field for century loading.

DAT6C Field for non-formatted date with century.

DAT7C Field for non-formatted date with century.

DAT8C Field for formatted date with century (DD/MM/CCYY).

DAT8G Field for the Gregorian type of date -- with century also -- (CCYY-MM-DD).

TIMCO Field for time loading.

TIMDAY Field for time formatting (HH:MM:SS).

The 'CONFIGURATIONS' level contains one variable 'ddss-CF' ('ddss' = Segment code in the generated program) for each Segment accessed in the program, which allows for conditioned access to each Segment in the procedure.

The 'STATUS-AREA' level contains the '1-dd00-STATUS' fields, which correspond to the FILE-STATUS defined in each file's SELECT clause.

```
WORKING-STORAGE SECTION.                                        DO0030
01   WSS-BEGIN.                                                 DO0030
     05 FILLER PICTURE X(7) VALUE "WORKING".                    DO0030
     05 IK     PICTURE X.                                       DO0030
     05 BLANC  PICTURE X VALUE SPACE.                           DO0030
     05 OPER   PICTURE X.                                       DO0030
     05 OPERD  PICTURE X VALUE SPACE.                           DO0030
     05 CATX   PICTURE X.                                       DO0030
     05 CATM   PICTURE X.                                       DO0030
     05 ICATR  PICTURE 99.                                      DO0030
     05 SCR-ER PICTURE X.                                       DO0030
     05 FT     PICTURE X.                                       DO0030
     05 ICF    PICTURE X.                                       DO0030
     05 OCF    PICTURE X.                                       DO0030
     05 CAT-ER PICTURE X.                                       DO0030
     05 I-PFKEY PICTURE XX.                                     DO0030
     05 INA    PICTURE 999 VALUE 008.                           DO0030
     05 INR    PICTURE 999 VALUE 012.                           DO0030
     05 INZ    PICTURE 999 VALUE 013.                           DO0030
     05 IRR     PICTURE 99 VALUE 09.                            DO0030
     05 INT    PICTURE 999 VALUE 045.                           DO0030
     05 IER     PICTURE 99 VALUE 01.                            DO0030
     05 DEL-ER  PICTURE X.                                      DO0030
01   PACBASE-CONSTANTS.                                         DO0030
 OLSD DATES PACE30 : /02/93                                     DO0030
            PACE80 : 05/03/93   PAC7SG : 930225                 DO0030
     05 SESSI  PICTURE X(5) VALUE "0314 ".                      DO0030
     05 LIBRA  PICTURE X(3) VALUE "ATA".                        DO0030
     05 DATGN  PICTURE X(8) VALUE "03/11/93".                   DO0030
     05 PROGR  PICTURE X(6) VALUE "DO0030".                     DO0030
     05 PROGE  PICTURE X(8) VALUE "DO030SER".                   DO0030
     05 TIMGN  PICTURE X(8) VALUE "17:52:30".                   DO0030
     05 USERCO PICTURE X(8) VALUE "PDSG    ".                   DO0030
     05 PRDOC  PICTURE X(8) VALUE "DOP050".                     DO0030
     05      5-0030-PROGE  PICTURE X(8).                       DO0030
01  DATCE.                                                     DO0030
  05  CENTUR   PICTURE XX VALUE "19".                          DO0030
     05 DATOR.                                                  DO0030
     10 DATOA  PICTURE XX.                                      DO0030
     10 DATOM  PICTURE XX.                                      DO0030
     10 DATOJ  PICTURE XX.                                      DO0030
01  DAT6.                                                      DO0030
     10 DAT61.                                                  DO0030
     15 DAT619 PICTURE 99.                                     DO0030
     10 DAT62.                                                  DO0030
     15 DAT629 PICTURE 99.                                     DO0030
     10 DAT63  PICTURE XX.                                     DO0030
01  DAT7.                                                      DO0030
     10 DAT71  PICTURE XX.                                     DO0030
     10 DAT72  PICTURE XX.                                     DO0030
     10 DAT73  PICTURE XX.                                     DO0030
01  DAT8.                                                      DO0030
     10 DAT81  PICTURE XX.                                     DO0030
     10 DAT8S1 PICTURE X.                                      DO0030
     10 DAT82  PICTURE XX.                                     DO0030
     10 DAT8S2 PICTURE X.                                      DO0030
     10 DAT83  PICTURE XX.                                     DO0030
01  DATSEP     PICTURE X VALUE "/".                            DO0030
01  DATSET     PICTURE X VALUE "-".                            DO0030
01  DATCTY.                                                    DO0030
  05  DATCTY9  PICTURE 99.                                     DO0030
01  DAT6C.                                                     DO0030
  10  DAT61C   PICTURE XX.                                     DO0030
  10  DAT62C   PICTURE XX.                                     DO0030
  10  DAT63C   PICTURE XX.                                     DO0030
  10  DAT64C   PICTURE XX.                                     DO0030
01  DAT7C.                                                     DO0030
  10  DAT71C   PICTURE XX.                                     DO0030
  10  DAT72C   PICTURE XX.                                     DO0030
  10  DAT73C   PICTURE XX.                                     DO0030
  10  DAT74C   PICTURE XX.                                     DO0030
01  DAT8C.                                                     DO0030
  10  DAT81C   PICTURE XX.                                     DO0030
  10  DAT8S1C  PICTURE X    VALUE "/".                         DO0030
  10  DAT82C   PICTURE XX.                                     DO0030
  10  DAT8S2C  PICTURE X    VALUE "/".                         DO0030
  10  DAT83C   PICTURE XX.                                     DO0030
  10  DAT84C   PICTURE XX.                                     DO0030
```

```
01  DAT8G.                                                      DO0030
  10  DAT81G   PICTURE XX.                                      DO0030
  10  DAT82G   PICTURE XX.                                      DO0030
  10  DAT8S1G  PICTURE X    VALUE "-".                          DO0030
  10  DAT83G   PICTURE XX.                                      DO0030
  10  DAT8S2G  PICTURE X    VALUE "-".                          DO0030
  10  DAT84G   PICTURE XX.                                      DO0030
01  TIMCO.                                                      DO0030
 02  TIMCOG.                                                    DO0030
   05  TIMCOH  PICTURE XX.                                      DO0030
   05  TIMCOM  PICTURE XX.                                      DO0030
   05  TIMCOS  PICTURE XX.                                      DO0030
  02 TIMCOC    PICTURE XX.                                      DO0030
01  TIMDAY.                                                     DO0030
   05  TIMHOU  PICTURE XX.                                      DO0030
   05  TIMS1   PICTURE X    VALUE ":".                          DO0030
   05  TIMMIN  PICTURE XX.                                      DO0030
   05  TIMS2   PICTURE X    VALUE ":".                          DO0030
   05  TIMSEC  PICTURE XX.                                      DO0030
01    CONFIGURATIONS.                                          DO0030
     05      CD05-CF      PICTURE X.                           DO0030
     05      CD10-CF      PICTURE X.                           DO0030
     05      CD20-CF      PICTURE X.                           DO0030
     05      FO10-CF      PICTURE X.                           DO0030
     05      ME00-CF      PICTURE X.                           DO0030
01      STATUS-AREA.                                           DO0030
     05    1-EM00-STATUS PICTURE XX.                           DO0030
     05    RECEIVE-STATUS PICTURE XX.                          DO0030
     05    1-HE00-STATUS PICTURE XX.                           DO0030
     05    1-CD00-STATUS PICTURE XX.                           DO0030
     05    1-FO00-STATUS PICTURE XX.                           DO0030
     05    1-ME00-STATUS PICTURE XX.                           DO0030
```

5.5. DESCRIPTION OF COMMUNICATION AREA

DESCRIPTION OF COMMUNICATION AREA

The COMMON-AREA level is generated according to the access keys of the segments used in display.

Each of the Dialogue screens include this common area.

The following fields are used to store the access keys of segments used in display if they do not have a preceding segment):

. K-A0001-DEBUT Automatic generation of screen-top category.

. K-ACD05-CLECD Key of the screen-top category.

. K-R0001-LINE OCCURS 2

Generated according to the data element defining the repetitive category (the 1st occurrence stores the beginning of display key; the 2nd stores the key for the read of the continuation screen).

. K-RCD10-CLECD Key for repetitive category.

. K-Z0001-END

Key of the screen-bottom category generated according to the data element defining that category).

. K-ZME00-CLEME Key of the screen-bottom category.

A 'FILLER' aligns the K-x0001 fields on 100 positions (by default), unless the user has specified a greater length on the Dialogue Complement (-O) screen.

The COMMUNICATION-MONITOR level contains the fields which are used for communication with the Dialogue Monitor.

GENERATED SERVER : DATA DIVISION 5
DESCRIPTION OF COMMUNICATION AREA 5

```
01       COMMON-AREA.                                          *AA000
     02      K-0030.                                           *AA002
     03     K-A0030-DEBUT.                                     *AA002
      05        K-ACD05-KEYCD  PICTURE X(00009).               *AA002
     03     K-R0030-LINE   OCCURS 2.                           *AA002
      05        K-RCD10-KEYCD  PICTURE X(00009).               *AA002
     03     K-Z0030-END.                                       *AA002
      05        K-ZME00-CLEME  PICTURE X(7).                   *AA002
     02      FILLER        PICTURE X(0666).                    *AA002
01           COMMUNICATION-MONITOR.                            *AA010
       02    S-WWSS.                                           *AA010
       10    S-WWSS-CDRET  PICTURE S9(4) COMP.                 *AA010
       10    S-WWSS-OPER   PICTURE X.                          *AA010
       10    S-WWSS-ICF    PICTURE X.                          *AA010
       10    S-WWSS-OCF    PICTURE X.                          *AA010
       10    S-WWSS-SCR-ER PICTURE X.                          *AA010
       10    S-WWSS-PROGE  PICTURE X(8).                       *AA010
       10    S-WWSS-PFKEY  PICTURE XX.                         *AA010
       10    FILLER        PICTURE XX.                         *AA010
       10    S-WWSS-ERCOD9 PICTURE 999.                        *AA010
       10    S-WWSS-CURPOS.                                    *AA010
         15  S-WWSS-CPOSL  PICTURE 9(4) COMP.                 *AA010
         15  S-WWSS-CPOSC  PICTURE 9(4) COMP.                 *AA010
```

5.6. SCREEN DESCRIPTION

SCREEN MAP DESCRIPTION

The fields of the screen are generated according to the rules that are illustrated by the example:

```
.I-0030         Screen in reception.
.O-0030         Screen in display.

.I-0030-REMIS   Reception field.
.E-0030-REMIS   Alphanumeric definition of an
                I-0030-REMIS field, which is numeric in
                reception.

.O-0030-QTMAC   Display field.
.F-0030-QTMAC   Alphanumeric definition of an
                O-0030-QTMAC field, which is numeric in
                display.

.X-0030-MATE    Attributes of the fields.
.Y-0030-MATE    Attributes of the fields.
```

The data element defining the repetitive category is coded in the screen description:

```
      .J-0030-LINE OCCURS 9 in reception,

      .P-0030-LINE OCCURS 9 in display,

containing a FILLER.
```

The description of the fields defined by the data elements of the repetitive category is generated outside of the screen description.

This description is made up of a 'FILLER' field which is filled in at each occurrence of the category and which is used to execute the procedures for each of the elementary data elements.

This description is generated according to the same rules as above, for example:

.I-0030-LINE Used for procedures in reception, containing,

.I-0030-FOURNI

.E-0001-QTMAC
etc.

.O-0030-LINE Used for procedures in display, containing,

.O-0030-FOURNI

.O-0030-QTMAC

An ordinary repetitive data element (which does not define a repetitive category) is described directly in the screen description in the following form:

.05 FILLER Occurs 2.
.10 I-0030-LREF1 in reception

.05 FILLER Occurs 2.
.10 O-0030-LREF1 in display

In this case, the procedures (validations, transfers, etc.) for each occurrence of the data element are not generated and are to be inserted by the user in Structured Code.

GENERATED SERVER : DATA DIVISION 5
SCREEN DESCRIPTION 6

```
01          INPUT-SCREEN-FIELDS.                          *AA050
    02      I-0030.                                       *AA050
    05      I-0030-PROGE  PICTURE X(8).                   *AA050
    05      I-0030-SESSI  PICTURE X(5).                   *AA050
    05      I-0030-DATEM  PICTURE X(10).                  *AA050
    05      I-0030-HEURE  PICTURE X(8).                   *AA050
    05      I-0030-NUCOM  PICTURE 9(5).                   *AA050
    05      I-0030-MATE   PICTURE X(8).                   *AA050
    05      I-0030-RELEA  PICTURE X(3).                   *AA050
    05      I-0030-RAISOC PICTURE X(50).                  *AA050
    05      I-0030-RUE    PICTURE X(40).                  *AA050
    05      I-0030-COPOS  PICTURE X(5).                   *AA050
    05      I-0030-VILLE  PICTURE X(20).                  *AA050
    05      I-0030-REFCLI PICTURE X(30).                  *AA050
    05      I-0030-DATE   PICTURE X(6).                   *AA050
    05      I-0030-CORRES PICTURE X(25).                  *AA050
    05      E-0030-REMIS.                                 *AA050
    10      I-0030-REMIS  PICTURE S9(4)V99.               *AA050
    10      FILLER        PICTURE X(2).                   *AA050
    05      J-0030-LINE   OCCURS 9.                       *AA050
    10      FILLER        PICTURE X(45).                  *AA050
    05      I-0030-EDIT   PICTURE X.                      *AA050
    05      I-0030-MESSA  PICTURE X(75).                  *AA050
    05      I-0030-ERMS.                                  *AA050
    10      I-001  OCCURS 1.                              *AA050
    15      I-0030-ERMSG  PICTURE X(72).                  *AA050
01          OUTPUT-SCREEN-FIELDS.                         *AA050
    02      O-0030.                                       *AA050
    05      O-0030-PROGE  PICTURE X(8).                   *AA050
    05      O-0030-SESSI  PICTURE X(5).                   *AA050
    05      O-0030-DATEM  PICTURE X(10).                  *AA050
    05      O-0030-HEURE  PICTURE X(8).                   *AA050
    05      O-0030-NUCOM  PICTURE 9(5).                   *AA050
    05      O-0030-MATE   PICTURE X(8).                   *AA050
    05      O-0030-RELEA  PICTURE X(3).                   *AA050
    05      O-0030-RAISOC PICTURE X(50).                  *AA050
    05      O-0030-RUE    PICTURE X(40).                  *AA050
    05      O-0030-COPOS  PICTURE X(5).                   *AA050
    05      O-0030-VILLE  PICTURE X(20).                  *AA050
    05      O-0030-REFCLI PICTURE X(30).                  *AA050
    05      O-0030-DATE   PICTURE X(6).                   *AA050
    05      O-0030-CORRES PICTURE X(25).                  *AA050
    05      F-0030-REMIS.                                 *AA050
    10      O-0030-REMIS  PICTURE -(04)9,9(02).           *AA050
    05      P-0030-LINE   OCCURS 9.                       *AA050
    10      FILLER        PICTURE X(45).                  *AA050
    05      O-0030-EDIT   PICTURE X.                      *AA050
    05      O-0030-MESSA  PICTURE X(75).                  *AA050
    05      O-0030-ERMS.                                  *AA050
    10      O-002  OCCURS 1.                              *AA050
    15      O-0030-ERMSG  PICTURE X(72).                  *AA050
01          REPEAT-LINE.                                  *AA050
    02      I-0030-LINE.                                  *AA050
    05      I-0030-CODMVT PICTURE X.                      *AA050
    05      I-0030-FOURNI PICTURE X(3).                   *AA050
    05      E-0030-QTMAC.                                 *AA050
    10      I-0030-QTMAC  PICTURE 99.                     *AA050
    05      I-0030-QTMAL  PICTURE 99.                     *AA050
    05      I-0030-QTMAR  PICTURE 99.                     *AA050
    05      I-0030-INFOR  PICTURE X(35).                  *AA050
    02      O-0030-LINE.                                  *AA050
    05      O-0030-CODMVT PICTURE X.                      *AA050
    05      O-0030-FOURNI PICTURE X(3).                   *AA050
    05      F-0030-QTMAC.                                 *AA050
    10      O-0030-QTMAC  PICTURE Z(01)9.                 *AA050
    05      O-0030-QTMAL  PICTURE 99.                     *AA050
    05      O-0030-QTMAR  PICTURE 99.                     *AA050
    05      O-0030-INFOR  PICTURE X(35).                  *AA050
```

5.7. DESCRIPTION OF VALIDATION AREAS

DESCRIPTION OF VALIDATION AREAS

The validation processing part of the program is always generated in the WORKING-STORAGE SECTION. It includes all the work areas necessary for the generated validation processing.

NUMERIC FIELDS OF THE SCREEN

The 'NUMERIC-FIELDS' level is generated when the screen includes at least one variable Data Element.

Field '9-scrn-delco' (scrn = last 4 characters of the screen code) is generated for each numeric Data Element. It contains the breakdown of the Data Element's VALUE in 'seedd' where:

s = ' ' non-signed Data Element.

'+' signed Data Element.

ee = number of digits in the integer part of the Data Element.

dd = number of digits in the decimal part of the Data Element.

VALIDATION VARIABLES

The 'VALIDATION-TABLE-FIELDS' level is generated if there is at least one variable data element (NATURE = 'V') used on the screen.

DE-ERR : memorizes the presence and/or status of each Data Element of the screen.

A position in this table (coded ER-scrn-delco) is associated with each Data Element of the screen. This is generated at the '05' level ('scrn' = last four characters of the screen code).

Depending on the stages of validation, this position can be set to the following values:

.0 Data Element absent.
.1 Data Element present.
.2 Invalid absence of data element.
.4 Erroneous class.
.5 Invalid content.

This table of error positions is structured according to the categories defined on the screen and the group data element in the following manner:

A group level for the Data Elements from the beginning of the screen is systematically generated in the form of:

ER-nn-BEGIN.

For a repetitive Data Element defining a repetitive area of the screen (data element on the screen with NATURE = 'R'), the generation of the error positions is as follows:

.03 ES-scrn-LINE OCCURS 9.
.05 FILLER PICTURE X(0004).

In this example:

LINE is the code of the Data Element with NATURE = 'R' (see above),
9 is the number of repetitions,
0004 is the number of Data Elements in the repetitive category.

After the table of errors, there is an area which will contain the error positions of the Data Elements from the repetitive category. This area is used to position the errors for each of these data elements, with each occurrence.

```
.02  ER-nn-LINE.

.05  ER-nn-CODMVT  PICTURE X.

.05  ER-nn-FOURNI  PICTURE X.
etc.
```

For a repetitive Data Element whose NATURE is other than 'R', the generation in the table of error positions does not provide the description of the sample item, but does provide the following:

```
.05 FILLER OCCURS 2.

.10 ER-nn-LREF1  PICTURE X.
```

A group level for the Data Elements from the screen-bottom category is generated using a Data Element whose NATURE = 'Z', which contains the error positions of Data Elements belonging to that category:

```
.03 ER-nn-END.

.05 ER-nn-EDIT  PICTURE X.
etc.
```

TT-DAT

The 'TT-DAT' level is generated if a variable Data Element (NATURE = 'V') contains a 'date' format. It is used in sub-function F8120-M for date formatting purposes.

LEAP-YEAR

The 'LEAP-YEAR' level is generated if a variable Data Element (NATURE = 'V') contains a 'date' format (always generated with CICS). It is used in F81-ER to determine whether or not the year is a leap year.

USERS-ERROR

The 'USERS-ERROR' level is always generated, and it contains:

XEMKY: Table position used to build the key, including:

'XPROGR' Name of the program or dialogue,
'XERCD' Error number and type of error,

T-XEMKY: Table of errors, corresponding to the number of error messages on the screen (default value = 1).

INDEXES

The 'INDEXES' level is always generated. It includes:

K01, K02, K03, K04
: Indexes for automatic numeric class.

K50R, K50L, K50M
: Indexes associated with the table of user errors (the value assigned to K50M directly relates to the number of vertical repetitions of Data Element 'ERMSG' in the screen description).

5-dd00-LTH
: Length of longest Segment of the Data Structure (common part + specific part; 'dd' = code of the Data Structure).

5-ddss-LTH
: Length of the Segment without the common part (not generated for the common part, 'dd00'; 'ddss' = code of the Segment).

5-ddss-LTHV
: Length of the Data Structure Segment including the common part (not generated for the common part, 'dd00'; 'ddss' = code of the Segment).

LTH Calculation area used during access to files with a Table or VSAM ORGANIZATION.

KEYLTH
: Calculation area of the key used during access to files with a VSAM ORGANIZATION.

5-scrn-LENGTH
: Area containing the length of the communication area (scrn = last four char. of screen code).

NUMERIC-VALIDATION-FIELDS

The 'NUMERIC-VALIDATION-FIELDS' level is generated if there is at least one variable numeric field on the screen. It contains the work areas necessary for analyzing and formatting numeric Data Elements on the screen (refer to subchapter "F81 : CALLED VALIDATION FUNCTIONS").

```
01          NUMERIC-FIELDS.                                    *AA050
     05     9-0030-REMIS  PICTURE X(5) VALUE "+0402".          *AA050
     05     9-0030-QTMAC  PICTURE X(5) VALUE " 0200".          *AA050
01          VALIDATION-TABLE-FIELDS.                           *AA150
     02     DE-ERR.                                            *AA150
     05      DE-ER        PICTURE X                            *AA150
                 OCCURS 045.                                   *AA150
     02     DE-E   REDEFINES DE-ERR.                           *AA150
     03    ER-0030-BEGIN.                                      *AA150
     05         ER-0030-MATE   PICTURE X.                      *AA150
     05         ER-0030-RELEA  PICTURE X.                      *AA150
     05         ER-0030-RUE    PICTURE X.                      *AA150
     05         ER-0030-COPOS  PICTURE X.                      *AA150
     05         ER-0030-REFCLI PICTURE X.                      *AA150
     05         ER-0030-DATE   PICTURE X.                      *AA150
     05         ER-0030-CORRES PICTURE X.                      *AA150
     05         ER-0030-REMIS  PICTURE X.                      *AA150
     03      PS-30-LINE   OCCURS 9.                            *AA150
     05     FILLER        PICTURE X(0004).                    *AA150
     03    ER-0030-END.                                        *AA150
     05         ER-0030-EDIT   PICTURE X.                      *AA150
     02    ER-0030-LINE.                                       *AA150
     05         ER-0030-CODMVT PICTURE X.                      *AA150
     05         ER-0030-FOURNI PICTURE X.                      *AA150
     05         ER-0030-QTMAC  PICTURE X.                      *AA150
     05         ER-0030-INFOR  PICTURE X.                      *AA150
01   TT-DAT.                                                   *AA200
     05 T-DAT      PICTURE X OCCURS 5.                         *AA200
01   LEAP-YEAR.                                                *AA200
     05 LEAP-FLAG  PICTURE X.                                 *AA200
     05 LEAP-REM   PICTURE 99.                                *AA200
01   USERS-ERROR.                                              *AA200
     05 XEMKY.                                                *AA200
        10 XPROGR   PICTURE X(6).                             *AA200
        10 XERCD    PICTURE X(4).                             *AA200
     05 T-XEMKY     OCCURS       01.                          *AA200
        10 T-XPROGR PICTURE X(6).                             *AA200
        10 T-XERCD  PICTURE X(4).                             *AA200
01   PACBASE-INDEXES COMPUTATIONAL.                            *AA200
     05  TALLY      PICTURE S9(4) VALUE ZERO.                 *AA200
     05 K01         PICTURE S9(4).                            *AA200
     05 K02         PICTURE S9(4).                            *AA200
     05 K03         PICTURE S9(4).                            *AA200
     05 K04         PICTURE S9(4).                            *AA200
     05 K50R        PICTURE S9(4) VALUE ZERO.                 *AA200
     05 K50L        PICTURE S9(4) VALUE ZERO.                 *AA200
     05 K50M        PICTURE S9(4)                             *AA200
                    VALUE       +01.                         *AA200
     05 IWP20L      PICTURE S9(4) VALUE  ZERO.                *AA200
     05 IWP20R      PICTURE S9(4) VALUE  ZERO.                *AA200
     05 IWP20M      PICTURE S9(4) VALUE +0009.                *AA200
     05    5-CD00-LTH  PICTURE S9(4) VALUE +0166.             *AA200
     05    5-CD05-LTH  PICTURE S9(4) VALUE +0157.             *AA200
     05    5-CD10-LTH  PICTURE S9(4) VALUE +0139.             *AA200
     05    5-CD20-LTH  PICTURE S9(4) VALUE +0001.             *AA200
     05    5-FO10-LTH  PICTURE S9(4) VALUE +0057.             *AA200
     05    5-ME00-LTH  PICTURE S9(4) VALUE +0082.             *AA200
     05    5-CA00-LTH  PICTURE S9(4) VALUE +0147.             *AA200
     05    5-CD05-LTHV PICTURE S9(4) VALUE +0166.             *AA200
     05    5-CD10-LTHV PICTURE S9(4) VALUE +0148.             *AA200
     05    5-CD20-LTHV PICTURE S9(4) VALUE +0010.             *AA200
     05    5-FO10-LTHV PICTURE S9(4) VALUE +0057.             *AA200
     05    LTH         PICTURE S9(4) VALUE ZERO.              *AA200
     05      5-0030-LENGTH PICTURE S9(4)                      *AA200
                        VALUE      +0891.                     *AA200
01   NUMERIC-VALIDATION-FIELDS.                                *AA200
     05 ZONUM1.                                               *AA200
        10 C1       PICTURE X OCCURS 27.                      *AA200
     05 ZONUM2.                                               *AA200
        10 C2       OCCURS 18.                                *AA200
        15 C29      PICTURE S9.                               *AA200
     05 ZONUM9      REDEFINES ZONUM2 PICTURE 9(18).           *AA200
     05 NUMPIC.                                               *AA200
        10 SIGNE    PICTURE X.                                *AA200
        10 NBCHA    PICTURE 99.                               *AA200
        10 NBCHP    PICTURE 99.                               *AA200
     05 C9          PICTURE S9.                               *AA200
     05 C91         PICTURE X.                                *AA200
```

```
      05 TPOINT      PICTURE X.                                  *AA200
      05 ZONUM3.                                                 *AA200
         10 C3       PICTURE X OCCURS 18.                       *AA200
      05 ZONUM4      REDEFINES ZONUM3 PICTURE 9(18).            *AA200
      05 ZONUM5      PICTURE S99   VALUE -10.                   *AA200
      05 ZONUM6      REDEFINES ZONUM5.                          *AA200
         10 FILLER   PICTURE X.                                 *AA200
         10 C4       PICTURE X.                                 *AA200
01          TABLE-OF-ATTRIBUTES.                                *AA250
     02     DE-ATT.                                             *AA250
     03     DE-ATT1          OCCURS 5.                          *AA250
     05     DE-AT   PICTURE X                                   *AA250
                    OCCURS 045.                                 *AA250
     02     DE-A    REDEFINES DE-ATT.                          *AA250
     03     DE-ATT2          OCCURS 5.                          *AA250
     04     A-0030-BEGIN.                                       *AA250
     05     A-0030-MATE   PICTURE X.                            *AA250
     05     A-0030-RELEA  PICTURE X.                            *AA250
     05     A-0030-RUE    PICTURE X.                            *AA250
     05     A-0030-COPOS  PICTURE X.                            *AA250
     05     A-0030-REFCLI PICTURE X.                            *AA250
     05     A-0030-DATE   PICTURE X.                            *AA250
     05     A-0030-CORRES PICTURE X.                            *AA250
     05     A-0030-REMIS  PICTURE X.                            *AA250
     04     B-0030-LINE   OCCURS 9.                             *AA250
     05     FILLER        PICTURE X(0004).                      *AA250
     04     A-0030-END.                                         *AA250
     05     A-0030-EDIT   PICTURE X.                            *AA250
     02     A-0030-LINE       OCCURS 5.                         *AA250
     05     A-0030-CODMVT PICTURE X.                            *AA250
     05     A-0030-FOURNI PICTURE X.                            *AA250
     05     A-0030-QTMAC  PICTURE X.                            *AA250
     05     A-0030-INFOR  PICTURE X.                            *AA250
01          STOP-FIELDS.                                        *AA300
    02      C-0030.                                             *AA300
      05    C-0030-COCARA     PICTURE X.                        *AA300
      05    C-0030-NUCOM      PICTURE 9(5).                     *AA300
01    FIRST-ON-SEGMENT.                                         *AA301
     05     CD10-FST    PICTURE X.                              *AA301
01          WW10-QTMAR                                          *BB200
                  PICTURE 99                                    *BB200
            VALUE ZERO.                                         *BB201
01            WP00.                                             *WP000
 02           WP10.                                             *WP010
  05          FILLER PIC X(25) VALUE                            *WP020
              "23400BRISBANE           ".                       *WP030
  05          FILLER PIC X(25) VALUE                            *WP040
              "56400VICTORIA           ".                       *WP050
  05          FILLER PIC X(25) VALUE                            *WP060
              "76500ALICE SPRINGS      ".                       *WP070
  05          FILLER PIC X(25) VALUE                            *WP080
              "55300MELBOURNE          ".                       *WP090
  05          FILLER PIC X(25) VALUE                            *WP100
              "11000CANBERRA           ".                       *WP110
  05          FILLER PIC X(25) VALUE                            *WP120
              "34500PERTH              ".                       *WP130
  05          FILLER PIC X(25) VALUE                            *WP140
              "85270DARWIN             ".                       *WP150
  05          FILLER PIC X(25) VALUE                            *WP160
              "94000HOBART             ".                       *WP170
  05          FILLER PIC X(25) VALUE                            *WP180
              "89300SYDNEY             ".                       *WP190
 02           WP20 REDEFINES WP10 OCCURS 9.                     *WP300
  05          WP20-COPOS                                        *WP320
                    PICTURE X(5).                               *WP320
  05          WP20-VILLE                                        *WP340
                    PICTURE X(20).                              *WP340
 02           WP30.                                             *WP400
  05          WP30-COPOS                                        *WP410
                    PICTURE X(5).                               *WP410
 02           WP40.                                             *WP500
  05          WP40-VILLE                                        *WP510
                    PICTURE X(20).                              *WP510
  05          WP40-VILLEL                                       *WP520
                    PICTURE X(20).                              *WP520
```

6. GENERATED SERVER : PROCEDURE

6.1. STRUCTURE OF THE PROCEDURE

STRUCTURE OF THE PROCEDURE DIVISION

```
F01       INITIALIZATION
F0101     Opening of files
F0110     Initializations
-----------------------------------------------------
F05       RECEPTION     (ICF = '1')
F0510     Reception of the screen
F0512     Documentation call procedure
F0520     Validation of Operation Code (OPER)
F10       CATEGORY PROCESSING                <--------
F15       VALIDATION OF THE TRANSACTION CODE    (CATM)!
F20       DATA ELEMENT VALIDATION                     !
F25       SEGMENT ACCESS FOR VALIDATION               !
F30       DATA ELEMENT TRANSFER                       !
F35       SEGMENT ACCESS FOR UPDATE                   !
F3999-ITER-FN. GO TO F10.  ----------------------------
F3999-ITER-FT. EXIT.

F40       END-OF-RECEPTION PROCESSING

F4010     Set-up keys for new display
F4020     Set-up keys for screen paging
F4030     End of transaction
F4040     Transfer to another screen

END-OF-RECEPTION.  (F45-FN)
-----------------------------------------------------
F50       DISPLAY PREPARATION      (OCF = '1')

F5010     Initialization

F52       LOADING OF DATE
F55       CATEGORY PROCESSING                <--------
F60       DATABASE ACCESS FOR DISPLAY                 !
F65       DATA ELEMENT TRANSFER                       !
F6999-ITER-FN. Go to F55.  ----------------------------
F6999-ITER-FT. Exit.

F70       ERROR PROCESSING
F7020     Cursor positioning

END-OF-DISPLAY.  (F78-FN)
-----------------------------------------------------
F8Z       DISPLAY AND END OF PROGRAM
F8Z05     Memorization of the screen
F8Z10     Transfer of the answer in $RECEIVE
F8Z20     End of processing. Go to F0110
```

```
------  Performed Functions ---------------------------
F80       PHYSICAL DATABASE ACCESS ROUTINES
F8098     Error Message File Access
F81ER     Abnormal End Procedure
F81FI     Closing of files
F81UT     Memorization of User's Errors
F8110     Numeric Validation
F8115     Initialization of the Variable Fields
F8130     Help Sub-function
```

6.2. F01 : INITIALIZATIONS

F01 : INITIALIZATIONS

The INITIALIZATIONS function is always generated.

The F0101 sub-function opens the files.

The F0110 sub-function initializes the work areas and contains the transfer of the communication area from the LINKAGE SECTION into the COMMON AREA.

This function triggers the procedure to be executed in case of error.

It ensures the branching to the physical display function after consultation of HELP documentation (if a documentation Help Character has been entered on the Screen Definition screen).

It ensures the cursor position for the first display.

```
PROCEDURE DIVISION.                                                    *99999
          ************************************                         DO0030
          *                                  *                         DO0030
          *  INITIALIZATIONS                 *                         DO0030
          *                                  *                         DO0030
          ************************************                         DO0030
F01.        EXIT.                                                      DO0030
F0101.                                                                 DO0030
      OPEN I-O    CD-FILE    SHARED.                                   DO0030
      OPEN INPUT  EM-FILE    SHARED.                                   DO0030
      OPEN I-O    FO-FILE    SHARED.                                   DO0030
      OPEN I-O    HE-FILE    SHARED.                                   DO0030
      OPEN INPUT  ME-FILE    SHARED.                                   DO0030
      OPEN I-O    MESSAGE-SCREEN.                                      DO0030
F0101-FN.   EXIT.                                                      DO0030
F0110.                                                                 DO0030
      MOVE ZERO TO CATX FT K50L.                                       DO0030
      MOVE "1" TO ICF OCF SCR-ER.                                      DO0030
      MOVE ZERO TO VALIDATION-TABLE-FIELDS.                            DO0030
      MOVE SPACE TO CATM OPER OPERD CAT-ER.                            DO0030
      MOVE SPACE TO TABLE-OF-ATTRIBUTES.                               DO0030
      MOVE ZERO TO CONFIGURATIONS.                                     DO0030
      READ MESSAGE-SCREEN AT END                                       DO0030
      PERFORM F81FI       STOP RUN.                                    DO0030
      MOVE SERVER-COMMON TO COMMON-AREA                                DO0030
      MOVE SERVER-MONIT  TO COMMUNICATION-MONITOR                      DO0030
      MOVE ZERO TO S-WWSS-CDRET                                        DO0030
      MOVE S-WWSS-ICF    TO ICF                                        DO0030
      MOVE S-WWSS-OCF    TO OCF                                        DO0030
      MOVE S-WWSS-PFKEY  TO I-PFKEY.                                   DO0030
      MOVE SPACE TO  O-0030.                                           DO0030
      IF ICF = ZERO AND OCF = ZERO                                     DO0030
      PERFORM F8115 THRU F8115-FN.                                     DO0030
        IF K-S0030-DOC = "2"  OR   K-S0030-DOC = "3"                   DO0030
      MOVE "1" TO K-S0030-DOC     GO TO F8Z05.                         DO0030
      ACCEPT TIMCO FROM TIME.                                          DO0030
      ACCEPT  DATOR FROM DATE.                                         DO0030
      MOVE "X" TO DE-AT (4, 009).                                      DO0030
F0110-FN.   EXIT.                                                      DO0030
F0160.                                                                 DO0030
      IF ICF = ZERO MOVE "A" TO OPER                                   DO0030
      GO TO F3999-ITER-FT.                                             DO0030
F0160-FN.   EXIT.                                                      DO0030
F01-FN.     EXIT.                                                      DO0030
            +----------------------------------+                       P000
 LEVEL 10   I INIT. NUMBER OF LOADED ITEMS      I                      P000
            +----------------------------------+                       P000
F02CP.                                                                 P000
    MOVE       IWP20M TO IWP20L.                                       P100
F02CP-FN.   EXIT.                                                      P000
```

6.3. F05 : RECEPTION

F05 : RECEPTION AND OPERATION CODE

The RECEPTION function contains the conditions for all of the procedures which have to do with the 'RECEPTION' part of the program: from F05 to END-OF-RECEPTION (F45-FN).

In general, all the automatic functions in this part of the program are generated if there is at least one variable data element (NATURE = 'V') defined on the screen.

The F0510 sub-function contains the 'SCREEN RECEPTION' procedure in input and the transfer of the communication area to the INPUT-SCREEN fields.

If an initialization character has been specified on the Screen Definition screen, it will be replaced by blanks (except when a branch to a documentation screen is executed).

The F0512 sub-function is generated if a documentation call character has been entered on the Screen Definition screen. It initializes the fields that are necessary for branching to the documentation screen.

The F0520 sub-function is generated if a variable data element from the screen, or the special PFKEY data element, is defined as the Operation Code on the Screen Call of Elements.

The internal Operation Code 'OPER' is set according to the:

- Value of the screen data element defined as an Operation Code (values specified with TYPE OF LINE = 'O' on the Data Element Description (-D) screen),
- Value of the PFKEY data element (entered on the Screen Call of Elements (-CE) screen).

If an error is found in the value of the Operation Code, subsequent 'reception' procedures are not executed.

```
            ************************************                DO0030
            *                                  *                DO0030
            *  RECEPTION                       *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
   F05.   IF ICF = ZERO GO TO END-OF-RECEPTION.                 DO0030
   F0510.                                                       DO0030
          MOVE SERVER-MSG  TO INPUT-SCREEN-FIELDS.              DO0030
          MOVE "A" TO OPER  MOVE SPACE TO OPERD.                DO0030
             IF I-PFKEY NOT = "11"                              DO0030
                           AND I-PFKEY NOT = "10"               DO0030
          INSPECT I-0030 REPLACING ALL "-" BY SPACE.            DO0030
   F0510-FN.    EXIT.                                           DO0030
   F0512.     IF    I-PFKEY = "11"  OR  I-PFKEY = "10"         DO0030
              NEXT SENTENCE ELSE GO TO F0512-FN.                DO0030
          MOVE "2"   TO K-S0030-DOC                             DO0030
          MOVE PROGE TO K-S0030-PROGE                           DO0030
          MOVE LIBRA TO K-S0030-LIBRA.                          DO0030
              IF    I-PFKEY = "11"                              DO0030
          MOVE "3"  TO  K-S0030-DOC.                            DO0030
          MOVE K-S0030-XTERM  TO HE00-XTERM                     DO0030
          PERFORM F80-HELP-R  THRU F80-FN                       DO0030
          MOVE HE00-SCREEN  TO  O-0030                          DO0030
          PERFORM F8130       THRU F8130-FN                     DO0030
          MOVE  O-0030    TO     HE00-SCREEN                    DO0030
          PERFORM F80-HELP-RW THRU F80-FN                       DO0030
          MOVE PRDOC TO  5-0030-PROGE                           DO0030
          MOVE "O" TO OPER  GO TO F4040.                        DO0030
   F0512-FN.    EXIT.                                           DO0030
            ************************************                DO0030
            *                                  *                DO0030
            *  VALIDATION OF OPERATION CODE    *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
   F0520.                                                       DO0030
             IF      I-PFKEY      = "01"                        DO0030
              MOVE    "DO0000  "   TO   5-0030-PROGE           DO0030
          MOVE  "O"  TO  OPER       GO TO F40-A.                DO0030
             IF      I-PFKEY      = "02"                        DO0030
              MOVE    "DO0010  "   TO   5-0030-PROGE           DO0030
          MOVE  "O"  TO  OPER       GO TO F40-A.                DO0030
             IF      I-PFKEY      = "03"                        DO0030
              MOVE    "DO0020  "   TO   5-0030-PROGE           DO0030
          MOVE  "O"  TO  OPER       GO TO F40-A.                DO0030
             IF      I-PFKEY      = "04"                        DO0030
              MOVE    "DO0040  "   TO   5-0030-PROGE           DO0030
          MOVE  "O"  TO  OPER       GO TO F40-A.                DO0030
             IF      I-PFKEY      = "05"                        DO0030
              MOVE    "DO0050  "   TO   5-0030-PROGE           DO0030
          MOVE  "O"  TO  OPER       GO TO F40-A.                DO0030
             IF      I-PFKEY      = "12"                        DO0030
              MOVE    "DO0070  "   TO   5-0030-PROGE           DO0030
          MOVE  "O"  TO  OPER       GO TO F40-A.                DO0030
             IF      I-PFKEY      = "00"                        DO0030
          MOVE  "E"  TO  OPER       GO TO F40-A.                DO0030
             IF      I-PFKEY      = "07"                        DO0030
          MOVE "M" TO OPER GO TO F0520-900.                     DO0030
             IF      I-PFKEY      = "08"                        DO0030
          MOVE "S" TO OPER GO TO F0520-900.                     DO0030
   F0520-900.                                                   DO0030
          IF OPER NOT = "A" AND OPER NOT = "M" AND OPER NOT = "O"DO0030
          GO TO F3999-ITER-FT.                                  DO0030
   F0520-FN.    EXIT.                                           DO0030
   F05-FN.      EXIT.                                           DO0030
                +----------------------------------+            P000
    LEVEL 10    I NO UPDATE ==> END OF RECEIVE      I           P000
                +----------------------------------+            P000
   F08BB.     IF    OPER NOT = "M"                              P000
              NEXT SENTENCE ELSE GO TO     F08BB-FN.            P000
       GO TO F3999-ITER-FT.                                     P100
   F08BB-FN.    EXIT.                                           P000
```

6.4. F10 : CATEGORY PROCESSING LOOP

F10 : CATEGORY POSITIONING

The CATEGORY POSITIONING function positions the category to be processed in 'RECEPTION' using the CATX indicator which may be set to one of the following values:

'0' Beginning of RECEPTION
' ' Screen-top category
'R' Repetitive category
'Z' Screen-bottom category

Procedures are generated according to the categories defined on the Screen Call of Elements ('-CE') screen.

If no category has been defined, the screen is considered to be a screen-top category.

For the repetitive category, this function includes the interaction between the line of the category to be processed and the input screen description field used to access each of the data elements on the line.

This function also includes the initialization and incrementation of the ICATR index, which manages the repetitive category.

If an error is detected (CAT-ER = 'E') once the processing of a category is complete (F15 to F3999-ITER-FI), SCR-ER is set and validation processing on the subsequent categories is not executed.

```
            ************************************                DO0030
            *                                  *                DO0030
            *  CATEGORY PROCESSING LOOP        *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
F10.          EXIT.                                             DO0030
F1010.      MOVE SPACE TO CATM.                                 DO0030
       IF CATX = "R"                                            DO0030
       MOVE  O-0030-LINE            TO                          DO0030
             P-0030-LINE    (ICATR)                            DO0030
       MOVE  A-0030-LINE   (1)      TO                          DO0030
             B-0030-LINE   (1, ICATR)                           DO0030
       MOVE  A-0030-LINE   (2)      TO                          DO0030
             B-0030-LINE   (2, ICATR)                           DO0030
       MOVE  A-0030-LINE   (4)      TO                          DO0030
             B-0030-LINE   (4, ICATR)                           DO0030
       MOVE  I-0030-LINE            TO                          DO0030
             J-0030-LINE    (ICATR)                            DO0030
       MOVE      ER-0030-LINE       TO                          DO0030
                   PS-30-LINE    (ICATR).                      DO0030
      IF CAT-ER = "E" MOVE "4" TO SCR-ER GO TO F3999-ITER-FT.   DO0030
       MOVE SPACE TO CAT-ER.                                    DO0030
       IF CATX = "0" MOVE " " TO CATX GO TO F1010-FN.           DO0030
       IF CATX = " " MOVE "R" TO CATX MOVE ZERO TO ICATR.       DO0030
       IF CATX = "R" AND ICATR < IRR  ADD  1 TO ICATR           DO0030
       MOVE        PS-30-LINE   (ICATR) TO                      DO0030
                  ER-0030-LINE                                  DO0030
       MOVE  B-0030-LINE   (4, ICATR) TO                        DO0030
             A-0030-LINE   (4)                                  DO0030
       MOVE  P-0030-LINE    (ICATR) TO                          DO0030
             O-0030-LINE                                        DO0030
       MOVE  J-0030-LINE    (ICATR) TO                          DO0030
             I-0030-LINE    GO TO F1010-FN.                     DO0030
       IF CATX = "R" MOVE "Z" TO CATX GO TO F1010-FN.           DO0030
F1010-A.   GO TO F3999-ITER-FT.                                 DO0030
F1010-FN.    EXIT.                                              DO0030
F10-FN.      EXIT.                                              DO0030
```

6.5. F15 : VALIDATION OF TRANSACTION CODE

F15 : TRANSACTION CODE POSITIONING

The VALIDATION OF TRANSACTION CODE (F15) function is generated if at least one Data Element is defined as a Transaction Code in a category on the Screen Call of Elements ('-CE') screen.

The internal transaction code (CATM) is set according to the Data Element's value that is defined as a Transaction Code for the category. The value can be given to the Data Element on:

. the Data Element Description (-D) screen with TYPE OF LINE = 'I',

. the Screen Call of Elements (-CE) screen in the Transaction Code Data Element call line.

Depending on the categories defined on the screen (and for which a transaction code is indicated) the F15 function includes the following:

.F15A for the screen-top category,

.F15R for the repetitive category,

.F15Z for the screen-bottom category.

If the transaction code is wrong, the subsequent 'RECEPTION' procedures are not executed.

```
            ************************************
            *                                  *
            *  VALIDATION OF TRANSACTION CODE  *
            *                                  *
            ************************************
F15.          EXIT.
F15R.  IF CATX NOT = "R" GO TO F15R-FN.
       IF OPER NOT = "M" MOVE SPACE TO CATM GO TO F15R-FN.
       IF    I-0030-CODMVT     = SPACE GO TO F15-FN.
       IF    I-0030-CODMVT     = "C"
       MOVE "C" TO CATM.
       IF    I-0030-CODMVT     = "M"
       MOVE "M" TO CATM.
       IF    I-0030-CODMVT     = "S"
       MOVE "A" TO CATM.
       IF    CATM = SPACE
       MOVE 5 TO    ER-0030-CODMVT  MOVE "E" TO CAT-ER
       GO TO F3999-ITER-FI.
F15R-FN.      EXIT.
F15Z.  IF CATX NOT = "Z" GO TO F15Z-FN.
       IF OPER NOT = "M" MOVE SPACE TO CATM GO TO F15Z-FN.
       IF    I-0030-EDIT       = SPACE GO TO F15-FN.
       IF    I-0030-EDIT       = "O"
       MOVE "X" TO CATM.
       IF    CATM = SPACE
       MOVE 5 TO    ER-0030-EDIT    MOVE "E" TO CAT-ER
       GO TO F3999-ITER-FI.
F15Z-FN.
            +----------------------------------+
 LEVEL 10   I INITIALIZATION CATM (HEADING)     I
            +----------------------------------+
F15AA.    IF    CATX = SPACE
          AND   OPER = "M"
          NEXT SENTENCE ELSE GO TO     F15AA-FN.
    MOVE        "M" TO CATM.
F15AA-FN.    EXIT.
F15-FN.      EXIT.
```

6.6. F20 : DATA ELEMENT VALIDATION

F20 : DATA ELEMENT VALIDATION

The DATA ELEMENT VALIDATION (F20) function is generated when one variable Data Element has been specified on the screen.

Depending on which category or categories defined on the screen contain at least one Data Element to be validated, the F20 function includes the following:

. F20A for the screen-top category.
. F20R for the repetitive category.
. F20Z for the screen-bottom category.

The procedure for each category contains one sub-function per Data Element to be validated. The validation procedures are the following:

. Presence validation.

. Numeric class validation.

. Value validation according to the values or value ranges defined on the Data Element Description ('-D') screen, or on the Screen Call of Elements ('-CE') screen.

. Validation of date (via PERFORM) for Data Elements defined with a 'DATE' format.

. Validation of a sub-function (via PERFORM) defined by the user.

The conditioning of each sub-function is generated based on the procedure option of the Data Element.

The validation result for each Data Element is stored in a field coded ER-scrn-delcod (scrn: last four characters of the screen code; delcod: Data Element code), which takes the following values:

```
'0' : Data Element absent
'1' : Data Element present
'2' : invalid absence
'4' : invalid class
'5' : invalid value
```

'CAT-ER' is set when any Data Element (or user) error is detected.

NOTE: Sub-functions are numbered based on the number of Data Elements, their position on the screen, etc.

As a result, direct references should never be made to a label generated in specific procedures.
Use the Relative Positioning types *A, *P, and *R (see chapter "USE OF STRUCTURED CODE" in the ON-LINE SYSTEMS DEVELOPMENT Reference Manual).

```
            ************************************                DO0030
            *                                  *                DO0030
            *  DATA ELEMENT VALIDATION         *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
F20.          EXIT.                                             DO0030
F20A.  IF CATX NOT = " " GO TO F20A-FN.                         DO0030
F20A2.        EXIT.                                             DO0030
F20A2-FN.     EXIT.                                             DO0030
F20B1.                                                          DO0030
           IF I-0030-MATE   NOT = SPACE                         DO0030
        MOVE "1" TO    ER-0030-MATE                             DO0030
           ELSE                                                 DO0030
        MOVE "2" TO    ER-0030-MATE                             DO0030
        MOVE "E" TO CAT-ER                  GO TO F20B1-FN.     DO0030
          IF  I-0030-MATE       = "I1"                          DO0030
          OR  I-0030-MATE       = "I2"                          DO0030
          OR  I-0030-MATE       = "I3"                          DO0030
          OR  I-0030-MATE       = "I4"                          DO0030
          OR  I-0030-MATE       = "I5"                          DO0030
          OR  I-0030-MATE       = "B7"                          DO0030
          OR  I-0030-MATE       = "B8"                          DO0030
          OR  I-0030-MATE       = "UN"                          DO0030
          OR  I-0030-MATE       = "IC"                          DO0030
          OR  I-0030-MATE       = "IBM.V.OS"                    DO0030
          OR  I-0030-MATE       = "IBM.V.DO"                    DO0030
          OR  I-0030-MATE       = "IBM.D.OS"                    DO0030
          OR  I-0030-MATE       = "IBM.D.DO"                    DO0030
          OR  I-0030-MATE       = "IBM.IMS "                    DO0030
          OR  I-0030-MATE       = "DPS7    "                    DO0030
          OR  I-0030-MATE       = "DPS8    "                    DO0030
          OR  I-0030-MATE       = "UNISYS  "                    DO0030
          OR  I-0030-MATE       = "ICL     "                    DO0030
          OR  I-0030-MATE       = "SPECIAL"                     DO0030
           NEXT SENTENCE ELSE                                   DO0030
        MOVE "5" TO    ER-0030-MATE.                            DO0030
           IF     ER-0030-MATE   > "1"                          DO0030
        MOVE "E" TO CAT-ER                  GO TO F20B1-FN.     DO0030
F20B1-FN.     EXIT.                                             DO0030
F20B2.                                                          DO0030
           IF I-0030-RELEA  NOT = SPACE                         DO0030
        MOVE "1" TO    ER-0030-RELEA                            DO0030
           ELSE                                                 DO0030
        MOVE "2" TO    ER-0030-RELEA                            DO0030
        MOVE "E" TO CAT-ER                  GO TO F20B2-FN.     DO0030
          IF  I-0030-RELEA      = "7.2"                         DO0030
          OR  I-0030-RELEA      = "7.3"                         DO0030
          OR  I-0030-RELEA      = "8.0"                         DO0030
           NEXT SENTENCE ELSE                                   DO0030
        MOVE "5" TO    ER-0030-RELEA.                           DO0030
           IF     ER-0030-RELEA  > "1"                          DO0030
        MOVE "E" TO CAT-ER                  GO TO F20B2-FN.     DO0030
F20B2-FN.     EXIT.                                             DO0030
F20B5.                                                          DO0030
           IF I-0030-RUE    NOT = SPACE                         DO0030
        MOVE "1" TO    ER-0030-RUE.                             DO0030
F20B5-FN.     EXIT.                                             DO0030
F20B6.                                                          DO0030
           IF I-0030-COPOS  NOT = SPACE                         DO0030
        MOVE "1" TO    ER-0030-COPOS                            DO0030
           ELSE                                                 DO0030
        MOVE "2" TO    ER-0030-COPOS                            DO0030
        MOVE "E" TO CAT-ER                  GO TO F20B6-FN.     DO0030
        MOVE  I-0030-COPOS  TO WP30-COPOS                       DO0030
        MOVE      ER-0030-COPOS  TO DEL-ER                      DO0030
        PERFORM  F93CP  THRU  F93CP-FN                          DO0030
        MOVE    WP30-COPOS     TO                               DO0030
              I-0030-COPOS                                      DO0030
        MOVE DEL-ER TO    ER-0030-COPOS.                        DO0030
           IF     ER-0030-COPOS  > "1"                          DO0030
        MOVE "E" TO CAT-ER                  GO TO F20B6-FN.     DO0030
F20B6-FN.     EXIT.                                             DO0030
F20B8.                                                          DO0030
           IF I-0030-REFCLI NOT = SPACE                         DO0030
        MOVE "1" TO    ER-0030-REFCLI.                          DO0030
F20B8-FN.     EXIT.                                             DO0030
F20B9.                                                          DO0030
           IF I-0030-DATE   NOT = SPACE                         DO0030
```

```
          MOVE "1" TO    ER-0030-DATE                                DO0030
             ELSE                                                    DO0030
          MOVE "2" TO    ER-0030-DATE                                DO0030
          MOVE "E" TO CAT-ER                  GO TO F20B9-FN.        DO0030
          MOVE  I-0030-DATE   TO DAT7                                DO0030
          PERFORM  F8120-D THRU  F8120-FN                            DO0030
          MOVE DEL-ER TO    ER-0030-DATE                             DO0030
          IF DEL-ER > "1" MOVE "E" TO CAT-ER GO TO F20B9-FN.        DO0030
      F20B9-FN.    EXIT.                                             DO0030
      F20C0.                                                         DO0030
             IF I-0030-CORRES NOT = SPACE                            DO0030
          MOVE "1" TO    ER-0030-CORRES.                           DO0030
             IF     ER-0030-CORRES   NOT = 1                        DO0030
                                       GO TO F20C0-FN.              DO0030
      F20C0-FN.    EXIT.                                             DO0030
      F20C1.                                                         DO0030
             IF E-0030-REMIS  NOT = SPACE                            DO0030
          MOVE "1" TO    ER-0030-REMIS.                            DO0030
          MOVE  E-0030-REMIS  TO ZONUM1                              DO0030
          MOVE  9-0030-REMIS  TO NUMPIC                              DO0030
          MOVE      ER-0030-REMIS  TO DEL-ER                         DO0030
          PERFORM F8110 THRU F8110-FN                                DO0030
          MOVE DEL-ER TO    ER-0030-REMIS                            DO0030
          IF DEL-ER > 1 MOVE "E" TO CAT-ER  GO TO F20C1-FN.          DO0030
          MOVE ZONUM2 TO E-0030-REMIS.                               DO0030
          IF DEL-ER = "1"                                            DO0030
       MOVE I-0030-REMIS  TO  O-0030-REMIS.                          DO0030
      F20C1-FN.    EXIT.                                             DO0030
      F20A-FN.     EXIT.                                             DO0030
      F20R.  IF CATX NOT = "R" GO TO F20R-FN.                        DO0030
      F20C3.                                                         DO0030
             IF I-0030-CODMVT NOT = SPACE                            DO0030
          MOVE "1" TO    ER-0030-CODMVT.                           DO0030
      F20C3-FN.    EXIT.                                             DO0030
                   +----------------------------------+              P000
       LEVEL 10    I ITEM NOT AVAILABLE               I              P000
                   +----------------------------------+              P000
      F20BB.                                                         P000
             IF    I-0030-FOURNI = "CLA"                             P100
             AND   CATM NOT = SPACE                                  P110
       MOVE "A"   TO  ER-0030-FOURNI                                 P100
       MOVE "E" TO CAT-ER                                            P100
              GO TO F20C4-FN.                                        P110
      F20BB-FN.    EXIT.                                             P000
      F20C4.                                                         DO0030
          IF CATM  = SPACE                 GO TO F20C4-FN.         DO0030
             IF I-0030-FOURNI NOT = SPACE                            DO0030
          MOVE "1" TO    ER-0030-FOURNI                            DO0030
             ELSE                                                    DO0030
          MOVE "2" TO    ER-0030-FOURNI                            DO0030
          MOVE "E" TO CAT-ER                  GO TO F20C4-FN.        DO0030
            IF  I-0030-FOURNI     = "DIC"                          DO0030
            OR  I-0030-FOURNI     = "MER"                          DO0030
            OR  I-0030-FOURNI     = "TAB"                          DO0030
            OR  I-0030-FOURNI     = "DBD"                          DO0030
            OR  I-0030-FOURNI     = "DSO"                          DO0030
            OR  I-0030-FOURNI     = "LGS"                          DO0030
            OR  I-0030-FOURNI     = "LGB"                          DO0030
            OR  I-0030-FOURNI     = "DLG"                          DO0030
             NEXT SENTENCE ELSE                                    DO0030
          MOVE "5" TO    ER-0030-FOURNI.                           DO0030
             IF     ER-0030-FOURNI > "1"                           DO0030
          MOVE "E" TO CAT-ER                  GO TO F20C4-FN.        DO0030
      F20C4-FN.    EXIT.                                             DO0030
      F20C5.                                                         DO0030
          IF CATM = "A" OR CATM = SPACE    GO TO F20C5-FN.         DO0030
             IF E-0030-QTMAC  NOT = SPACE                            DO0030
          MOVE "1" TO    ER-0030-QTMAC                             DO0030
             ELSE                                                    DO0030
          MOVE "2" TO    ER-0030-QTMAC                             DO0030
          MOVE "E" TO CAT-ER                  GO TO F20C5-FN.        DO0030
          MOVE  E-0030-QTMAC  TO ZONUM1                              DO0030
          MOVE  9-0030-QTMAC  TO NUMPIC                              DO0030
          MOVE      ER-0030-QTMAC  TO DEL-ER                         DO0030
          PERFORM F8110 THRU F8110-FN                                DO0030
          MOVE DEL-ER TO    ER-0030-QTMAC                            DO0030
          IF DEL-ER > 1 MOVE "E" TO CAT-ER  GO TO F20C5-FN.          DO0030
          MOVE ZONUM2 TO E-0030-QTMAC.                               DO0030
```

```
          IF DEL-ER = "1"                                          DO0030
       MOVE I-0030-QTMAC  TO  O-0030-QTMAC.                        DO0030
            IF  I-0030-QTMAC  NOT <  01                            DO0030
            AND I-0030-QTMAC  NOT >     50                         DO0030
             NEXT SENTENCE ELSE                                    DO0030
          MOVE "5" TO    ER-0030-QTMAC.                          DO0030
             IF     ER-0030-QTMAC  > "1"                          DO0030
          MOVE "E" TO CAT-ER                  GO TO F20C5-FN.     DO0030
   F20C5-FN.    EXIT.                                             DO0030
   F20C8.                                                         DO0030
          IF CATM = "A" OR CATM = SPACE     GO TO F20C8-FN.       DO0030
             IF I-0030-INFOR  NOT = SPACE                        DO0030
          MOVE "1" TO    ER-0030-INFOR.                          DO0030
             IF     ER-0030-INFOR    NOT = 1                     DO0030
                                       GO TO F20C8-FN.           DO0030
   F20C8-FN.    EXIT.                                             DO0030
   F20R-FN.     EXIT.                                             DO0030
   F20Z.  IF CATX NOT = "Z" GO TO F20Z-FN.                        DO0030
   F20D0.                                                         DO0030
             IF I-0030-EDIT   NOT = SPACE                        DO0030
          MOVE "1" TO    ER-0030-EDIT.                           DO0030
   F20D0-FN.    EXIT.                                             DO0030
   F20Z-FN.     EXIT.                                             DO0030
   F20-FN.      EXIT.                                             DO0030
```

6.7. F25 : SEGMENT ACCESS FOR VALIDATION

F25 : SEGMENT ACCESS FOR VALIDATION

The SEGMENT ACCESS FOR VALIDATION (F25) function is generated when there is at least one segment to be accessed in RECEPTION.

Depending on which categories defined on the screen contain a segment to be accessed in RECEPTION, the F25 function includes the following:

. F25A for the screen-top category.

. F25R for the repetitive category.

. F25Z for the screen-bottom category.

In the processing for each category there is one sub-function per segment to be accessed, including:

. The initialization of the key (if indicated on the -CS)

. Read or Read with Segment Update depending on its use in the screen (by a PERFORM of F80-ddss-R or RU)

. Positioning of the segment ddss-CF variable (1 if OK)

. Error processing, if any.

Within a category, accesses are generated in the alphabetical order of the segment codes, except for segments which contain a 'preceding' segment.

If a segment is to be updated, its access depends on the CATM value. It is not performed if CATM = SPACE.

If a segment has a preceding segment, its access is performed if the ddss-CF variable of the preceding segment is equal to '1'.

Other types of reads are not conditioned.

Sub-function F2599 is generated if at least one of the Read segments can be updated.

It contains the PERFORM of functions F80-ddss-UN, according to the segments used, as well as cursor positioning on the first variable data element of the category, in the case of segment error.

NOTE: Sub-functions are numbered based on the number of segments, their positions on the '-CS' screen, etc. As a result, a direct reference should never be made to a generated label in the specific procedures.

Use the Relative Positioning types '*A', '*P' and '*R' (see chapter "USE OF STRUCTURED CODE" in the ON-LINE SYSTEMS DEVELOPMENT Reference Manual).

```
            ************************************                DO0030
            *                                  *                DO0030
            *  SEGMENT ACCESS FOR VALIDATION   *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
   F25.     IF CAT-ER NOT = SPACE GO TO F25-FN.                 DO0030
   F25A.  IF CATX NOT = " " GO TO F25A-FN.                      DO0030
   F2501.                                                       DO0030
          MOVE "0" TO CD05-CF.                                  DO0030
          IF CATM = SPACE                  GO TO F2501-FN.      DO0030
          MOVE    SPACES            TO    CD00-KEYCD           DO0030
          MOVE    "B"               TO    CD00-COCARA          DO0030
          MOVE    CA00-NUCOM        TO    CD00-NUCOM           DO0030
          PERFORM F80-CD05-RU THRU F80-FN.                      DO0030
          IF IK = "0"                                           DO0030
          MOVE "1" TO CD05-CF.                                  DO0030
          IF CATM NOT = "C" AND IK = "1"                        DO0030
                      MOVE  "F019" TO XERCD                     DO0030
                      PERFORM F81UT         GO TO F2501-FN.     DO0030
   F2501-FN.    EXIT.                                           DO0030
   F25A-FN.     EXIT.                                           DO0030
   F25R.  IF CATX NOT = "R" GO TO F25R-FN.                      DO0030
   F2502.                                                       DO0030
          MOVE "0" TO CD10-CF.                                  DO0030
          IF CATM = SPACE                  GO TO F2502-FN.      DO0030
          MOVE    "C"               TO    CD00-KEYCD           DO0030
          MOVE    CA00-NUCOM        TO    CD00-NUCOM           DO0030
          MOVE  I-0030-FOURNI       TO    CD00-FOURNI          DO0030
          PERFORM F80-CD10-RU THRU F80-FN.                      DO0030
          IF IK = "0"                                           DO0030
          MOVE "1" TO CD10-CF.                                  DO0030
          IF CATM = "X" AND IK = "1" MOVE "C" TO CATM.          DO0030
          IF CATM = "X" AND IK = "0" MOVE "M" TO CATM.          DO0030
          IF CATM = "C" AND IK = "0"                            DO0030
                      MOVE  "F028" TO XERCD                     DO0030
                      PERFORM F81UT         GO TO F2502-FN.     DO0030
          IF CATM NOT = "C" AND IK = "1"                        DO0030
                      MOVE  "F029" TO XERCD                     DO0030
                      PERFORM F81UT         GO TO F2502-FN.     DO0030
                +-----------------------------------+           P000
    LEVEL 12    I ACCESS TO FO10                    I           P000
                +-----------------------------------+           P000
   F25BB.                                                       P000
       MOVE        "1" TO CD10-CF.                              P100
   F25BB-FN.    EXIT.                                           P000
   F2502-FN.    EXIT.                                           P000
   F2503.                                                       DO0030
          MOVE "0" TO FO10-CF.                                  DO0030
          IF          CD10-CF NOT = "1"   GO TO   F2503-FN.     DO0030
          IF CATM = SPACE                   GO TO F2503-FN.     DO0030
          MOVE  I-0030-FOURNI       TO    FO10-CLEFO           DO0030
          MOVE    CA00-LANGU        TO    FO10-LANGU           DO0030
          MOVE  I-0030-RELEA        TO    FO10-RELEA           DO0030
          MOVE  I-0030-MATE         TO    FO10-MATE            DO0030
          PERFORM F80-FO10-RU THRU F80-FN.                      DO0030
          IF IK = "0"                                           DO0030
          MOVE "1" TO FO10-CF.                                  DO0030
          IF IK = "1" MOVE  "F039" TO XERCD                     DO0030
                      PERFORM F81UT         GO TO F2503-FN.     DO0030
   F2503-FN.    EXIT.                                           DO0030
   F25R-FN.     EXIT.                                           DO0030
   F25Z.  IF CATX NOT = "Z" GO TO F25Z-FN.                      DO0030
   F2505.                                                       DO0030
          MOVE "0" TO CD20-CF.                                  DO0030
          IF CATM = SPACE                  GO TO F2505-FN.      DO0030
          MOVE    SPACES            TO    CD00-KEYCD           DO0030
          MOVE    "E"               TO    CD00-COCARA          DO0030
          MOVE    CA00-NUCOM        TO    CD00-NUCOM           DO0030
          PERFORM F80-CD20-RU THRU F80-FN.                      DO0030
          IF IK = "0"                                           DO0030
          MOVE "1" TO CD20-CF.                                  DO0030
          IF CATM = "X" AND IK = "1" MOVE "C" TO CATM.          DO0030
          IF CATM = "X" AND IK = "0" MOVE "M" TO CATM.          DO0030
          IF CATM = "C" AND IK = "0"                            DO0030
                      MOVE  "F058" TO XERCD                     DO0030
                      PERFORM F81UT         GO TO F2505-FN.     DO0030
          IF CATM NOT = "C" AND IK = "1"                        DO0030
                      MOVE  "F059" TO XERCD                     DO0030
```

```
                  PERFORM F81UT         GO TO F2505-FN.          DO0030
F2505-FN.    EXIT.                                               DO0030
F25Z-FN.     EXIT.                                               DO0030
F2599.     IF CAT-ER = SPACE GO TO F2599-FN.                     DO0030
       IF          CD05-CF = "1"                                 DO0030
       PERFORM F80-CD05-UN THRU F80-FN.                          DO0030
       IF          CD10-CF = "1"                                 DO0030
       PERFORM F80-CD10-UN THRU F80-FN.                          DO0030
       IF          FO10-CF = "1"                                 DO0030
       PERFORM F80-FO10-UN THRU F80-FN.                          DO0030
       IF          CD20-CF = "1"                                 DO0030
       PERFORM F80-CD20-UN THRU F80-FN.                          DO0030
       IF CATX = " " AND DE-AT (4, 009) = "X"                    DO0030
       MOVE  " "   TO  DE-AT (4, 009).                           DO0030
       IF CATX = " "                                             DO0030
       MOVE  "X"   TO A-0030-MATE   (4).                         DO0030
       IF CATX = "R" AND DE-AT (4, 009) = "X"                    DO0030
       MOVE  " "   TO  DE-AT (4, 009).                           DO0030
       IF CATX = "R"                                             DO0030
       MOVE  "X"   TO A-0030-CODMVT (4).                         DO0030
       IF CATX = "Z" AND DE-AT (4, 009) = "X"                    DO0030
       MOVE  " "   TO  DE-AT (4, 009).                           DO0030
       IF CATX = "Z"                                             DO0030
       MOVE  "X"   TO A-0030-EDIT   (4).                         DO0030
F2599-FN.    EXIT.                                               DO0030
F25-FN.      EXIT.                                               DO0030
             +-----------------------------------+               P000
 LEVEL 10    I STOCK UPD.: ORDER DELETION/UPD    I               P000
             +-----------------------------------+               P000
F28BH.     IF    (CATM = "A" OR "M")                            P000
           AND   CATX = "R"                                      P100
           AND   CAT-ER = SPACES                                 P120
           NEXT SENTENCE ELSE GO TO     F28BH-FN.                P120
    ADD          CD10-QTMAL TO FO10-QTMAS.                      P100
F28BH-FN.    EXIT.                                               P000
```

6.8. F30 : DATA ELEMENT TRANSFER

F30: DATA ELEMENT TRANSFER

The DATA ELEMENT TRANSFER (F30) function ensures the transfer of Data Elements on the screen to the corresponding Data Elements in the Segments.

Depending on which categories defined on the screen contain at least one Data Element transfer on reception, the F30 function includes the following:

. F30A for the screen-top category.

. F30R for the repetitive category.

. F30Z for the screen-bottom category.

The condition of the transfer is generated based on the use of the Segment on reception, or the value of the PRESENCE VALIDATION OF DATA ELEMENT field on the Screen Call of Elements ('-CE') screen.

```
            ************************************                DO0030
            *                                  *                DO0030
            *  DATA ELEMENT TRANSFER           *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
F30.        IF CAT-ER NOT = SPACE GO TO F30-FN.                 DO0030
F30A.  IF CATX NOT = " " GO TO F30A-FN.                         DO0030
       MOVE     I-0030-MATE        TO     CD05-MATE.           DO0030
       MOVE     I-0030-RELEA       TO     CD05-RELEA.          DO0030
       MOVE     I-0030-COPOS       TO     CD05-COPOS.          DO0030
       MOVE     I-0030-REFCLI      TO     CD05-REFCLI.         DO0030
       MOVE     I-0030-DATE        TO     CD05-DATE.           DO0030
       MOVE     I-0030-REMIS       TO     CD05-REMIS.          DO0030
          IF     ER-0030-CORRES = "1"                          DO0030
       MOVE     I-0030-CORRES      TO     CD05-CORRES.         DO0030
F30A-FN.     EXIT.                                              DO0030
F30R.  IF CATX NOT = "R" GO TO F30R-FN.                         DO0030
          IF     ER-0030-INFOR  = "1"                          DO0030
       MOVE     I-0030-INFOR       TO     CD10-INFOR.          DO0030
       IF CATM NOT = SPACE                                     DO0030
       MOVE     I-0030-FOURNI      TO     CD00-FOURNI.         DO0030
       IF CATM NOT = SPACE AND CATM NOT = "A"                  DO0030
       MOVE     I-0030-QTMAC       TO     CD10-QTMAC           DO0030
       ADD      I-0030-QTMAC       TO     FO10-QTMAM.          DO0030
             +-----------------------------------+             P000
 LEVEL 10    I QUANTITY PROCESSING               I             P000
             +-----------------------------------+             P000
F30BD.                                                         P000
             +-----------------------------------+             P000
 LEVEL 12    I CALC. DELIV. QUANT.   STOCK UPD.  I             P000
             +-----------------------------------+             P000
F30BF.    IF    CATM = "C" OR "M"                              P000
          NEXT SENTENCE ELSE GO TO     F30BF-FN.               P000
          IF    FO10-QTMAS NOT <                               P100
                I-0030-QTMAC                                   P110
    MOVE        I-0030-QTMAC TO CD10-QTMAL                     P100
          ELSE                                                 P120
    MOVE        FO10-QTMAS TO CD10-QTMAL.                      P120
    SUBTRACT    CD10-QTMAL FROM FO10-QTMAS                     P130
    MOVE        CD10-QTMAL TO O-0030-QTMAL.                    P140
F30BF-FN.    EXIT.                                             P000
F30BD-FN.    EXIT.                                             P000
F30R-FN.     EXIT.                                              DO0030
F30Z.  IF CATX NOT = "Z" GO TO F30Z-FN.                         DO0030
       MOVE     I-0030-EDIT        TO     CD20-EDIT.           DO0030
F30Z-FN.     EXIT.                                              DO0030
F30-FN.      EXIT.                                              DO0030
```

6.9. F35 : SEGMENT ACCESS FOR UPDATE

F35: SEGMENT ACCESS FOR UPDATE

This function ensures Segment updates. If an error has been detected by the error checks (CAT-ER), this function is not executed.

Depending on which categories contain a Segment to be updated, the SEGMENT ACCESS FOR UPDATE (F35) function includes the following:

. F35A for the screen-top category.

. F35R for the repetitive category.

. F35Z for the screen-bottom category.

In the processing for each category there is one sub-function per Segment to be updated, possibly including several types of access.

The function is accessed by executing a PERFORM of the appropriate subfunction in F80.

For a Segment that does not follow an access to another Segment (i.e. the PRECEDING SEGMENT field in the Screen Call of Segments ('-CS') screen is left blank), access is conditioned by the value of the internal Transaction Code (CATM) found in the category, which corresponds to one of the following operations:

. Creation: writing (F80-ddss-R).

. Deletion: suppression (F80-ddss-D).

. Other cases: rewriting (F80-ddss-RW)

The user must manage the access to other transactions if the rewrite option does not correspond to user needs.

For a Segment that follows an access to another Segment (i.e. a Segment is listed in the PRECEDING SEGMENT field on the Screen Call of Segments ('-CS') screen), access is conditioned by the Segment configuration, which is either:

. ddss-CF = 0, writing, or
. ddss-CF = 1, rewriting.

If a Data Element was defined as a Transaction Code on the Screen Call of Elements ('-CE') screen (in the VALIDATION CONDITIONS/SET VARIABLES field), it is set to blanks.

Paragraph F3999-ITER-FI returns to the beginning of the 'RECEPTION' iteration.

NOTE: Sub-functions are numbered based on the number of segments, their positions on the '-CS' screen, etc. As a result, a direct reference should never be made to a generated label in the specific procedures.

Use the Relative Positioning types '*A', '*P' and '*R' (see chapter "USE OF STRUCTURED CODE" in the ON-LINE SYSTEMS DEVELOPMENT Reference Manual.)

```
           ************************************                DO0030
           *                                  *                DO0030
           *  SEGMENT ACCESS FOR UPDATE       *                DO0030
           *                                  *                DO0030
           ************************************                DO0030
F35.     IF CAT-ER NOT = SPACE OR CATM = SPACE GO TO F35-FN.    DO0030
F35A.  IF CATX NOT = " " GO TO F35A-FN.                        DO0030
F3501.                                                         DO0030
       IF CATM NOT = "C" AND CATM NOT = "A"                    DO0030
       PERFORM F80-CD05-RW THRU F80-FN.                        DO0030
F3501-FN.    EXIT.                                             DO0030
F35A-FN.     EXIT.                                             DO0030
F35R.  IF CATX NOT = "R" GO TO F35R-FN.                        DO0030
F3502.                                                         DO0030
       IF CATM = "C"                                           DO0030
       PERFORM F80-CD10-W  THRU F80-FN.                        DO0030
       IF CATM = "A"                                           DO0030
       PERFORM F80-CD10-D  THRU F80-FN.                        DO0030
       IF CATM NOT = "C" AND CATM NOT = "A"                    DO0030
       PERFORM F80-CD10-RW THRU F80-FN.                        DO0030
F3502-FN.    EXIT.                                             DO0030
F3503.                                                         DO0030
       IF          FO10-CF = "1"                               DO0030
       PERFORM F80-FO10-RW THRU F80-FN.                        DO0030
F3503-FN.    EXIT.                                             DO0030
F35R-C3.   MOVE   SPACE     TO       O-0030-CODMVT.            DO0030
F35R-FN.     EXIT.                                             DO0030
F35Z.  IF CATX NOT = "Z" GO TO F35Z-FN.                        DO0030
F3505.                                                         DO0030
       IF CATM = "C"                                           DO0030
       PERFORM F80-CD20-W  THRU F80-FN.                        DO0030
       IF CATM NOT = "C" AND CATM NOT = "A"                    DO0030
       PERFORM F80-CD20-RW THRU F80-FN.                        DO0030
F3505-FN.    EXIT.                                             DO0030
F35Z-D0.   MOVE   SPACE     TO       O-0030-EDIT.              DO0030
F35Z-FN.     EXIT.                                             DO0030
F35-FN.      EXIT.                                             DO0030
F3999-ITER-FI.  GO TO F10.                                     DO0030
F3999-ITER-FT.     EXIT.                                       DO0030
F3999-FN.    EXIT.                                             DO0030
```

6.10. F40 : END-OF-RECEPTION PROCESSING

F40: END-OF-RECEPTION PROCESSING

This function contains the procedures for the end-of-reception processing of the program. It is executed as long as no errors have been found.

Within this function, there are four sub-functions which correspond to four automatically generated procedures that are conditioned by the value of the Operation Code (OPER).

SET-UP KEYS FOR NEW DISPLAY (F4010)

This function is executed for a 'display' or an 'update' operation. The keys to the segments with no preceding segment, or those used in display, are given a value here.

Depending on the categories defined on the screen, the memorization of the access key for the display segment is found in:

. F40A for the screen-top category.
. F40R for the repetitive category.
. F40Z for the screen-bottom category.

SET-UP KEYS FOR SCREEN PAGING (F4020)

This function is executed for a 'screen continuation' operation. It contains the memorization of the first key for the display of the screen continuation, if the segment is used in the repetitive category.

END OF TRANSACTION (F4030)

This function is executed for an end-of-transaction operation. It includes the transfer of the answer into the $RECEIVE fields and the branching to the beginning of program (F0110).

TRANSFER TO ANOTHER SCREEN (F4040)

This function is executed for a transfer to another screen operation. It includes the transfer of the answer into the $RECEIVE fields and the branching to the beginning of program (F0110).

```
F40.       IF SCR-ER > "1"  MOVE "A" TO OPER  GO TO F40-FN.      DO0030
F40-A.     IF OPERD NOT = SPACE   MOVE OPERD TO OPER.            DO0030
           ************************************                  DO0030
           *                                  *                  DO0030
           *  SET-UP KEYS FOR NEW DISPLAY     *                  DO0030
           *                                  *                  DO0030
           ************************************                  DO0030
F4010.     IF OPER NOT = "A" AND NOT = "M" GO TO F4010-FN.       DO0030
F40A.                                                            DO0030
      MOVE    SPACES            TO    CD00-KEYCD                DO0030
      MOVE    "B"               TO    CD00-COCARA               DO0030
      MOVE    CA00-NUCOM        TO    CD00-NUCOM                DO0030
      MOVE        CD00-KEYCD    TO K-ACD05-KEYCD.               DO0030
F40A-FN.     EXIT.                                               DO0030
F40R.                                                            DO0030
      MOVE  J-0030-LINE   (1) TO                                 DO0030
            I-0030-LINE.                                         DO0030
      MOVE    SPACES            TO    CD00-KEYCD                DO0030
      MOVE    "C"               TO    CD00-COCARA               DO0030
      MOVE    CA00-NUCOM        TO    CD00-NUCOM                DO0030
      MOVE        CD00-KEYCD    TO K-RCD10-KEYCD  (1).          DO0030
F40R-FN.     EXIT.                                               DO0030
F40Z.                                                            DO0030
      MOVE    CA00-CLEME        TO    ME00-CLEME                DO0030
      MOVE        ME00-CLEME    TO K-ZME00-CLEME.               DO0030
F40Z-FN.     EXIT.                                               DO0030
F4010-FN.    EXIT.                                               DO0030
           ************************************                  DO0030
           *                                  *                  DO0030
           *  SET-UP KEYS FOR SCREEN PAGING   *                  DO0030
           *                                  *                  DO0030
           ************************************                  DO0030
F4020.     IF OPER NOT = "S" GO TO F4020-FN.                     DO0030
      MOVE     K-RCD10-KEYCD  (2) TO                             DO0030
               K-RCD10-KEYCD  (1).                               DO0030
F4020-FN.    EXIT.                                               DO0030
           ************************************                  DO0030
           *                                  *                  DO0030
           *  END OF TRANSACTION              *                  DO0030
           *                                  *                  DO0030
           ************************************                  DO0030
F4030.     IF OPER NOT = "E" GO TO F4030-FN.                     DO0030
      MOVE K-S0030-XTERM  TO HE00-XTERM                          DO0030
      PERFORM F80-HELP-D  THRU F80-FN.                           DO0030
      MOVE OPER  TO S-WWSS-OPER                                  DO0030
      MOVE COMMON-AREA TO SERVER-COMMON                          DO0030
      MOVE COMMUNICATION-MONITOR TO SERVER-MONIT                 DO0030
      MOVE  DE-ATT  TO    SERVER-ATT                             DO0030
      WRITE ENTRY-REPLY.                                         DO0030
      GO TO F0110.                                               DO0030
F4030-FN.    EXIT.                                               DO0030
           ************************************                  DO0030
           *                                  *                  DO0030
           *  TRANSFER TO ANOTHER SCREEN      *                  DO0030
           *                                  *                  DO0030
           ************************************                  DO0030
F4040.     IF OPER NOT = "O" GO TO F4040-FN.                     DO0030
      MOVE OPER  TO S-WWSS-OPER                                  DO0030
      MOVE  5-0030-PROGE TO S-WWSS-PROGE                         DO0030
      MOVE COMMON-AREA TO SERVER-COMMON                          DO0030
      MOVE COMMUNICATION-MONITOR TO SERVER-MONIT                 DO0030
      MOVE  DE-ATT  TO    SERVER-ATT                             DO0030
      WRITE ENTRY-REPLY.                                         DO0030
      GO TO F0110.                                               DO0030
F4040-FN.    EXIT.                                               DO0030
F40-FN.      EXIT.                                               DO0030
END-OF-RECEPTION.      EXIT.                                     DO0030
```

6.11. F50 : DISPLAY PREPARATION

F50: DISPLAY PREPARATION

The DISPLAY PREPARATION (F50) function contains the conditions for the set of procedures used in the 'DISPLAY' part of the program, F50 to F78-FN (END-OF-DISPLAY).

Sub-function F5010 is always generated. It ensures the initialization of work areas, and of the display screen description.

```
            ************************************                DO0030
            *                                  *                DO0030
            *  DISPLAY PREPARATION             *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
F50.      IF OCF = "0" GO TO END-OF-DISPLAY.                    DO0030
F5010.                                                          DO0030
       MOVE ZERO TO CATX.                                       DO0030
       MOVE ZERO TO CONFIGURATIONS.                             DO0030
       MOVE ALL "1" TO FIRST-ON-SEGMENT.                        DO0030
       IF SCR-ER > "1"  GO TO F6999-ITER-FT.                    DO0030
       MOVE SPACE TO  O-0030.                                   DO0030
       PERFORM F8115 THRU F8115-FN.                             DO0030
       MOVE K-R0030-LINE   (1)  TO                              DO0030
            K-R0030-LINE   (2).                                 DO0030
F5010-FN.    EXIT.                                              DO0030
F50-FN.      EXIT.                                              DO0030
```

6.12. F55 : CATEGORY PROCESSING LOOP

F55: CATEGORY PROCESSING LOOP

The CATEGORY PROCESSING LOOP (F55) function positions the category to be processed in 'DISPLAY' based on the CATX indicator, which can have the following values:

. '0' Beginning of display.

. ' ' Screen-top category.

. 'R' Repetitive category.

. 'Z' Screen-bottom category.

The procedures are generated based on the categories defined on the Call of Elements ('-CE') screen.

If no category is defined, the screen is considered a screen-top category.

For the repetitive category this function includes:

. The interaction between the line of the category to be processed, and the output screen description field used to access each of the data elements of the line,

. The initialization and incrementation of the ICATR indicator which manages the repetitive category.

```
           ************************************                DO0030
           *                                  *                DO0030
           *  CATEGORY PROCESSING LOOP        *                DO0030
           *                                  *                DO0030
           ************************************                DO0030
F55.         EXIT.                                             DO0030
F5510.                                                         DO0030
       MOVE SPACE TO CAT-ER.                                   DO0030
       IF CATX = "0" MOVE " " TO CATX GO TO F5510-FN.          DO0030
       IF CATX = " " MOVE "R" TO CATX MOVE ZERO TO ICATR.      DO0030
       IF CATX NOT = "R" OR  ICATR > IRR GO TO F5510-R.        DO0030
       IF ICATR > ZERO                                         DO0030
       MOVE  O-0030-LINE            TO                         DO0030
             P-0030-LINE    (ICATR)                           DO0030
       MOVE      ER-0030-LINE       TO                         DO0030
                   PS-30-LINE    (ICATR).                     DO0030
       ADD 1 TO ICATR.                                         DO0030
       IF ICATR NOT > IRR                                      DO0030
       MOVE  P-0030-LINE    (ICATR) TO                         DO0030
             O-0030-LINE                                       DO0030
       MOVE        PS-30-LINE    (ICATR) TO                   DO0030
                 ER-0030-LINE.                                 DO0030
       GO TO F5510-FN.                                         DO0030
F5510-R.     EXIT.                                             DO0030
F5510-Z.                                                       DO0030
       IF CATX = "R" MOVE "Z" TO CATX GO TO F5510-FN.          DO0030
F5510-900. GO TO F6999-ITER-FT.                                DO0030
F5510-FN.    EXIT.                                             DO0030
F55-FN.      EXIT.                                             DO0030
```

6.13. F60 : SEGMENT ACCESS FOR DISPLAY

F60: SEGMENT ACCESS FOR DISPLAY

The SEGMENT ACCESS FOR DISPLAY (F60) function is generated when there is a segment to be accessed for display.

Depending on which categories defined on the screen contain a segment to be accessed for display, the F60 function includes the following:

. F60A for the screen-top category,

. F60R for the repetitive category,

. F60Z for the screen-bottom category.

To process each category, there is one sub-function per access to a segment, including:

. Loading of the key from the 'K-cddss-KEY' field stored in function F40. For the first display (OCF = '1'), the user must ensure that the 'K-' field is loaded.

. Access by a PERFORM to the appropriate F80 sub-function depending on the category:

- Direct read (F80-ddss-R),

- Sequential Read after positioning (repetitive) (F80-ddss-P and F80-ddss-RN) based on the use of the segment (indicated on the '-CS').

. The positioning of the Segment 'ddss-CF' variable.

. Error processing, if necessary.

If a segment has a preceding segment, its Read will always be a Direct Read, even in the Repetitive category.

NOTE: Sub-functions are numbered based on the number of segments, their positions on the '-CS' screen, etc. As a result, a direct reference should never be made to a generated label in the specific procedures.

Use the Relative Positioning types '*A', '*P' and '*R' (see chapter "USE OF STRUCTURED CODE" in the ON-LINE SYSTEMS DEVELOPMENT Reference Manual.)

```
            ************************************                DO0030
            *                                  *                DO0030
            *  SEGMENT ACCESS FOR DISPLAY      *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
    F60.         EXIT.                                          DO0030
    F60A.  IF CATX NOT = " " GO TO F60A-FN.                     DO0030
    F6001.                                                      DO0030
           MOVE "0" TO CD05-CF.                                 DO0030
           MOVE     K-ACD05-KEYCD     TO   CD00-KEYCD           DO0030
           PERFORM F80-CD05-R  THRU F80-FN.                     DO0030
           IF IK = "1" MOVE  "G019" TO XERCD                    DO0030
           PERFORM F81UT THRU F81UT-FN       GO TO F6001-FN.    DO0030
           MOVE "1" TO CD05-CF.                                 DO0030
    F6001-FN.    EXIT.                                          DO0030
    F60A-FN.     EXIT.                                          DO0030
    F60R.  IF CATX NOT = "R" OR FT = "1" GO TO F60R-FN.         DO0030
    F6003.                                                      DO0030
           MOVE "0" TO CD10-CF.                                 DO0030
           IF          CD10-FST = "1"                           DO0030
           MOVE     K-RCD10-KEYCD  (1) TO  CD00-KEYCD           DO0030
           MOVE        CD00-COCARA   TO  C-0030-COCARA          DO0030
           MOVE        CD00-NUCOM    TO  C-0030-NUCOM           DO0030
           PERFORM F80-CD10-P  THRU F80-FN                      DO0030
           MOVE ZERO TO   CD10-FST ELSE                         DO0030
           PERFORM F80-CD10-RN THRU F80-FN.                     DO0030
           IF IK = "0"                                          DO0030
             IF        CD00-COCARA NOT = C-0030-COCARA          DO0030
             OR        CD00-NUCOM  NOT = C-0030-NUCOM           DO0030
           MOVE "1" TO IK.                                      DO0030
           IF IK = "1" MOVE  "G039" TO XERCD MOVE "1" TO FT     DO0030
           PERFORM F81UT THRU F81UT-FN       GO TO F6003-FN.    DO0030
           MOVE "1" TO CD10-CF.                                 DO0030
           MOVE        CD00-KEYCD    TO K-RCD10-KEYCD  (2).     DO0030
    F6003-FN.    EXIT.                                          DO0030
    F60R-FN.     EXIT.                                          DO0030
    F60Z.  IF CATX NOT = "Z" GO TO F60Z-FN.                     DO0030
    F6006.                                                      DO0030
           MOVE "0" TO ME00-CF.                                 DO0030
           MOVE     K-ZME00-CLEME     TO   ME00-CLEME          DO0030
           PERFORM F80-ME00-R  THRU F80-FN.                     DO0030
           IF IK = "1" MOVE  "G069" TO XERCD                    DO0030
           PERFORM F81UT THRU F81UT-FN       GO TO F6006-FN.    DO0030
           MOVE "1" TO ME00-CF.                                 DO0030
    F6006-FN.    EXIT.                                          DO0030
    F60Z-FN.                                                    DO0030
    F60-FN.      EXIT.                                          DO0030
                 +----------------------------------+           P000
     LEVEL 10    I PREPARATION DISPLAY DATE/HOUR     I          P000
                 +----------------------------------+           P000
    F64DA.    IF    CATX = " "                                  P000
              NEXT SENTENCE ELSE GO TO     F64DA-FN.            P000
        ACCEPT  DATOR  FROM DATE                                P040
        MOVE            DATOR                                   P040
        TO DAT6 DAT8                                            P040
        MOVE DAT63 TO DAT61 MOVE DAT81 TO DAT63                 P040
        MOVE      DATOR                                         P080
        TO  DAT6                                                P080
        PERFORM F8120-I  THRU F8120-Z                           P080
        MOVE  DAT8C TO   DAT8C.                                 P080
        ACCEPT  TIMCO  FROM  TIME                               P120
        MOVE            TIMCOG                                  P160
             TO TIMCOG                                          P160
        MOVE TIMCOH TO TIMHOU                                   P160
        MOVE TIMCOM TO TIMMIN                                   P160
        MOVE TIMCOS TO TIMSEC                                   P160
        MOVE ":"    TO TIMS1  TIMS2                             P160
        MOVE TIMDAY TO   TIMDAY.                                P160
    F64DA-FN.    EXIT.                                          P000
```

6.14. F65 : DATA ELEMENT TRANSFER

F65: DATA ELEMENT TRANSFER

The DATA ELEMENT TRANSFER (F65) function ensures the transfer of the segment data elements to the corresponding data elements on the screen.

Depending on which categories defined on the screen contain at least one transfer of a data element for display, the F65 function includes:

. F65A for the screen-top category,

. F65R for the repetitive category,

. F65Z for the screen-bottom category.

If the data element is filled from a segment, the transfer is conditioned by the segment configuration variable (ddss-CF=1).

Paragraph 'F6999-ITER-FI' contains the return to the beginning of the display iteration.

```
            ************************************                DO0030
            *                                  *                DO0030
            *  DATA ELEMENT TRANSFER           *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
F65.          EXIT.                                             DO0030
F65A.  IF CATX NOT = " " GO TO F65A-FN.                         DO0030
       MOVE    PROGE            TO                              DO0030
             O-0030-PROGE.                                      DO0030
       MOVE    SESSI            TO                              DO0030
             O-0030-SESSI.                                      DO0030
       MOVE    DAT8C            TO                              DO0030
             O-0030-DATEM.                                      DO0030
       MOVE    TIMDAY           TO                              DO0030
             O-0030-HEURE.                                      DO0030
F65A-A7.                                                        DO0030
       MOVE    CA00-NUCOM       TO                              DO0030
             O-0030-NUCOM.                                      DO0030
F65A-A7-FN. EXIT.                                               DO0030
F65A-A8.                                                        DO0030
       MOVE    CA00-RAISOC      TO                              DO0030
             O-0030-RAISOC.                                     DO0030
F65A-A8-FN. EXIT.                                               DO0030
F65A-CD05.                                                      DO0030
       IF      CD05-CF   NOT = "1" GO  TO  F65A-CD05-FN.        DO0030
       MOVE    CD05-MATE        TO                              DO0030
             O-0030-MATE.                                       DO0030
F65A-B0.                                                        DO0030
       MOVE    CD05-RELEA       TO                              DO0030
             O-0030-RELEA.                                      DO0030
F65A-B0-FN. EXIT.                                               DO0030
F65A-B1.                                                        DO0030
       MOVE    CD05-COPOS       TO                              DO0030
             O-0030-COPOS.                                      DO0030
F65A-B1-FN. EXIT.                                               DO0030
F65A-B2.                                                        DO0030
       MOVE    CD05-VILLE       TO                              DO0030
             O-0030-VILLE.                                      DO0030
F65A-B2-FN. EXIT.                                               DO0030
F65A-B3.                                                        DO0030
       MOVE    CD05-REFCLI      TO                              DO0030
             O-0030-REFCLI.                                     DO0030
F65A-B3-FN. EXIT.                                               DO0030
F65A-B4.                                                        DO0030
       MOVE    CD05-DATE        TO                              DO0030
             O-0030-DATE.                                       DO0030
F65A-B4-FN. EXIT.                                               DO0030
F65A-B5.                                                        DO0030
       MOVE    CD05-CORRES      TO                              DO0030
             O-0030-CORRES.                                     DO0030
F65A-B5-FN. EXIT.                                               DO0030
F65A-B6.                                                        DO0030
       MOVE    CD05-REMIS       TO                              DO0030
             O-0030-REMIS.                                      DO0030
F65A-B6-FN. EXIT.                                               DO0030
F65A-CD05-FN. EXIT.                                             DO0030
F65A-FN.     EXIT.                                              DO0030
F65R.  IF CATX NOT = "R" OR FT = "1" GO TO F65R-FN.             DO0030
                     IF ICATR > IRR GO TO F65R-FN.              DO0030
F65R-A4.                                                        DO0030
       MOVE    CD00-FOURNI      TO                              DO0030
             O-0030-FOURNI.                                     DO0030
F65R-A4-FN. EXIT.                                               DO0030
F65R-CD10.                                                      DO0030
       IF      CD10-CF   NOT = "1" GO  TO  F65R-CD10-FN.        DO0030
       MOVE    CD10-QTMAC       TO                              DO0030
             O-0030-QTMAC.                                      DO0030
F65R-A6.                                                        DO0030
       MOVE    CD10-QTMAL       TO                              DO0030
             O-0030-QTMAL.                                      DO0030
F65R-A6-FN. EXIT.                                               DO0030
F65R-A7.                                                        DO0030
       MOVE    CD10-INFOR       TO                              DO0030
             O-0030-INFOR.                                      DO0030
F65R-A7-FN. EXIT.                                               DO0030
F65R-CD10-FN. EXIT.                                             DO0030
             +----------------------------------+               P000
 LEVEL 10    I REMAINS TO BE DELIVERED          I               P000
```

```
            +----------------------------------+              P000
F65BB.                                                        P000
          IF    CD10-QTMAL NOT = ZERO                         P100
    COMPUTE     WW10-QTMAR =                                  P100
                CD10-QTMAC - CD10-QTMAL                       P110
    MOVE        WW10-QTMAR TO O-0030-QTMAR.                   P120
F65BB-FN.    EXIT.                                            P000
F65R-FN.     EXIT.                                            DO0030
F65Z.  IF CATX NOT = "Z" GO TO F65Z-FN.                       DO0030
F65Z-ME00.                                                    DO0030
       IF      ME00-CF   NOT = "1" GO  TO  F65Z-ME00-FN.      DO0030
       MOVE    ME00-MESSA       TO                           DO0030
               O-0030-MESSA.                                  DO0030
F65Z-ME00-FN. EXIT.                                           DO0030
F65Z-FN.     EXIT.                                            DO0030
F65-FN.      EXIT.                                            DO0030
F6999-ITER-FI.  GO TO F55.                                    DO0030
F6999-ITER-FT.     EXIT.                                      DO0030
F6999-FN.    EXIT.                                            DO0030
F70.         EXIT.                                            DO0030
```

6.15. F70 : ERROR PROCESSING

F70: ERROR PROCESSING

The ERROR PROCESSING (F70) function is always generated.

Sub-function F7010 contains:

. in F7010-A, testing of DE-ERR, positioning of the error attributes, access to the error message file, and coding of the error message on the screen.

. in F7010-B, testing of T-XEMKY, access to the error message file, and coding of the error message on the screen.

Sub-function F7020 is generated if at least one variable field exists on the Screen Call of Elements (-CE).

This sub-function positions the attributes of the fields on the screen in display.

An 'invisible' field ('DARK' attribute) retains this attribute, even if it is erroneous (for ex., with passwords).

```
            ************************************                DO0030
            *                                  *                DO0030
            *  ERROR PROCESSING                *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
   F7010.     MOVE ZERO TO K01 K02 K04 MOVE 1 TO K03.           DO0030
          MOVE LIBRA TO EM00-LIBRA MOVE PROGR TO EM00-PROGR     DO0030
          MOVE ZERO TO EM00-LINUM MOVE "H" TO EM00-ENTYP.       DO0030
   F7010-A.   IF K02 = INR AND K03 < IRR MOVE INA TO K02        DO0030
          ADD 1 TO K03. ADD 1 TO K01 K02.                       DO0030
          IF DE-ER (K01) > "1" OR < "0" MOVE "Y" TO DE-AT (4, K01)  DO0030
          MOVE "B" TO DE-AT (1, K01)                            DO0030
          MOVE "N" TO DE-AT (2, K01)                            DO0030
          MOVE "W" TO DE-AT (3, K01)                            DO0030
             IF K04 < IER MOVE DE-ER (K01) TO EM00-ERTYP        DO0030
          MOVE K02 TO EM00-ERCOD9 MOVE EM00-XEMKY TO EM00-ERMSG DO0030
          PERFORM F80-EM00-R THRU F80-FN ADD 1 TO K04            DO0030
          MOVE  EM00-ERMSG  TO    O-0030-ERMSG (K04).           DO0030
          IF K01 < INT      GO TO F7010-A.                      DO0030
          MOVE ZERO TO K50R.                                    DO0030
   F7010-B.                                                     DO0030
           ADD 1 TO K50R IF K50R > K50L OR K04 NOT < IER GO TO   DO0030
           F7010-FN. MOVE T-XEMKY (K50R) TO EM00-XEMKY EM00-ERMSG   DO0030
           PERFORM F80-EM00-R THRU F80-FN. ADD 1 TO K04         DO0030
          MOVE  EM00-ERMSG  TO    O-0030-ERMSG (K04)            DO0030
          GO TO F7010-B.                                        DO0030
   F7010-FN.    EXIT.                                           DO0030
            ************************************                DO0030
            *                                  *                DO0030
            *  POSITIONING OF ATTRIBUTES       *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
   F7020.                                                       DO0030
          MOVE ZERO TO TALLY  INSPECT DE-ATT1 (4)               DO0030
          TALLYING TALLY FOR CHARACTERS BEFORE "Y".             DO0030
          IF TALLY     NOT <       0045                         DO0030
          MOVE ZERO TO TALLY  INSPECT DE-ATT1 (4)               DO0030
          TALLYING TALLY FOR CHARACTERS BEFORE "Z".             DO0030
          IF TALLY     NOT <       0045                         DO0030
          MOVE ZERO TO TALLY  INSPECT DE-ATT1 (4)               DO0030
          TALLYING TALLY FOR CHARACTERS BEFORE "X".             DO0030
          IF TALLY     NOT <       0045                         DO0030
          MOVE ZERO TO TALLY.                                   DO0030
          MOVE SPACE  TO DE-ATT1 (4) ADD 1 TO TALLY             DO0030
          MOVE TALLY  TO S-WWSS-ERCOD9.                         DO0030
   F7020-FN.    EXIT.                                           DO0030
   F70-FN.      EXIT.                                           DO0030
   END-OF-DISPLAY.    EXIT.                                     DO0030
```

6.16. F8Z : DISPLAY AND END OF PROGRAM

F8Z : DISPLAY AND END OF PROGRAM

The DISPLAY AND END OF PROGRAM function is always generated.

The F8Z05 sub-function is generated if a call for HELP documentation has been entered on the Screen Definition screen.

It also ensures that the fields of the screen are memorized in 'TS' (Temporary Storage).

The F8Z10 sub-function contains the transfer of the answer in the $RECEIVE field.

The F8Z20 sub-function contains the end-of-program operation. It includes the transfer of the answer into the $RECEIVE fields and the branching to the beginning of program (F0110).

```
F8Z.         EXIT.                                                DO0030
F8Z05.   IF SCR-ER = "1"                                          DO0030
       NEXT SENTENCE ELSE GO TO F8Z05-FN.                         DO0030
         IF K-S0030-DOC NOT = "1"     GO TO F8Z05-A.             DO0030
       MOVE S-WWSS-ERCOD9  TO K01 K02.                            DO0030
       IF K02 > INR                                               DO0030
       COMPUTE K02 = K01 + (INR - INA) * (IRR - 1).               DO0030
       IF K02 < 1 OR K02 > INT MOVE 1 TO K02.                     DO0030
       MOVE "X"  TO DE-AT (4, K02)                                DO0030
       PERFORM F7020 THRU F7020-FN.                               DO0030
F8Z05-A.                                                          DO0030
       MOVE K-S0030-XTERM  TO HE00-XTERM.                         DO0030
         IF K-S0030-DOC = "1"                                     DO0030
       PERFORM F80-HELP-R  THRU F80-FN                            DO0030
       MOVE HE00-SCREEN  TO  O-0030                               DO0030
       MOVE "0" TO K-S0030-DOC      GO TO F8Z05-FN.               DO0030
         IF K-S0030-DOC NOT = ZERO      GO TO F8Z05-FN.           DO0030
       PERFORM F80-HELP-R  THRU F80-FN.                           DO0030
       MOVE K-S0030-XTERM  TO HE00-XTERM                          DO0030
       MOVE  O-0030    TO     HE00-SCREEN.                        DO0030
       IF IK = "1"                                                DO0030
       PERFORM F80-HELP-W  THRU F80-FN  ELSE                      DO0030
       PERFORM F80-HELP-RW THRU F80-FN.                           DO0030
F8Z05-FN.    EXIT.                                                DO0030
           ************************************                   DO0030
           *                                  *                   DO0030
           *  DISPLAY                         *                   DO0030
           *                                  *                   DO0030
           ************************************                   DO0030
F8Z10.                                                            DO0030
       IF SCR-ER  NOT > "1"                                       DO0030
       AND DE-AT (4, 009) = "X"                                   DO0030
       PERFORM F7020 THRU F7020-FN.                               DO0030
       MOVE PROGR TO K-S0030-PROGR.                               DO0030
       MOVE SCR-ER TO S-WWSS-SCR-ER                               DO0030
       MOVE OPER  TO S-WWSS-OPER                                  DO0030
       MOVE COMMON-AREA TO SERVER-COMMON                          DO0030
       MOVE COMMUNICATION-MONITOR TO SERVER-MONIT                 DO0030
       MOVE  DE-ATT  TO    SERVER-ATT                             DO0030
       MOVE OUTPUT-SCREEN-FIELDS  TO SERVER-MSG.                  DO0030
       WRITE ENTRY-REPLY.                                         DO0030
F8Z10-FN.    EXIT.                                                DO0030
           ************************************                   DO0030
           *                                  *                   DO0030
           *  END OF PROGRAM                  *                   DO0030
           *                                  *                   DO0030
           ************************************                   DO0030
F8Z20.                                                            DO0030
       GO TO F0110.                                               DO0030
F8Z20-FN.    EXIT.                                                DO0030
F8Z-FN.      EXIT.                                                DO0030
```

6.17. F80 : PHYSICAL SEGMENT ACCESS ROUTINES

F80: PHYSICAL SEGMENT ACCESS ROUTINES

The PHYSICAL SEGMENT ACCESS ROUTINES (F80) function, which is generated when at least one segment is called in the screen, includes physical access to the segments.

The coding for these access sub-functions is illustrated in the following example. (The segment code from the program in this example is CD10.)

```
F80-CD10-R   Direct read.

F80-CD10-RU  Direct read with update.

F80-CD10-P   Positioning of a sequential read.

F80-CD10-RN  Sequential read.

F80-CD10-W   Write.

F80-CD10-RW  Rewrite.

F80-CD10-D   Deletion.

F80-CD10-UN  Unlock of record.
```

If a call for HELP documentation has been entered on the Screen Definition screen, the physical access(es) to the back-up file is (are) generated. The coding of the access sub-functions is illustrated as follows:

```
F80-HELP-W   Write.

F80-HELP-RW  Rewrite.

F80-HELP-R   Direct read.

F80-HELP-D   Deletion.
```

If the access methods are user-programmed, refer to Chapter "USE OF STRUCTURED CODE" in the OLSD Reference Manual.

```
           ************************************                DO0030
           *                                  *                DO0030
           *  PHYSICAL SEGMENT ACCESS ROUTINES *                DO0030
           *                                  *                DO0030
           ************************************                DO0030
F80.         EXIT.                                             DO0030
F80-CD05-R.                                                    DO0030
       READ    CD-FILE    INVALID KEY GO TO F80-KO.            DO0030
       GO TO F80-OK.                                           DO0030
F80-CD05-RU.                                                   DO0030
       READ    CD-FILE    WITH LOCK                            DO0030
       INVALID KEY GO TO F80-KO.                               DO0030
       GO TO F80-OK.                                           DO0030
F80-CD05-RW.                                                   DO0030
       REWRITE     CD00 WITH UNLOCK                            DO0030
       INVALID KEY GO TO F80-KO.                               DO0030
       GO TO F80-OK.                                           DO0030
F80-CD05-UN.                                                   DO0030
       GO TO F80-OK.                                           DO0030
F8001-FN.    EXIT.                                             DO0030
F80-CD10-R.                                                    DO0030
       READ    CD-FILE    INVALID KEY GO TO F80-KO.            DO0030
       GO TO F80-OK.                                           DO0030
F80-CD10-RU.                                                   DO0030
       READ    CD-FILE    WITH LOCK                            DO0030
       INVALID KEY GO TO F80-KO.                               DO0030
       GO TO F80-OK.                                           DO0030
F80-CD10-P.                                                    DO0030
       START   CD-FILE    KEY NOT <                            DO0030
              CD00-KEYCD  INVALID KEY GO TO F80-KO.            DO0030
F80-CD10-RN.                                                   DO0030
       READ    CD-FILE    NEXT AT END GO TO F80-KO.            DO0030
       GO TO F80-OK.                                           DO0030
F80-CD10-W.                                                    DO0030
       WRITE       CD00   INVALID KEY GO TO F80-KO.            DO0030
       GO TO F80-OK.                                           DO0030
F80-CD10-RW.                                                   DO0030
       REWRITE     CD00 WITH UNLOCK                            DO0030
       INVALID KEY GO TO F80-KO.                               DO0030
       GO TO F80-OK.                                           DO0030
F80-CD10-D.                                                    DO0030
       DELETE  CD-FILE    INVALID KEY GO TO F80-KO.            DO0030
       GO TO F80-OK.                                           DO0030
F80-CD10-UN.                                                   DO0030
       UNLOCKFILE  CD-FILE     GO TO F80-OK.                   DO0030
       GO TO F80-OK.                                           DO0030
F8002-FN.    EXIT.                                             DO0030
F80-CD20-RU.                                                   DO0030
       READ    CD-FILE    WITH LOCK                            DO0030
       INVALID KEY GO TO F80-KO.                               DO0030
       GO TO F80-OK.                                           DO0030
F80-CD20-W.                                                    DO0030
       WRITE       CD00   INVALID KEY GO TO F80-KO.            DO0030
       GO TO F80-OK.                                           DO0030
F80-CD20-RW.                                                   DO0030
       REWRITE     CD00 WITH UNLOCK                            DO0030
       INVALID KEY GO TO F80-KO.                               DO0030
       GO TO F80-OK.                                           DO0030
F80-CD20-UN.                                                   DO0030
       GO TO F80-OK.                                           DO0030
F8003-FN.    EXIT.                                             DO0030
F80-FO10-RU.                                                   DO0030
       READ    FO-FILE    WITH LOCK                            DO0030
       INVALID KEY GO TO F80-KO.                               DO0030
       GO TO F80-OK.                                           DO0030
F80-FO10-RW.                                                   DO0030
       REWRITE     FO10 WITH UNLOCK                            DO0030
       INVALID KEY GO TO F80-KO.                               DO0030
       GO TO F80-OK.                                           DO0030
F80-FO10-UN.                                                   DO0030
       GO TO F80-OK.                                           DO0030
F8004-FN.    EXIT.                                             DO0030
F80-ME00-R.                                                    DO0030
       READ    ME-FILE    INVALID KEY GO TO F80-KO.            DO0030
       GO TO F80-OK.                                           DO0030
F8005-FN.    EXIT.                                             DO0030
F80-HELP-R.                                                    DO0030
           READ  HE-FILE    INVALID KEY GO TO F80-KO.         DO0030
```

```
       GO TO F80-OK.                                              DO0030
   F80-HELP-W.                                                    DO0030
             WRITE  HE00 INVALID KEY GO TO F80-KO.                DO0030
       GO TO F80-OK.                                              DO0030
   F80-HELP-RW.                                                   DO0030
            REWRITE  HE00 INVALID KEY GO TO F80-KO.               DO0030
       GO TO F80-OK.                                              DO0030
   F80-HELP-D.                                                    DO0030
            DELETE  HE-FILE    INVALID KEY GO TO F80-KO.         DO0030
       GO TO F80-OK.                                              DO0030
   F8095-FN.    EXIT.                                             DO0030
   F80-EM00-R.                                                    DO0030
              READ    EM-FILE    INVALID KEY GO TO F80-KO.       DO0030
       GO TO F80-OK.                                              DO0030
   F8098-FN.    EXIT.                                             DO0030
   F80-OK.  MOVE "0" TO IK MOVE PROGR TO XPROGR GO TO F80-FN.     DO0030
   F80-KO.  MOVE "1" TO IK MOVE PROGR TO XPROGR.                  DO0030
   F8099-FN.    EXIT.                                             DO0030
   F80-FN.      EXIT.                                             DO0030
   F81.         EXIT.                                             DO0030
```

6.18. F81 : PERFORMED VALIDATION FUNCTIONS

F81 : PERFORMED VALIDATIONS FUNCTIONS

The PERFORMED VALIDATIONS FUNCTIONS (F81) are always generated.

F81ER contains the abnormal end routine.

F81FI closes all the files used in the program.

F81UT stores the user's errors.

F8110 is generated when there is a numeric field on the screen. It contains the procedures which format the field to be validated in the work area, the numeric class validation, and the positioning of error messages, if required.

F8115 ensures the initialization of the output variable fields. It is performed in Function F0510 if the ICF indicator is equal to '0'.

F8120 is generated if at least one variable data element ('V') has a date format, or if an 'AD'-type operator is specified on the Procedural Code (-P) lines of the program (in this case, the F8120-ER and F8120-KO functions are not generated).

It also contains date formatting and validations.

F8130 is generated if a call for HELP documentation is entered on the Screen Definition screen. It prepares the field to be saved in the backup file.

```
            ************************************                DO0030
            *                                  *                DO0030
            *  ABNORMAL END PROCEDURE          *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
F81ER.                                                          DO0030
       MOVE "X"   TO S-WWSS-OPER                                DO0030
       MOVE COMMON-AREA TO SERVER-COMMON                        DO0030
       MOVE COMMUNICATION-MONITOR TO SERVER-MONIT               DO0030
       WRITE ENTRY-REPLY.                                       DO0030
       GO TO F0110.                                             DO0030
F81ER-FN.    EXIT.                                              DO0030
F81FI.                                                          DO0030
       CLOSE   CD-FILE.                                         DO0030
       CLOSE   EM-FILE.                                         DO0030
       CLOSE   FO-FILE.                                         DO0030
       CLOSE   HE-FILE.                                         DO0030
       CLOSE   ME-FILE.                                         DO0030
F81FI-FN.    EXIT.                                              DO0030
            ************************************                DO0030
            *                                  *                DO0030
            *  MEMORIZATION OF USER'S ERRORS   *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
F81UT.     IF K50L < K50M ADD 1 TO K50L                         DO0030
       MOVE XEMKY TO T-XEMKY (K50L). MOVE "E" TO CAT-ER.        DO0030
F81UT-FN.    EXIT.                                              DO0030
            ************************************                DO0030
            *                                  *                DO0030
            *  NUMERIC VALIDATION              *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
F8110.   MOVE ZERO TO TPOINT K01 K02 K03 ZONUM3 ZONUM2          DO0030
                      C9 C91.                                   DO0030
F8110-1.   IF K01 > 26 OR K02 > 17 GO TO F8110-5.               DO0030
       ADD 1 TO K01.                                            DO0030
       IF C1 (K01) = SPACE OR C1 (K01) = "." GO TO F8110-1.     DO0030
     IF C1 (K01) NOT = "-" AND C1 (K01) NOT = "+" GO TO F8110-2. DO0030
       IF C9 NOT = ZERO                                         DO0030
       MOVE "5" TO DEL-ER GO TO F8110-FN.                       DO0030
       IF K02 = ZERO MOVE "1" TO C91.                           DO0030
       IF C1 (K01) = "+" MOVE 1 TO C9   GO TO F8110-1.          DO0030
       IF SIGNE = " " MOVE "5" TO DEL-ER GO TO F8110-FN.        DO0030
       MOVE -1 TO C9 GO TO F8110-1.                             DO0030
F8110-2. IF C1 (K01) NOT = "," GO TO F8110-4.                   DO0030
       IF TPOINT = "1" OR NBCHP = 0                             DO0030
       MOVE "5" TO DEL-ER GO TO F8110-FN.                       DO0030
F8110-3. IF K02 > NBCHA MOVE "5" TO DEL-ER GO TO F8110-FN.      DO0030
       COMPUTE K04 = 18 - NBCHA + K02 MOVE 1 TO C3 (K04)        DO0030
       DIVIDE ZONUM4 INTO ZONUM9 MOVE NBCHA TO K02              DO0030
       MOVE "1" TO TPOINT GO TO F8110-1.                        DO0030
F8110-4. IF C1 (K01) NOT NUMERIC MOVE "4" TO DEL-ER             DO0030
       GO TO F8110-FN.                                          DO0030
       IF C9 NOT = ZERO AND C91 = ZERO                          DO0030
       MOVE "5" TO DEL-ER  GO TO F8110-FN.                      DO0030
       IF C1 (K01) = "0" AND K02 = ZERO AND TPOINT = "0"        DO0030
       GO TO F8110-1. ADD 1 TO K02 MOVE C1 (K01) TO C2 (K02).   DO0030
       IF TPOINT = "1" ADD 1 TO K03. IF K03 > NBCHP MOVE "5"    DO0030
       TO DEL-ER GO TO F8110-FN. GO TO F8110-1.                 DO0030
F8110-5. IF TPOINT = "0" AND K02 > ZERO GO TO F8110-3.          DO0030
       IF SIGNE NOT =  "+" GO TO F8110-FN.                      DO0030
       IF C9 = ZERO MOVE 1 TO C9.                               DO0030
       ADD NBCHA NBCHP GIVING K01 MULTIPLY C9 BY C29 (K01).     DO0030
       IF C29 (K01) = ZERO AND C9 = -1 MOVE C4 TO C2 (K01).     DO0030
F8110-FN.    EXIT.                                              DO0030
F8115.                                                          DO0030
       MOVE ALL "-"                                             DO0030
         TO  O-0030-MATE.                                       DO0030
       MOVE ALL "-"                                             DO0030
         TO  O-0030-RELEA.                                      DO0030
       MOVE ALL "-"                                             DO0030
         TO  O-0030-RUE.                                        DO0030
       MOVE ALL "-"                                             DO0030
         TO  O-0030-COPOS.                                      DO0030
       MOVE ALL "-"                                             DO0030
         TO  O-0030-REFCLI.                                     DO0030
       MOVE "..__.."                                            DO0030
         TO  O-0030-DATE.                                       DO0030
```

```
       MOVE ALL "-"                                                  DO0030
         TO  O-0030-CORRES.                                          DO0030
       MOVE ALL "-"                                                  DO0030
         TO  F-0030-REMIS.                                           DO0030
       MOVE  ZERO  TO  ICATR.                                        DO0030
F8115-GRP.   ADD 1 TO  ICATR                                         DO0030
       MOVE  P-0030-LINE  (ICATR) TO O-0030-LINE                     DO0030
       MOVE ALL "-"                                                  DO0030
         TO  O-0030-CODMVT.                                          DO0030
       MOVE ALL "-"                                                  DO0030
         TO  O-0030-FOURNI.                                          DO0030
       MOVE ALL "-"                                                  DO0030
         TO  F-0030-QTMAC.                                           DO0030
       MOVE ALL "-"                                                  DO0030
         TO  O-0030-INFOR.                                           DO0030
       MOVE  O-0030-LINE          TO P-0030-LINE  (ICATR).           DO0030
    IF ICATR  < IRR GO TO F8115-GRP.                                 DO0030
       MOVE ALL "-"                                                  DO0030
         TO  O-0030-EDIT.                                            DO0030
F8115-FN.    EXIT.                                                   DO0030
           ************************************                      DO0030
           *                                  *                      DO0030
           *  VALIDATION AND SETTING OF DATE  *                      DO0030
           *                                  *                      DO0030
           ************************************                      DO0030
F8120.       EXIT.                                                   DO0030
F8120-C. MOVE DAT73C TO DATCTY.                                      DO0030
         MOVE DAT71C TO DAT71.                                       DO0030
         MOVE DAT72C TO DAT72.                                       DO0030
         MOVE DAT74C TO DAT73.                                       DO0030
         MOVE "00111" TO TT-DAT GO TO F8120-T.                       DO0030
F8120-D. MOVE CENTUR TO DATCTY DAT73C.                               DO0030
         MOVE DAT71 TO DAT71C.                                       DO0030
         MOVE DAT72 TO DAT72C                                        DO0030
         MOVE DAT73 TO DAT74C.                                       DO0030
         MOVE "00111" TO TT-DAT GO TO F8120-T.                       DO0030
F8120-E. MOVE CENTUR TO DATCTY DAT83C.                               DO0030
         MOVE DAT81 TO DAT81C.                                       DO0030
         MOVE DAT82 TO DAT82C.                                       DO0030
         MOVE DAT83 TO DAT84C  MOVE DATSEP TO DAT8S1C DAT8S2C.       DO0030
         MOVE "01011" TO TT-DAT GO TO F8120-T.                       DO0030
F8120-G. MOVE DAT81G TO DATCTY.                                      DO0030
         MOVE DAT82G TO DAT61.                                       DO0030
         MOVE DAT83G TO DAT62.                                       DO0030
         MOVE DAT84G TO DAT63.                                       DO0030
         MOVE "10110" TO TT-DAT GO TO F8120-T.                       DO0030
F8120-I. MOVE CENTUR TO DATCTY DAT61C.                               DO0030
         MOVE DAT61 TO DAT62C.                                       DO0030
         MOVE DAT62 TO DAT63C.                                       DO0030
         MOVE DAT63 TO DAT64C.                                       DO0030
         MOVE "10101" TO TT-DAT GO TO F8120-T.                       DO0030
F8120-M. MOVE DAT83C TO DATCTY.                                      DO0030
         MOVE DAT81C TO DAT81.                                       DO0030
         MOVE DAT82C TO DAT82.                                       DO0030
         MOVE DAT84C TO DAT83  MOVE DATSEP TO DAT8S1 DAT8S2.         DO0030
         MOVE "01011" TO TT-DAT GO TO F8120-T.                       DO0030
F8120-S. MOVE DAT61C TO DATCTY.                                      DO0030
         MOVE DAT62C TO DAT61.                                       DO0030
         MOVE DAT63C TO DAT62.                                       DO0030
         MOVE DAT64C TO DAT63.                                       DO0030
         MOVE "10101" TO TT-DAT.                                     DO0030
F8120-T. IF T-DAT (1) = "1"                                          DO0030
            MOVE DAT61 TO DAT73 DAT74C                               DO0030
            MOVE DAT62 TO DAT72 DAT72C                               DO0030
            MOVE DAT63 TO DAT71 DAT71C                               DO0030
            MOVE DATCTY TO DAT73C.                                   DO0030
         IF T-DAT (2) = "1"                                          DO0030
            MOVE DAT81 TO DAT71 DAT71C                               DO0030
            MOVE DAT82 TO DAT72 DAT72C                               DO0030
            MOVE DAT83 TO DAT73 DAT74C                               DO0030
            MOVE DATCTY TO  DAT73C.                                  DO0030
         IF T-DAT (3) = "1"                                          DO0030
            MOVE DAT71 TO DAT81 DAT81C                               DO0030
            MOVE DAT72 TO DAT82 DAT82C                               DO0030
            MOVE DAT73 TO DAT83 DAT84C                               DO0030
            MOVE DATSEP TO DAT8S1 DAT8S2 DAT8S1C DAT8S2C             DO0030
            MOVE DATCTY TO DAT83C.                                   DO0030
         IF T-DAT (4) = "1"                                          DO0030
```

```
            MOVE DAT71 TO DAT63 DAT64C                          DO0030
            MOVE DAT72 TO DAT62 DAT63C                          DO0030
            MOVE DAT73 TO DAT61 DAT62C                          DO0030
            MOVE DATCTY TO DAT61C.                              DO0030
         IF T-DAT (5) = "1"                                     DO0030
            MOVE DAT61 TO DAT82G                                DO0030
            MOVE DAT62 TO DAT83G                                DO0030
            MOVE DAT63 TO DAT84G                                DO0030
            MOVE DATSET TO DAT8S1G DAT8S2G                      DO0030
            MOVE DATCTY TO DAT81G.                              DO0030
F8120-Z.     EXIT.                                              DO0030
F8120-ER.   MOVE "1"   TO DEL-ER.                               DO0030
         IF DAT6 NOT NUMERIC              GO TO F8120-KO.       DO0030
         IF DATCTY NOT NUMERIC            GO TO F8120-KO.       DO0030
         IF DAT62 > "12" OR DAT62 = "00" OR                     DO0030
            DAT63 > "31" OR DAT63 = "00"    GO TO F8120-KO.     DO0030
         IF DAT63 > "30" AND                                    DO0030
           (DAT62 = "04" OR DAT62 = "06" OR                     DO0030
            DAT62 = "09" OR DAT62 = "11")   GO TO F8120-KO.     DO0030
         IF DAT62 NOT = "02"              GO TO F8120-FN.       DO0030
         IF DAT63 > "29"                  GO TO F8120-KO.       DO0030
         IF   DAT619  = ZERO                                    DO0030
         DIVIDE  DATCTY9    BY 4 GIVING  LEAP-REM               DO0030
         COMPUTE LEAP-REM = DATCTY9 - 4 * LEAP-REM              DO0030
         ELSE DIVIDE DAT619  BY 4 GIVING LEAP-REM               DO0030
         COMPUTE LEAP-REM = DAT619 - 4 * LEAP-REM.              DO0030
         IF DAT63 < "29" OR LEAP-REM = ZERO GO TO F8120-FN.     DO0030
F8120-KO. MOVE "5" TO DEL-ER.                                   DO0030
F8120-FN.    EXIT.                                              DO0030
            ************************************                DO0030
            *                                  *                DO0030
            *  HELP SUB-FUNCTION               *                DO0030
            *                                  *                DO0030
            ************************************                DO0030
F8130.                                                          DO0030
       MOVE  I-0030-MATE          TO O-0030-MATE.               DO0030
       MOVE  I-0030-RELEA         TO O-0030-RELEA.              DO0030
       MOVE  I-0030-RUE           TO O-0030-RUE.                DO0030
       MOVE  I-0030-COPOS         TO O-0030-COPOS.              DO0030
       MOVE  I-0030-REFCLI        TO O-0030-REFCLI.             DO0030
       MOVE  I-0030-DATE          TO O-0030-DATE.               DO0030
       MOVE  I-0030-CORRES        TO O-0030-CORRES.             DO0030
       MOVE  E-0030-REMIS         TO F-0030-REMIS.              DO0030
       MOVE  ZERO  TO  ICATR.                                   DO0030
F8130-GRP.   ADD 1 TO  ICATR                                    DO0030
       MOVE  J-0030-LINE  (ICATR) TO I-0030-LINE                DO0030
       MOVE  P-0030-LINE  (ICATR) TO O-0030-LINE                DO0030
       MOVE  I-0030-CODMVT        TO O-0030-CODMVT.             DO0030
       MOVE  I-0030-FOURNI        TO O-0030-FOURNI.             DO0030
       MOVE  E-0030-QTMAC         TO F-0030-QTMAC.              DO0030
       MOVE  I-0030-INFOR         TO O-0030-INFOR.              DO0030
       MOVE  O-0030-LINE          TO P-0030-LINE  (ICATR).      DO0030
    IF ICATR  < IRR GO TO F8130-GRP.                            DO0030
       MOVE  I-0030-EDIT          TO O-0030-EDIT.               DO0030
F8130-FN.    EXIT.                                              DO0030
F81-FN.      EXIT.                                              DO0030
            +----------------------------------+                P000
 LEVEL 10    I ZIP CODE VALIDATION             I                P000
            +----------------------------------+                P000
F93CP.                                                          P000
    MOVE 1 TO     IWP20R.                                       P100
F93CP-100. IF     IWP20R NOT >    IWP20L                        P100
    AND             WP20-COPOS   (IWP20R)                       P100
    NOT =            WP30-COPOS                                 P100
    ADD  1 TO     IWP20R    GO TO F93CP-100.                    P100
         IF    IWP20R > IWP20L                                  P200
    MOVE       "5" TO DEL-ER                                    P200
          GO TO F93CP-FN.                                       P220
F93CP-FN.    EXIT.                                              DO0030
```

7. "HELP" FUNCTION

7.1. INTRODUCTION

INTRODUCTION

The user has the possibility to dynamically access the HELP documentation of a screen or of a data element on the screen through the activation of a program commonly known as the "HELP Function".

The purpose of the HELP function is to display the messages contained in the Error Message file.

For information on the character used to call the HELP documentation of a given screen or data element, refer to Subchapter, "DIALOGUE OR SCREEN DEFINITION" in the ON-LINE SYSTEMS DEVELOPMENT Reference Manual.

USING THE "HELP" PROGRAM

To use the specifications of the "HELP" function in a dialogue, two additional screens have to be defined: a SERVER and a REQUESTER.

These screens belong to the dialogue. Thus, the first two characters of their codes must be the same as those of the corresponding dialogue, the last four being 'HELP' for the SERVER. For Dialogue 'XX', the HELP SERVER would be coded: 'XXHELP'.

These screens must be defined but not described (i.e., only the Definition screens must be created). They have the same variants as standard REQUESTER and SERVERS, and the standard rules apply to their external names.

The user must generate and compile these programs (the generated COBOL programs have the same structure as an on-line screen SERVER and REQUESTER).

The HELP program ensures the display of the documentation as follows:

- For the Screen documentation:

. Screen-related documentation (texts and comments),

. Segment access error messages.

- For the Data Element documentation:

. Standard error messages generated by the System,

. Explicit manual error messages,

. Description lines associated with the Data Element (CH: E.....D),

. Screen general documentation lines associated with the Data Element (CH: O.....G).

(For further details, refer to Subchapter "ERROR MESSAGES: CODING", Chapter "ERROR MESSAGES - HELP FUNCTION" in the ON-LINE SYSTEMS DEVELOPMENT Reference Manual).

NOTE: If the Error Message file is generated with the 'C1' option, only the error messages are generated. If it is generated with the 'C2' option, in addition to the error messages, comments and documentation associated with the Screen are also generated.

```
--------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDLB.NDOC.ATA.2!
! ON-LINE SCREEN DEFINITION.....: DOHELP                                      !
!                                                                             !
! SCREEN NAME...................: HELP FUNCTION SCREEN                       !
!                                                                             !
! SCREEN SIZE (LINES, COLUMNS) .....:   24       080                          !
! LABEL TYPE, TABS, INITIALIZATION...:   L        01       _                   !
! HELP CHARACTER SCREEN, DATA ELEMENT:   10       11                           !
!                                                                             !
!                                    LABELS   DISPLAY  INPUT  ER.MESS.  ER.FL!
! INTENSITY ATTRIBUTE ..............:   N        N        N        B        B !
! PRESENTATION ATTRIBUTE ...........:   N        N        N        N        N !
! COLOR ATTRIBUTE ..................:   W        W        W        W        W !
!                                                                             !
! TYPE OF COBOL AND MAP TO GENERATE..:   F * S     TANDEM (SERVER)           !
! CONTRL CARD OPTIONS FRONT & BACK..:             (PROGRAM)              (MAP)!
! EXTERNAL NAMES ...................:   DOHELSER (PROGRAM)      DOHELR   (MAP)!
! TRANSACTION CODE .................:   T16-6530
!
!                                                                             !
! EXPLICIT KEYWORDS..: DO                                                     !
! SESSION NUMBER.....: 0045        LIBRARY......: ATA    LOCK....:            !
! *** END ***                                                                 !
! O: C1 CH: Odohelp                    ACTION:                                !
--------------------------------------------------------------------------------
```

```
-------------------------------------------------------------------------------
!                  TANDEM APPLICATION                        *PDLB.NDOC.ATA.2!
! ON-LINE SCREEN DEFINITION.....: DOHELR                                      !
!                                                                             !
! SCREEN NAME.....................: HELP FUNCTION SCREEN                      !
!                                                                             !
! SCREEN SIZE (LINES, COLUMNS) ......:   24       080                        !
! LABEL TYPE, TABS, INITIALIZATION...:   L        01       _                 !
! HELP CHARACTER SCREEN, DATA ELEMENT:   10       11                         !
!                                                                             !
!                                    LABELS   DISPLAY  INPUT  ER.MESS.  ER.FL!
! INTENSITY ATTRIBUTE ..............:   N        N        N        B        B !
! PRESENTATION ATTRIBUTE ...........:   N        N        N        N        N !
! COLOR ATTRIBUTE ..................:   W        W        W        W        W !
!                                                                             !
! TYPE OF COBOL AND MAP TO GENERATE..:   F   R     TANDEM (REQUESTER)        !
! CONTROL CAR OPTIONS FRONT & BACK..:            (PROGRAM)              (MAP)!
! EXTERNAL NAMES ...................:   DOP050   (PROGRAM)      DOHELP   (MAP)!
! TRANSACTION CODE..................:   T16-6530                             !
!                                                                             !
!                                                                             !
! EXPLICIT KEYWORDS..: DO                                                     !
! SESSION NUMBER.....:  020        LIBRARY......: ATA    LOCK....:            !
! *** END ***                                                                 !
! O: C1 CH::Odohelr                    ACTION:                                !
----------- ---------------------------------------------------------------------
```

7.2. "HELP" REQUESTER

```
IDENTIFICATION DIVISION.
PROGRAM-ID. DOP050.                                              DOHELR
AUTHOR.     HELP FUNCTION SCREEN.                                DOHELR
DATE-COMPILED. 03/11/93.                                         DOHELR
ENVIRONMENT DIVISION.                                            DOHELR
CONFIGURATION SECTION.                                           DOHELR
SOURCE-COMPUTER. T16.                                            DOHELR
OBJECT-COMPUTER. T16,                                            DOHELR
       TERMINAL IS T16-6530.                                     DOHELR
SPECIAL-NAMES.                                                   DOHELR
    F1 IS F1, F2 IS F2, F3 IS F3, F4 IS F4, F5 IS F5,            DOHELR
    F6 IS F6, F7 IS F7, F8 IS F8, F9 IS F9, F10 IS F10,          DOHELR
    F11 IS F11, F12 IS F12, F13 IS F13, F14 IS F14,              DOHELR
    F15 IS F15, F16 IS F16, SF1 IS SF1, SF2 IS SF2,              DOHELR
    SF3 IS SF3, SF4 IS SF4, SF5 IS SF5, SF6 IS SF6,              DOHELR
    SF7 IS SF7, SF8 IS SF8, SF9 IS SF9, SF10 IS SF10,            DOHELR
    SF11 IS SF11, SF12 IS SF12, SF13 IS SF13,                    DOHELR
    SF14 IS SF14, SF15 IS SF15, SF16 IS SF16,                    DOHELR
      ATTENTION IS  NORMAL,                                      DOHELR
    DYNBLIN IS (BLINK, NOREVERSE, NOUNDERLINE),                  DOHELR
    DYNREVE IS (REVERSE, NOBLINK, NOUNDERLINE),                  DOHELR
    DYNUNDE IS (UNDERLINE, NOBLINK, NOREVERSE),                  DOHELR
    DYNNORP IS (NOUNDERLINE, NOBLINK, NOREVERSE),                DOHELR
    PROTECTED IS PROTECTED, UNPROTECTED IS UNPROTECTED,          DOHELR
    HIDDEN IS HIDDEN, NOTHIDDEN IS NOTHIDDEN,                    DOHELR
    DIM IS DIM, UNDERLINE IS UNDERLINE, REVERSE IS REVERSE,      DOHELR
    BLINK IS BLINK, NORMAL IS NORMAL.                            DOHELR
DATA DIVISION.                                                   DOHELR
WORKING-STORAGE SECTION.                                         DOHELR
01   WSS-BEGIN.                                                  DOHELR
     05 FILLER PICTURE X(7) VALUE "WORKING".                     DOHELR
     05 IK     PICTURE X.                                        DOHELR
     05 BLANC  PICTURE X VALUE SPACE.                            DOHELR
     05 OPER   PICTURE X.                                        DOHELR
     05 SCR-ER PICTURE X.                                        DOHELR
     05 ICF    PICTURE X.                                        DOHELR
     05 OCF    PICTURE X.                                        DOHELR
     05 INT    PICTURE 999 VALUE 001.                            DOHELR
     05 SH-SEL.                                                  DOHELR
       10 SH-SELECT PICTURE X VALUE "1".                         DOHELR
01   PACBASE-CONSTANTS.                                          DOHELR
     05 SESSI  PICTURE X(5) VALUE "0314 ".                       DOHELR
     05 LIBRA  PICTURE X(3) VALUE "ATA".                         DOHELR
     05 DATGN  PICTURE X(8) VALUE "03/11/93".                    DOHELR
     05 PROGR  PICTURE X(6) VALUE "DOHELR".                      DOHELR
     05 PROGE  PICTURE X(8) VALUE "DOP050  ".                    DOHELR
     05 TIMGN  PICTURE X(8) VALUE "18:04:22".                    DOHELR
     05 USERCO PICTURE X(8) VALUE "PDSG    ".                    DOHELR
     05 5-HELR-PROGE  PICTURE X(8).                              DOHELR
01         SCREEN-FIELDS.                                        *AA042
   05      R03002  PICTURE X(30).                                *AA042
   05      R03033  PICTURE X(36).                                *AA042
   05      R05004  PICTURE X(74).                                *AA042
   05      R06004  PICTURE X(74).                                *AA042
   05      R07004  PICTURE X(74).                                *AA042
   05      R08004  PICTURE X(74).                                *AA042
   05      R09004  PICTURE X(74).                                *AA042
   05      R10004  PICTURE X(74).                                *AA042
   05      R11004  PICTURE X(74).                                *AA042
   05      R12004  PICTURE X(74).                                *AA042
   05      R13004  PICTURE X(74).                                *AA042
   05      R14004  PICTURE X(74).                                *AA042
   05      R15004  PICTURE X(74).                                *AA042
   05      R16004  PICTURE X(74).                                *AA042
   05      R17004  PICTURE X(74).                                *AA042
   05      R18004  PICTURE X(74).                                *AA042
   05      R19004  PICTURE X(74).                                *AA042
   05      R20004  PICTURE X(74).                                *AA042
   05      R21004  PICTURE X(74).                                *AA042
   05      R23002  PICTURE X(19).                                *AA042
   05      R23022  PICTURE X(1).                                 *AA042
   05      R23028  PICTURE X(30).                                *AA042
   05      R24002  PICTURE X(72).                                *AA042
```

"HELP" FUNCTION 7
"HELP" REQUESTER 2

```
01         INPUT-SCREEN-FIELDS REDEFINES SCREEN-FIELDS.          *AA050
     05      I-HELR-LIBEC  PICTURE X(30).                        *AA050
     05      I-HELR-LIENT  PICTURE X(36).                        *AA050
     05      J-HELR-LIGNE  OCCURS 17.                            *AA050
     10      FILLER        PICTURE X(74).                        *AA050
     05      I-HELR-LICHOI PICTURE X(19).                        *AA050
     05      I-HELR-OPDOC  PICTURE X.                            *AA050
     05      I-HELR-LIOPT  PICTURE X(30).                        *AA050
     05      I-HELR-LIERR  PICTURE X(72).                        *AA050
01        OUTPUT-SCREEN-FIELDS REDEFINES SCREEN-FIELDS.         *AA050
     05      O-HELR-LIBEC  PICTURE X(30).                        *AA050
     05      O-HELR-LIENT  PICTURE X(36).                        *AA050
     05      P-HELR-LIGNE  OCCURS 17.                            *AA050
     10      FILLER        PICTURE X(74).                        *AA050
     05      O-HELR-LICHOI PICTURE X(19).                        *AA050
     05      O-HELR-OPDOC  PICTURE X.                            *AA050
     05      O-HELR-LIOPT  PICTURE X(30).                        *AA050
     05      O-HELR-LIERR  PICTURE X(72).                        *AA050
01           REPEAT-LINE.                                        *AA050
     02      I-HELR-LIGNE.                                       *AA050
     05      I-HELR-LIERRD PICTURE X(74).                        *AA050
     02      O-HELR-LIGNE.                                       *AA050
     05      O-HELR-LIERRD PICTURE X(74).                        *AA050
01   PACBASE-INDEXES COMPUTATIONAL.                              *AA200
     05 K01         PICTURE S9(4).                              *AA200
     05    5-CA00-LTH  PICTURE S9(4) VALUE +0147.                *AA200
01    PFKEY-TAB.                                                 *AA240
  10  FILLER PICTURE X(32) VALUE                                 *AA240
     "1011                          ".                          *AA240
01    PFKEY-CHECK REDEFINES PFKEY-TAB.                           *AA240
  10  PFKEY-VAL PICTURE X(2) OCCURS 16.                          *AA240
01           DE-ATT.                                             *AA250
  02         DE-ATT1           OCCURS 5.                       *AA250
     05      DE-AT   PICTURE X                                   *AA250
                    OCCURS 001.                                  *AA250
01           SH-ATT.                                             *AA250
  02         SH-ATT1 OCCURS 8.                                   *AA250
     05      SH-AT   PICTURE X                                   *AA250
                    OCCURS 001.                                  *AA250
01           SH-SCREEN.                                          *AA255
       10 SH-S23022 PICTURE X.                                   *AA255
01      AT-SV.                                                   *AA260
      10   FILLER  PICTURE X(8) VALUE "00123022".                *AA260
01      TABLE-SV-AT  REDEFINES AT-SV.                            *AA265
      05   SV-ATT OCCURS 001.                                    *AA265
      10 SV-AT     PICTURE 999.                                 *AA265
      10 SV-CPOSL  PICTURE 99.                                  *AA265
      10 SV-CPOSC  PICTURE 999.                                 *AA265
LINKAGE SECTION.                                                DOHELR
01           COMMON-AREA.                                        *00001
     02      K-HELR-PROGR  PICTURE X(6).                         *00001
     02           CA00.                                          *00001
       10         CA00-CLECD.                                    *00001
        15        CA00-NUCOM  PICTURE 9(5).                      *00001
       10         CA00-CLECL1.                                   *00001
        15        CA00-NUCLIE PICTURE 9(8).                      *00001
       10         CA00-ME00.                                     *00001
        15        CA00-CLEME.                                    *00001
         20       CA00-COPERS PICTURE X(5).                      *00001
         20       CA00-NUMORD PICTURE XX.                        *00001
        15        CA00-MESSA  PICTURE X(75).                     *00001
       10         CA00-PREM   PICTURE X.                         *00001
       10         CA00-LANGU  PICTURE X.                         *00001
       10         CA00-RAISOC PICTURE X(50).                     *00001
     02     K-SHELR-DOC   PICTURE X.                            *00002
     02     K-SHELR-PROGE PICTURE X(8).                         *00002
     02     K-SHELR-CPOSL PICTURE 999.                          *00002
     02     K-SHELR-LIBRA PICTURE XXX.                          *00002
     02     K-SHELR-ERCOD PICTURE XXX.                          *00002
     02     K-SHELR-ERTYP PICTURE X.                            *00002
     02     K-SHELR-LINUM PICTURE 999.                          *00002
     02     K-SHELR-XTERM PICTURE X(16).                        *00002
     02      FILLER        PICTURE X(0700).                     *00002
01           COMMUNICATION-MONITOR.                              *00010
       02    S-WWSS.                                           *00010
       10    S-WWSS-CDRET  PICTURE S9(4) COMP.                 *00010
       10    S-WWSS-OPER   PICTURE X.                          *00010
       10    S-WWSS-ICF    PICTURE X.                          *00010
```

```
          10    S-WWSS-OCF    PICTURE X.                          *00010
          10    S-WWSS-SCR-ER PICTURE X.                          *00010
          10    S-WWSS-PROGE  PICTURE X(8).                       *00010
          10    S-WWSS-PFKEY  PICTURE XX.                         *00010
          10    FILLER        PICTURE XX.                         *00010
          10    S-WWSS-ERCOD9 PICTURE 999.                        *00010
          10    S-WWSS-CURPOS.                                    *00010
            15  S-WWSS-CPOSL  PICTURE 9(4) COMP.                 *00010
            15  S-WWSS-CPOSC  PICTURE 9(4) COMP.                 *00010
    SCREEN SECTION.                                               *00200
    01         HELR-SCREEN  BASE SIZE 24, 80.                     *00200
       05      FILLER  AT 1, 2  DIM                               *00200
                 VALUE    "          ".                          *00200
       05      S03002 AT 3, 2 PICTURE X(30) DIM                   *00200
                        FROM  R03002.                             *00200
       05      S03033 AT 3, 33 PICTURE X(36) DIM                  *00200
                        FROM  R03033.                             *00200
       05      S05004 AT 5, 4 PICTURE X(74) DIM                   *00200
                        FROM  R05004.                             *00200
       05      S06004 AT 6, 4 PICTURE X(74) DIM                   *00200
                        FROM  R06004.                             *00200
       05      S07004 AT 7, 4 PICTURE X(74) DIM                   *00200
                        FROM  R07004.                             *00200
       05      S08004 AT 8, 4 PICTURE X(74) DIM                   *00200
                        FROM  R08004.                             *00200
       05      S09004 AT 9, 4 PICTURE X(74) DIM                   *00200
                        FROM  R09004.                             *00200
       05      S10004 AT 10, 4 PICTURE X(74) DIM                  *00200
                        FROM  R10004.                             *00200
       05      S11004 AT 11, 4 PICTURE X(74) DIM                  *00200
                        FROM  R11004.                             *00200
       05      S12004 AT 12, 4 PICTURE X(74) DIM                  *00200
                        FROM  R12004.                             *00200
       05      S13004 AT 13, 4 PICTURE X(74) DIM                  *00200
                        FROM  R13004.                             *00200
       05      S14004 AT 14, 4 PICTURE X(74) DIM                  *00200
                        FROM  R14004.                             *00200
       05      S15004 AT 15, 4 PICTURE X(74) DIM                  *00200
                        FROM  R15004.                             *00200
       05      S16004 AT 16, 4 PICTURE X(74) DIM                  *00200
                        FROM  R16004.                             *00200
       05      S17004 AT 17, 4 PICTURE X(74) DIM                  *00200
                        FROM  R17004.                             *00200
       05      S18004 AT 18, 4 PICTURE X(74) DIM                  *00200
                        FROM  R18004.                             *00200
       05      S19004 AT 19, 4 PICTURE X(74) DIM                  *00200
                        FROM  R19004.                             *00200
       05      S20004 AT 20, 4 PICTURE X(74) DIM                  *00200
                        FROM  R20004.                             *00200
       05      S21004 AT 21, 4 PICTURE X(74) DIM                  *00200
                        FROM  R21004.                             *00200
       05      S23002 AT 23, 2 PICTURE X(19) DIM                  *00200
                        FROM  R23002.                             *00200
       05      S23022 AT 23, 22 PICTURE X(1) DIM                  *00200
                        SHADOWED BY SH-S23022                     *00200
                        USING R23022                              *00200
                        WHEN BLANK CLEAR                          *00200
                        FULL TAB                                  *00200
                        FILL "_".                                 *00200
       05      S23028 AT 23, 28 PICTURE X(30) DIM                 *00200
                        FROM  R23028.                             *00200
       05      S24002 AT 24, 2 PICTURE X(72)                      *00200
                        FROM  R24002.                             *00200
    PROCEDURE DIVISION USING                                      *99999
              COMMON-AREA, COMMUNICATION-MONITOR.                 *99999
               ************************************               DOHELR
               *                                  *               DOHELR
               *  INITIALIZATIONS                 *               DOHELR
               *                                  *               DOHELR
               ************************************               DOHELR
    F01.         EXIT.                                            DOHELR
    F0101.                                                        DOHELR
           MOVE ZERO TO S-WWSS-ICF.                               DOHELR
           DISPLAY  BASE    HELR-SCREEN.                          DOHELR
    F0101-FN.    EXIT.                                            DOHELR
    F0110.                                                        DOHELR
           MOVE S-WWSS-ICF TO ICF                                 DOHELR
           MOVE S-WWSS-OCF TO OCF                                 DOHELR
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       MOVE "1" TO SCR-ER S-WWSS-SCR-ER.                          DOHELR
       MOVE "A" TO OPER.                                          DOHELR
           MOVE      001 TO S-WWSS-ERCOD9.                        DOHELR
   F0110-FN.    EXIT.                                             DOHELR
   F01-FN.      EXIT.                                             DOHELR
           ************************************                   DOHELR
           *                                  *                   DOHELR
           *  RECEPTION                       *                   DOHELR
           *                                  *                   DOHELR
           ************************************                   DOHELR
   F05.   IF ICF = ZERO GO TO F05-FN.                             DOHELR
   F0510.                                                         DOHELR
       ACCEPT  HELR-SCREEN  UNTIL                                 DOHELR
       F10  F11.                                                  DOHELR
       MOVE TERMINATION-STATUS TO K01                             DOHELR
       MOVE PFKEY-VAL (K01) TO S-WWSS-PFKEY.                      DOHELR
       MOVE OLD-CURSOR-ROW TO S-WWSS-CPOSL                        DOHELR
       MOVE OLD-CURSOR-COL TO S-WWSS-CPOSC.                       DOHELR
       MOVE LOGICAL-TERMINAL-NAME TO K-SHELR-XTERM                DOHELR
       MOVE  S-WWSS-CPOSL  TO K-SHELR-CPOSL                       DOHELR
       MOVE  S-WWSS-CPOSC  TO K-SHELR-LINUM.                      DOHELR
   F0510-FN.    EXIT.                                             DOHELR
   F05-FN.      EXIT.                                             DOHELR
   F40. IF OCF = ZERO GO TO END-OF-RECEPTION.                     DOHELR
           ************************************                   DOHELR
           *                                  *                   DOHELR
           *   CALL SERVER                    *                   DOHELR
           *                                  *                   DOHELR
           ************************************                   DOHELR
   F4005.     IF OPER = "E" OR "O" GO TO F4005-FN.                DOHELR
       MOVE ICF TO S-WWSS-ICF                                     DOHELR
       MOVE OCF TO S-WWSS-OCF                                     DOHELR
       SEND COMMUNICATION-MONITOR, COMMON-AREA,                   DOHELR
       SCREEN-FIELDS, DE-ATT TO "DOHELSER" REPLY CODE 0           DOHELR
       YIELDS COMMUNICATION-MONITOR, COMMON-AREA,                 DOHELR
       SCREEN-FIELDS, DE-ATT ON ERROR GO TO F81ER.                DOHELR
       MOVE S-WWSS-OPER  TO OPER                                  DOHELR
       MOVE S-WWSS-SCR-ER TO SCR-ER.                              DOHELR
   F4005-FN.    EXIT.                                             DOHELR
           ************************************                   DOHELR
           *                                  *                   DOHELR
           *  END OF TRANSACTION              *                   DOHELR
           *                                  *                   DOHELR
           ************************************                   DOHELR
   F4030.     IF OPER NOT = "E" GO TO F4030-FN.                   DOHELR
       MOVE OPER TO S-WWSS-OPER.                                  DOHELR
   F4030-A.   EXIT PROGRAM.                                       DOHELR
   F4030-FN.    EXIT.                                             DOHELR
           ************************************                   DOHELR
           *                                  *                   DOHELR
           *  TRANSFER TO ANOTHER SCREEN      *                   DOHELR
           *                                  *                   DOHELR
           ************************************                   DOHELR
   F4040.     IF OPER NOT = "O" GO TO F4040-FN.                   DOHELR
       MOVE OPER TO S-WWSS-OPER.                                  DOHELR
       IF   K-SHELR-DOC = "2" OR "3"                              DOHELR
       MOVE  PROGE         TO K-SHELR-PROGE.                      DOHELR
   F4040-A.   EXIT PROGRAM.                                       DOHELR
   F4040-FN.    EXIT.                                             DOHELR
   F40-FN.      EXIT.                                             DOHELR
   END-OF-RECEPTION.      EXIT.                                   DOHELR
   F8Z.         EXIT.                                             DOHELR
           ************************************                   DOHELR
           *                                  *                   DOHELR
           *  DISPLAY                         *                   DOHELR
           *                                  *                   DOHELR
           ************************************                   DOHELR
   F8Z10. MOVE "1" TO S-WWSS-ICF S-WWSS-OCF                       DOHELR
       IF S-WWSS-ERCOD9 > ZERO AND NOT > INT                      DOHELR
       MOVE SV-CPOSL (S-WWSS-ERCOD9) TO NEW-CURSOR-ROW            DOHELR
       MOVE SV-CPOSC (S-WWSS-ERCOD9) TO NEW-CURSOR-COL.           DOHELR
       IF DE-ATT NOT = SPACE PERFORM F8145 THRU F8145-FN.         DOHELR
       IF SCR-ER NOT  > "1"                                       DOHELR
       DISPLAY      HELR-SCREEN.                                  DOHELR
   F8Z10-FN.    EXIT.                                             DOHELR
           ************************************                   DOHELR
           *                                  *                   DOHELR
           *  END OF PROGRAM                  *                   DOHELR
```

"HELP" FUNCTION 7
"HELP" REQUESTER 2

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           *                                   *                DOHELR
           *************************************                DOHELR
   F8Z20.                                                       DOHELR
            GO TO F0110.                                        DOHELR
   F8Z20-FN.    EXIT.                                          DOHELR
   F8Z-FN.      EXIT.                                          DOHELR
   F81.         EXIT.                                          DOHELR
           *************************************                DOHELR
           *                                   *                DOHELR
           *  ABNORMAL END PROCEDURE           *                DOHELR
           *                                   *                DOHELR
           *************************************                DOHELR
   F81ER.                                                       DOHELR
          MOVE TERMINATION-STATUS TO S-WWSS-CDRET               DOHELR
          MOVE "X" TO S-WWSS-OPER.                              DOHELR
   F81ER-A.  EXIT PROGRAM.                                      DOHELR
   F81ER-FN.    EXIT.                                           DOHELR
   F8145.                                                       DOHELR
          MOVE LOW-VALUE TO SH-ATT.                             DOHELR
          MOVE 1 TO K01.                                        DOHELR
   F8145-A.                                                     DOHELR
          IF K01 > INT GO TO F8145-B.                           DOHELR
          IF DE-AT (1, K01) = "N" MOVE SH-SEL TO SH-AT (1, K01).    DOHELR
          IF DE-AT (1, K01) = "B" MOVE SH-SEL TO SH-AT (2, K01).    DOHELR
          IF DE-AT (1, K01) = "D" MOVE SH-SEL TO SH-AT (3, K01).    DOHELR
          IF DE-AT (2, K01) = "N" MOVE SH-SEL TO SH-AT (4, K01).    DOHELR
          IF DE-AT (2, K01) = "B" MOVE SH-SEL TO SH-AT (5, K01).    DOHELR
          IF DE-AT (2, K01) = "R" MOVE SH-SEL TO SH-AT (6, K01).    DOHELR
          IF DE-AT (2, K01) = "U" MOVE SH-SEL TO SH-AT (7, K01).    DOHELR
          IF DE-AT (5, K01) = "F" MOVE SH-SEL TO SH-AT (8, K01).    DOHELR
          ADD 1 TO K01 GO TO F8145-A.                           DOHELR
   F8145-B.                                                     DOHELR
          IF SH-ATT1 (1) NOT = LOW-VALUE                        DOHELR
          MOVE SH-ATT1 (1) TO SH-SCREEN                         DOHELR
          TURN TEMP DIM      IN HELR-SCREEN SHADOWED.           DOHELR
          IF SH-ATT1 (2) NOT = LOW-VALUE                        DOHELR
          MOVE SH-ATT1 (2) TO SH-SCREEN                         DOHELR
          TURN TEMP NORMAL   IN HELR-SCREEN SHADOWED.           DOHELR
          IF SH-ATT1 (3) NOT = LOW-VALUE                        DOHELR
          MOVE SH-ATT1 (3) TO SH-SCREEN                         DOHELR
          TURN TEMP HIDDEN   IN HELR-SCREEN SHADOWED.           DOHELR
          IF SH-ATT1 (4) NOT = LOW-VALUE                        DOHELR
          MOVE SH-ATT1 (4) TO SH-SCREEN                         DOHELR
          TURN TEMP DYNNORP  IN HELR-SCREEN SHADOWED.           DOHELR
          IF SH-ATT1 (5) NOT = LOW-VALUE                        DOHELR
          MOVE SH-ATT1 (5) TO SH-SCREEN                         DOHELR
          TURN TEMP DYNBLIN  IN HELR-SCREEN SHADOWED.           DOHELR
          IF SH-ATT1 (6) NOT = LOW-VALUE                        DOHELR
          MOVE SH-ATT1 (6) TO SH-SCREEN                         DOHELR
          TURN TEMP DYNREVE  IN HELR-SCREEN SHADOWED.           DOHELR
          IF SH-ATT1 (7) NOT = LOW-VALUE                        DOHELR
          MOVE SH-ATT1 (7) TO SH-SCREEN                         DOHELR
          TURN TEMP DYNUNDE  IN HELR-SCREEN SHADOWED.           DOHELR
          IF SH-ATT1 (8) NOT = LOW-VALUE                        DOHELR
          MOVE SH-ATT1 (8) TO SH-SCREEN                         DOHELR
          TURN TEMP PROTECTED IN HELR-SCREEN SHADOWED.          DOHELR
   F8145-FN.    EXIT.                                          DOHELR
   F81-FN.      EXIT.                                          DOHELR
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7.3. "HELP" SERVER

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IDENTIFICATION DIVISION.
PROGRAM-ID. DOHELSER.                                          DOHELP
AUTHOR.     HELP FUNCTION SCREEN.                              DOHELP
DATE-COMPILED. 03/11/93.                                       DOHELP
ENVIRONMENT DIVISION.                                          DOHELP
CONFIGURATION SECTION.                                         DOHELP
SOURCE-COMPUTER. T16.                                          DOHELP
OBJECT-COMPUTER. T16.                                          DOHELP
SPECIAL-NAMES.                                                 DOHELP
     DECIMAL-POINT IS COMMA.                                   DOHELP
INPUT-OUTPUT SECTION.                                          DOHELP
FILE-CONTROL.                                                  DOHELP
     SELECT        EM-FILE                                     DOHELP
     ASSIGN  TO   "DODOEM  "                                   DOHELP
     ORGANIZATION INDEXED                                      DOHELP
     ACCESS IS DYNAMIC                                         DOHELP
     RECORD KEY IS EM00-EMKEY                                  DOHELP
     FILE STATUS 1-EM00-STATUS.                                DOHELP
     SELECT MESSAGE-SCREEN  ASSIGN TO $RECEIVE                 DOHELP
     FILE STATUS IS RECEIVE-STATUS.                            DOHELP
RECEIVE-CONTROL.                                               DOHELP
     TABLE OCCURS 10.                                          DOHELP
DATA DIVISION.                                                 DOHELP
FILE SECTION.                                                  DOHELP
FD                EM-FILE                                      DOHELP
             LABEL RECORD IS OMITTED.                          DOHELP
01                EM00.                                        DOHELP
      05          EM00-EMKEY.                                  DOHELP
       10         EM00-LIBRA  PICTURE X(3).                    DOHELP
       10         EM00-ENTYP  PICTURE X.                       DOHELP
       10         EM00-XEMKY.                                  DOHELP
        15        EM00-PROGR  PICTURE X(6).                    DOHELP
        15        EM00-ERCOD.                                  DOHELP
         20       EM00-ERCOD9 PICTURE 9(3).                    DOHELP
        15        EM00-ERTYP  PICTURE X.                       DOHELP
       10         EM00-LINUM  PICTURE 9(3).                    DOHELP
      05          EM00-ERLVL  PICTURE X.                       DOHELP
      05          EM00-ERMSG  PICTURE X(66).                   DOHELP
      05          FILLER      PICTURE X(6).                    DOHELP
FD        MESSAGE-SCREEN                                       DOHELP
        LABEL RECORD IS OMITTED.                               DOHELP
01   ENTRY-REPLY.                                              DOHELP
     02  SERVER-MONIT   PICTURE X(26).                        DOHELP
     02     K-SHELP-PROGR PICTURE X(6).                        DOHELP
     02           CA00.                                        DOHELP
       10         CA00-CLECD.                                  DOHELP
        15        CA00-NUCOM  PICTURE 9(5).                    DOHELP
       10         CA00-CLECL1.                                 DOHELP
        15        CA00-NUCLIE PICTURE 9(8).                    DOHELP
       10         CA00-ME00.                                   DOHELP
        15        CA00-CLEME.                                  DOHELP
         20       CA00-COPERS PICTURE X(5).                    DOHELP
         20       CA00-NUMORD PICTURE XX.                      DOHELP
        15        CA00-MESSA  PICTURE X(75).                   DOHELP
       10         CA00-PREM   PICTURE X.                       DOHELP
       10         CA00-LANGU  PICTURE X.                       DOHELP
       10         CA00-RAISOC PICTURE X(50).                   DOHELP
     02     K-SHELP-CDOC.                                      DOHELP
       05   K-SHELP-DOC   PICTURE X.                          DOHELP
     02     K-SHELP-PROGE PICTURE X(8).                        DOHELP
     02     K-SHELP-CPOSL PICTURE 999.                         DOHELP
     02     K-SHELP-LIBRA PICTURE XXX.                         DOHELP
     02     K-SHELP-ERCOD.                                     DOHELP
       05   K-SHELP-ERCOD9 PICTURE 999.                       DOHELP
     02     K-SHELP-ERTYP PICTURE X.                           DOHELP
     02     K-SHELP-NULIX.                                     DOHELP
       05   K-SHELP-LINUM PICTURE 999.                        DOHELP
     02     K-SHELP-XTERM PICTURE X(16).                       DOHELP
     02  SERVER-COMMON.                                       DOHELP
     05  FILLER        PICTURE X(0700).                       DOHELP
     02  SERVER-MSG.                                          DOHELP
     05  FILLER  PICTURE X(1446).                             DOHELP
     02  SERVER-ATT.                                          DOHELP
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     05  FILLER  PICTURE X(0005).                                  DOHELP
   WORKING-STORAGE SECTION.                                       DOHELP
   01   WSS-BEGIN.                                                DOHELP
        05 FILLER PICTURE X(7) VALUE "WORKING".                   DOHELP
        05 IK     PICTURE X.                                      DOHELP
        05 BLANC  PICTURE X VALUE SPACE.                          DOHELP
        05 OPER   PICTURE X.                                      DOHELP
        05 OPERD  PICTURE X VALUE SPACE.                          DOHELP
        05 CATX   PICTURE X.                                      DOHELP
        05 CATM   PICTURE X.                                      DOHELP
        05 ICATR  PICTURE 99.                                     DOHELP
        05 SCR-ER PICTURE X.                                      DOHELP
        05 FT     PICTURE X.                                      DOHELP
        05 ICF    PICTURE X.                                      DOHELP
        05 OCF    PICTURE X.                                      DOHELP
        05 CAT-ER PICTURE X.                                      DOHELP
        05 I-PFKEY PICTURE XX.                                    DOHELP
        05 INA    PICTURE 999 VALUE 000.                          DOHELP
        05 INR    PICTURE 999 VALUE 000.                          DOHELP
        05 INZ    PICTURE 999 VALUE 001.                          DOHELP
        05 IRR     PICTURE 99 VALUE 17.                           DOHELP
        05 INT    PICTURE 999 VALUE 001.                          DOHELP
        05 IER     PICTURE 99 VALUE 01.                           DOHELP
        05 DEL-ER  PICTURE X.                                     DOHELP
   01   PACBASE-CONSTANTS.                                        DOHELP
    OLSD DATES PACE30 : /02/93                                    DOHELP
               PACE80 : 05/03/93   PAC7SG : 930225                DOHELP
        05 SESSI  PICTURE X(5) VALUE "0314 ".                     DOHELP
        05 LIBRA  PICTURE X(3) VALUE "ATA".                       DOHELP
        05 DATGN  PICTURE X(8) VALUE "03/11/93".                  DOHELP
        05 PROGR  PICTURE X(6) VALUE "DOHELP".                    DOHELP
        05 PROGE  PICTURE X(8) VALUE "DOHELSER".                  DOHELP
        05 TIMGN  PICTURE X(8) VALUE "18:12:38".                  DOHELP
        05 USERCO PICTURE X(8) VALUE "PDSG    ".                  DOHELP
        05      5-HELP-PROGE  PICTURE X(8).                       DOHELP
   01  DATCE.                                                     DOHELP
     05  CENTUR   PICTURE XX VALUE "19".                         DOHELP
        05 DATOR.                                                 DOHELP
        10 DATOA  PICTURE XX.                                     DOHELP
        10 DATOM  PICTURE XX.                                     DOHELP
        10 DATOJ  PICTURE XX.                                     DOHELP
   01  DAT6.                                                      DOHELP
        10 DAT61.                                                 DOHELP
        15 DAT619 PICTURE 99.                                    DOHELP
        10 DAT62.                                                 DOHELP
        15 DAT629 PICTURE 99.                                    DOHELP
        10 DAT63  PICTURE XX.                                    DOHELP
   01  DAT7.                                                      DOHELP
        10 DAT71  PICTURE XX.                                    DOHELP
        10 DAT72  PICTURE XX.                                    DOHELP
        10 DAT73  PICTURE XX.                                    DOHELP
   01  DAT8.                                                      DOHELP
        10 DAT81  PICTURE XX.                                    DOHELP
        10 DAT8S1 PICTURE X.                                     DOHELP
        10 DAT82  PICTURE XX.                                    DOHELP
        10 DAT8S2 PICTURE X.                                     DOHELP
        10 DAT83  PICTURE XX.                                    DOHELP
   01  DATSEP     PICTURE X VALUE "/".                          DOHELP
   01  DATSET     PICTURE X VALUE "-".                          DOHELP
   01  DATCTY.                                                    DOHELP
     05  DATCTY9  PICTURE 99.                                    DOHELP
   01  DAT6C.                                                     DOHELP
     10  DAT61C   PICTURE XX.                                    DOHELP
     10  DAT62C   PICTURE XX.                                    DOHELP
     10  DAT63C   PICTURE XX.                                    DOHELP
     10  DAT64C   PICTURE XX.                                    DOHELP
   01  DAT7C.                                                     DOHELP
     10  DAT71C   PICTURE XX.                                    DOHELP
     10  DAT72C   PICTURE XX.                                    DOHELP
     10  DAT73C   PICTURE XX.                                    DOHELP
     10  DAT74C   PICTURE XX.                                    DOHELP
   01  DAT8C.                                                     DOHELP
     10  DAT81C   PICTURE XX.                                    DOHELP
     10  DAT8S1C  PICTURE X    VALUE "/".                        DOHELP
     10  DAT82C   PICTURE XX.                                    DOHELP
     10  DAT8S2C  PICTURE X    VALUE "/".                        DOHELP
     10  DAT83C   PICTURE XX.                                    DOHELP
     10  DAT84C   PICTURE XX.                                    DOHELP
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"HELP" FUNCTION 7
"HELP" SERVER 3

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01  DAT8G.                                                    DOHELP
  10  DAT81G   PICTURE XX.                                    DOHELP
  10  DAT82G   PICTURE XX.                                    DOHELP
  10  DAT8S1G  PICTURE X    VALUE "-".                        DOHELP
  10  DAT83G   PICTURE XX.                                    DOHELP
  10  DAT8S2G  PICTURE X    VALUE "-".                        DOHELP
  10  DAT84G   PICTURE XX.                                    DOHELP
01  TIMCO.                                                    DOHELP
 02  TIMCOG.                                                  DOHELP
   05  TIMCOH  PICTURE XX.                                    DOHELP
   05  TIMCOM  PICTURE XX.                                    DOHELP
   05  TIMCOS  PICTURE XX.                                    DOHELP
  02 TIMCOC    PICTURE XX.                                    DOHELP
01  TIMDAY.                                                   DOHELP
   05  TIMHOU  PICTURE XX.                                    DOHELP
   05  TIMS1   PICTURE X    VALUE ":".                        DOHELP
   05  TIMMIN  PICTURE XX.                                    DOHELP
   05  TIMS2   PICTURE X    VALUE ":".                        DOHELP
   05  TIMSEC  PICTURE XX.                                    DOHELP
01    CONFIGURATIONS.                                         DOHELP
     05      EM00-CF      PICTURE X.                         DOHELP
01      STATUS-AREA.                                         DOHELP
     05    1-EM00-STATUS PICTURE XX.                         DOHELP
     05    RECEIVE-STATUS PICTURE XX.                        DOHELP
01       COMMON-AREA.                                        *AA000
     02      FILLER        PICTURE X(0700).                  *AA002
01           COMMUNICATION-MONITOR.                          *AA010
       02    S-WWSS.                                         *AA010
       10    S-WWSS-CDRET  PICTURE S9(4) COMP.               *AA010
       10    S-WWSS-OPER   PICTURE X.                        *AA010
       10    S-WWSS-ICF    PICTURE X.                        *AA010
       10    S-WWSS-OCF    PICTURE X.                        *AA010
       10    S-WWSS-SCR-ER PICTURE X.                        *AA010
       10    S-WWSS-PROGE  PICTURE X(8).                     *AA010
       10    S-WWSS-PFKEY  PICTURE XX.                       *AA010
       10    FILLER        PICTURE XX.                       *AA010
       10    S-WWSS-ERCOD9 PICTURE 999.                      *AA010
       10    S-WWSS-CURPOS.                                  *AA010
         15  S-WWSS-CPOSL  PICTURE 9(4) COMP.               *AA010
         15  S-WWSS-CPOSC  PICTURE 9(4) COMP.               *AA010
01               K-HELP-CLE.                                 *AA010
     03          K-RHELP-LIGNE  OCCURS 1.                    *AA010
     10          K-REM00-EMKEY  PICTURE X(17).               *AA010
01           INPUT-SCREEN-FIELDS.                            *AA050
     02      I-HELP.                                         *AA050
     05      I-HELP-LIBEC  PICTURE X(30).                    *AA050
     05      I-HELP-LIENT  PICTURE X(36).                    *AA050
     05      J-HELP-LIGNE  OCCURS 17.                        *AA050
     10      FILLER        PICTURE X(74).                    *AA050
     05      I-HELP-LICHOI PICTURE X(19).                    *AA050
     05      I-HELP-OPDOC  PICTURE X.                        *AA050
     05      I-HELP-LIOPT  PICTURE X(30).                    *AA050
     05      I-HELP-ERMS.                                    *AA050
     10      I-001  OCCURS 1.                                *AA050
     15      I-HELP-ERMSG  PICTURE X(72).                    *AA050
01           OUTPUT-SCREEN-FIELDS.                           *AA050
     02      O-HELP.                                         *AA050
     05      O-HELP-LIBEC  PICTURE X(30).                    *AA050
     05      O-HELP-LIENT  PICTURE X(36).                    *AA050
     05      P-HELP-LIGNE  OCCURS 17.                        *AA050
     10      FILLER        PICTURE X(74).                    *AA050
     05      O-HELP-LICHOI PICTURE X(19).                    *AA050
     05      O-HELP-OPDOC  PICTURE X.                        *AA050
     05      O-HELP-LIOPT  PICTURE X(30).                    *AA050
     05      O-HELP-ERMS.                                    *AA050
     10      O-002  OCCURS 1.                                *AA050
     15      O-HELP-ERMSG  PICTURE X(72).                    *AA050
01           REPEAT-LINE.                                    *AA050
     02      I-HELP-LIGNE.                                   *AA050
     05      I-HELP-ERMSGD PICTURE X(74).                    *AA050
     02      O-HELP-LIGNE.                                   *AA050
     05      O-HELP-ERMSGD PICTURE X(74).                    *AA050
01           VALIDATION-TABLE-FIELDS.                        *AA150
     02      DE-ERR.                                         *AA150
     05       DE-ER        PICTURE X                         *AA150
                    OCCURS 001.                              *AA150
     02      DE-E   REDEFINES DE-ERR.                        *AA150
     03     ER-HELP-ENDRE.                                   *AA150
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     05          ER-HELP-OPDOC  PICTURE X.                    *AA150
01   TT-DAT.                                                  *AA200
     05 T-DAT      PICTURE X OCCURS 5.                       *AA200
01   USERS-ERROR.                                             *AA200
     05 XEMKY.                                                *AA200
        10 XPROGR   PICTURE X(6).                             *AA200
        10 XERCD    PICTURE X(4).                             *AA200
     05 T-XEMKY     OCCURS       01.                         *AA200
        10 T-XPROGR PICTURE X(6).                             *AA200
        10 T-XERCD  PICTURE X(4).                             *AA200
01   PACBASE-INDEXES COMPUTATIONAL.                           *AA200
     05  TALLY      PICTURE S9(4) VALUE ZERO.                 *AA200
     05 K01         PICTURE S9(4).                            *AA200
     05 K02         PICTURE S9(4).                            *AA200
     05 K03         PICTURE S9(4).                            *AA200
     05 K04         PICTURE S9(4).                            *AA200
     05 K50R        PICTURE S9(4) VALUE ZERO.                 *AA200
     05 K50L        PICTURE S9(4) VALUE ZERO.                 *AA200
     05 K50M        PICTURE S9(4)                             *AA200
                   VALUE       +01.                          *AA200
     05    5-CA00-LTH  PICTURE S9(4) VALUE +0147.             *AA200
     05    5-EM00-LTH  PICTURE S9(4) VALUE +0090.             *AA200
     05    LTH         PICTURE S9(4) VALUE ZERO.              *AA200
     05      5-HELP-LENGTH PICTURE S9(4)                      *AA200
                     VALUE      +0891.                        *AA200
01           TABLE-OF-ATTRIBUTES.                             *AA250
     02      DE-ATT.                                          *AA250
     03      DE-ATT1           OCCURS 5.                      *AA250
     05      DE-AT   PICTURE X                                *AA250
                   OCCURS 001.                                *AA250
     02      DE-A    REDEFINES DE-ATT.                        *AA250
     03      DE-ATT2           OCCURS 5.                      *AA250
     04      A-HELP-ENDRE.                                    *AA250
     05      A-HELP-OPDOC  PICTURE X.                         *AA250
01    FIRST-ON-SEGMENT.                                       *AA301
     05      EM00-FST    PICTURE X.                           *AA301
01           STOP-FIELDS-HELP.                                *AA400
    02       C-HELP-LE.                                       *AA400
      05     C-HELP-LIBRA      PICTURE XXX.                   *AA400
      05     C-HELP-ERCOD      PICTURE XXX.                   *AA400
      05     C-HELP-PROGR      PICTURE X(6).                  *AA400
      05     C-HELP-ENTYP      PICTURE X.                     *AA400
     02       HELP-LIENT  PICTURE X(36) VALUE SPACE.          *AA400
     02       HELP-LIBEC  PICTURE X(30) VALUE SPACE.          *AA400
01           7-HELP-LIBEL.                                    *AA400
   05        7-HELP-ERMS.                                     *AA400
    10       7-HELP-ERMSG.                                    *AA400
     15      7-HELP-ERMSG1  PICTURE X(12).                    *AA400
     15      7-HELP-ERMSG2  PICTURE X(18).                    *AA400
    10       7-HELP-ERMSC   PICTURE X(36).                    *AA400
01           SCREEN-LIGNE.                                    *AA400
   05        7-HELP-ERMSGD  PICTURE X(74).                    *AA400
   05        7-HELP-CODIF   REDEFINES 7-HELP-ERMSGD.          *AA400
    10       7-HELP-VALRU   PICTURE X(12).                    *AA400
    10       FILLER         PICTURE X.                        *AA400
    10       7-HELP-SIGNI.                                    *AA400
     15      FILLER         PICTURE X(18).                    *AA400
     15      7-HELP-ERMSC1  PICTURE X(43).                    *AA400
   05        7-HELP-DOCUM   REDEFINES 7-HELP-ERMSGD.          *AA400
    10       7-HELP-XEMKY.                                    *AA400
     15      FILLER         PICTURE XXX.                      *AA400
     15      7-HELP-ERTYP   PICTURE X.                        *AA400
     15      FILLER         PICTURE X.                        *AA400
    10       7-HELP-LITAC   PICTURE X(69).                    *AA400
01           7-HELP-POSIT.                                    *AA400
   05        7-HELP-POCEC.                                    *AA400
     10      7-HELP-POCEC9  PICTURE 999.                      *AA400
   05        7-HELP-POLEC.                                    *AA400
     10      7-HELP-POLEC9  PICTURE 99.                       *AA400
01             XZ00.                                         *AA400
    10         XZ00-EMKEY   PICTURE X(17).                   *AA400
    10         XZ00-ERLVL   PICTURE X.                       *AA400
    10         XZ00-ERMSG   PICTURE X(66).                   *AA400
    10         FILLER       PICTURE X(6).                    *AA400
PROCEDURE DIVISION.                                          *99999
          ************************************               DOHELP
          *                                  *               DOHELP
          *  INITIALIZATIONS                 *               DOHELP
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           *                                   *                DOHELP
           ***************************************                DOHELP
   F01.      EXIT.                                                DOHELP
   F0101.                                                         DOHELP
         OPEN INPUT  EM-FILE    SHARED.                           DOHELP
         OPEN I-O    MESSAGE-SCREEN.                             DOHELP
   F0101-FN.    EXIT.                                             DOHELP
   F0110.                                                         DOHELP
         MOVE ZERO TO CATX FT K50L.                              DOHELP
         MOVE "1" TO ICF OCF SCR-ER.                             DOHELP
         MOVE ZERO TO VALIDATION-TABLE-FIELDS.                   DOHELP
         MOVE SPACE TO CATM OPER OPERD CAT-ER.                   DOHELP
         MOVE SPACE TO TABLE-OF-ATTRIBUTES.                      DOHELP
         MOVE ZERO TO CONFIGURATIONS.                            DOHELP
         MOVE SPACE TO XEMKY.                                    DOHELP
         READ MESSAGE-SCREEN AT END                              DOHELP
         PERFORM F81FI       STOP RUN.                           DOHELP
         MOVE SERVER-COMMON TO COMMON-AREA                       DOHELP
         MOVE SERVER-MONIT  TO COMMUNICATION-MONITOR             DOHELP
         MOVE ZERO TO S-WWSS-CDRET                               DOHELP
         MOVE S-WWSS-ICF    TO ICF                               DOHELP
         MOVE S-WWSS-OCF    TO OCF                               DOHELP
         MOVE S-WWSS-PFKEY  TO I-PFKEY.                          DOHELP
         MOVE SPACE TO  O-HELP.                                  DOHELP
         IF ICF = ZERO AND OCF = ZERO                            DOHELP
         PERFORM F8115 THRU F8115-FN.                            DOHELP
         MOVE "X" TO DE-AT (4, 001).                             DOHELP
   F0110-FN.    EXIT.                                             DOHELP
   F0120.                                                         DOHELP
         MOVE "1" TO OCF.                                        DOHELP
         IF K-SHELP-CDOC = "D" OR K-SHELP-CDOC = "R"             DOHELP
         MOVE "1" TO ICF     GO TO F0120-FN.                     DOHELP
         MOVE "A"  TO OPER                                       DOHELP
         MOVE SPACE TO K-SHELP-ERTYP                             DOHELP
         MOVE SPACE TO K-SHELP-ERCOD                             DOHELP
         IF K-SHELP-CDOC = "2"                                   DOHELP
         MOVE ZERO  TO K-SHELP-LINUM                             DOHELP
         MOVE "D" TO K-SHELP-CDOC   GO TO F3999-ITER-FT.         DOHELP
         MOVE "R"  TO K-SHELP-CDOC.                              DOHELP
         MOVE K-SHELP-CPOSL TO 7-HELP-POLEC9                     DOHELP
         MOVE K-SHELP-LINUM TO 7-HELP-POCEC9                     DOHELP
         MOVE ZERO         TO K-SHELP-LINUM.                     DOHELP
         MOVE SPACE          TO EM00-EMKEY                       DOHELP
         MOVE K-SHELP-LIBRA  TO EM00-LIBRA                       DOHELP
         MOVE  "I"           TO EM00-ENTYP                       DOHELP
         MOVE K-SHELP-PROGR  TO EM00-PROGR                       DOHELP
         MOVE 7-HELP-POLEC9  TO EM00-ERCOD                       DOHELP
         PERFORM F80-EM00-P THRU F80-FN.                         DOHELP
         IF IK = "0"                                             DOHELP
           IF  EM00-LIBRA NOT = K-SHELP-LIBRA                    DOHELP
           OR  EM00-ENTYP NOT = "I"                              DOHELP
           OR  EM00-PROGR NOT = K-SHELP-PROGR                    DOHELP
         MOVE "1" TO IK.                                         DOHELP
         IF IK = "1"  MOVE "D" TO K-SHELP-CDOC                   DOHELP
         MOVE SPACE TO EM00-EMKEY  GO TO F3999-ITER-FT.          DOHELP
         IF 7-HELP-POLEC  <  EM00-ERCOD                          DOHELP
         OR (7-HELP-POLEC =  EM00-ERCOD                          DOHELP
         AND 7-HELP-POCEC9 NOT > EM00-LINUM)                     DOHELP
         MOVE EM00-ERMSG TO K-SHELP-ERCOD                        DOHELP
         GO TO F3999-ITER-FT.                                    DOHELP
   F0120-A.                                                      DOHELP
         IF IK = "1"  MOVE SPACE TO EM00                         DOHELP
         MOVE "D" TO K-SHELP-CDOC  GO TO F3999-ITER-FT.          DOHELP
         MOVE EM00  TO XZ00                                      DOHELP
         PERFORM F80-EM00-RN  THRU F80-FN.                       DOHELP
         IF IK = "0"                                             DOHELP
           IF  EM00-LIBRA NOT = K-SHELP-LIBRA                    DOHELP
           OR  EM00-ENTYP NOT = "I"                              DOHELP
           OR  EM00-PROGR NOT = K-SHELP-PROGR                    DOHELP
         MOVE "1" TO IK.                                         DOHELP
         IF IK = "1"                                             DOHELP
         OR 7-HELP-POLEC  < EM00-ERCOD                           DOHELP
         OR 7-HELP-POCEC9 < EM00-LINUM                           DOHELP
         MOVE XZ00-ERMSG TO K-SHELP-ERCOD                        DOHELP
         MOVE SPACE      TO EM00      GO TO F3999-ITER-FT.       DOHELP
         IF 7-HELP-POLEC  = EM00-ERCOD                           DOHELP
         AND 7-HELP-POCEC9 = EM00-LINUM                          DOHELP
         MOVE EM00-ERMSG TO K-SHELP-ERCOD                        DOHELP
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       MOVE SPACE TO EM00           GO TO F3999-ITER-FT.          DOHELP
   F0120-B.   GO TO F0120-A.                                      DOHELP
   F0120-FN.    EXIT.                                             DOHELP
   F01-FN.      EXIT.                                             DOHELP
              ************************************                DOHELP
              *                                  *                DOHELP
              *  RECEPTION                       *                DOHELP
              *                                  *                DOHELP
              ************************************                DOHELP
   F05.   IF ICF = ZERO GO TO END-OF-RECEPTION.                   DOHELP
   F0510.                                                         DOHELP
       MOVE SERVER-MSG  TO INPUT-SCREEN-FIELDS.                   DOHELP
       MOVE "A" TO OPER  MOVE SPACE TO OPERD.                     DOHELP
   F0510-FN.    EXIT.                                             DOHELP
              ************************************                DOHELP
              *                                  *                DOHELP
              *  VALIDATION OF OPERATION CODE    *                DOHELP
              *                                  *                DOHELP
              ************************************                DOHELP
   F0520.                                                         DOHELP
          IF I-HELP-OPDOC   =  "E" OR "F"                         DOHELP
       MOVE  K-SHELP-PROGE  TO 5-HELP-PROGE                       DOHELP
       MOVE "O" TO OPER OPERD GO TO F0520-900.                    DOHELP
          IF I-HELP-OPDOC   =  "T" OR "D"                         DOHELP
       MOVE  SPACE TO K-SHELP-ERCOD K-SHELP-ERTYP                 DOHELP
       MOVE  ZERO  TO K-SHELP-LINUM                               DOHELP
       MOVE  "A" TO OPER      GO TO F0520-900.                    DOHELP
          IF I-HELP-OPDOC   =  "S"                                DOHELP
       MOVE  "A" TO OPER      GO TO F0520-900.                    DOHELP
       MOVE "5" TO    ER-HELP-OPDOC  MOVE "4" TO SCR-ER           DOHELP
       GO TO F3999-ITER-FT.                                       DOHELP
   F0520-900.                                                     DOHELP
       IF OPER NOT = "A" AND OPER NOT = "O"                       DOHELP
       GO TO F3999-ITER-FT.                                       DOHELP
   F0520-FN.    EXIT.                                             DOHELP
   F05-FN.      EXIT.                                             DOHELP
              ************************************                DOHELP
              *                                  *                DOHELP
              *  CATEGORY PROCESSING LOOP        *                DOHELP
              *                                  *                DOHELP
              ************************************                DOHELP
   F10.         EXIT.                                             DOHELP
   F1010.     MOVE SPACE TO CATM.                                 DOHELP
         IF CAT-ER = "E" MOVE "4" TO SCR-ER GO TO F3999-ITER-FT.   DOHELP
       MOVE SPACE TO CAT-ER.                                      DOHELP
       IF CATX = "0" MOVE "Z" TO CATX GO TO F1010-FN.             DOHELP
   F1010-A.   GO TO F3999-ITER-FT.                                DOHELP
   F1010-FN.    EXIT.                                             DOHELP
   F10-FN.      EXIT.                                             DOHELP
              ************************************                DOHELP
              *                                  *                DOHELP
              *  DATA ELEMENT VALIDATION         *                DOHELP
              *                                  *                DOHELP
              ************************************                DOHELP
   F20.         EXIT.                                             DOHELP
   F20Z.  IF CATX NOT = "Z" GO TO F20Z-FN.                        DOHELP
   F20A7.                                                         DOHELP
          IF I-HELP-OPDOC  NOT = SPACE                            DOHELP
       MOVE "1" TO    ER-HELP-OPDOC.                             DOHELP
   F20A7-FN.    EXIT.                                             DOHELP
   F20Z-FN.     EXIT.                                             DOHELP
   F20-FN.      EXIT.                                             DOHELP
   F3999-ITER-FI.  GO TO F10.                                     DOHELP
   F3999-ITER-FT.     EXIT.                                       DOHELP
   F3999-FN.    EXIT.                                             DOHELP
   F40.       IF SCR-ER > "1"  MOVE "A" TO OPER  GO TO F40-FN.    DOHELP
   F40-A.     IF OPERD NOT = SPACE   MOVE OPERD TO OPER.          DOHELP
   F4005. IF OPER NOT = "O"          GO TO F4005-FN.              DOHELP
       IF K-SHELP-CDOC = "D"                                      DOHELP
       MOVE "2" TO K-SHELP-CDOC.                                  DOHELP
       IF K-SHELP-CDOC = "R"                                      DOHELP
       MOVE "3" TO K-SHELP-CDOC.                                  DOHELP
       MOVE ZERO TO K-SHELP-LINUM.                                DOHELP
       IF K-SHELP-ERCOD = SPACE                                   DOHELP
       OR K-SHELP-ERCOD NOT NUMERIC                               DOHELP
       MOVE "001"  TO  K-SHELP-ERCOD.                             DOHELP
       IF K-SHELP-ERCOD > "001"                                   DOHELP
       SUBTRACT 1 FROM K-SHELP-ERCOD9.                            DOHELP
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F4005-FN.    EXIT.                                                  DOHELP
F4010.  IF OPER NOT = "A"    GO TO F4010-FN.                        DOHELP
       MOVE  SPACE          TO EM00-EMKEY                         DOHELP
       MOVE  K-SHELP-LIBRA  TO EM00-LIBRA                         DOHELP
       MOVE  "H"            TO EM00-ENTYP                         DOHELP
       MOVE  K-SHELP-PROGR  TO EM00-PROGR                         DOHELP
       MOVE  K-SHELP-ERCOD  TO EM00-ERCOD                         DOHELP
       MOVE  K-SHELP-ERTYP  TO EM00-ERTYP                         DOHELP
       MOVE  K-SHELP-LINUM  TO EM00-LINUM                         DOHELP
       MOVE  EM00-EMKEY     TO K-REM00-EMKEY (1).                 DOHELP
F4010-FN.    EXIT.                                                  DOHELP
           ************************************                     DOHELP
           *                                  *                     DOHELP
           *  END OF TRANSACTION              *                     DOHELP
           *                                  *                     DOHELP
           ************************************                     DOHELP
F4030.     IF OPER NOT = "E" GO TO F4030-FN.                        DOHELP
       MOVE OPER  TO S-WWSS-OPER                                    DOHELP
       MOVE COMMON-AREA TO SERVER-COMMON                            DOHELP
       MOVE COMMUNICATION-MONITOR TO SERVER-MONIT                   DOHELP
       MOVE  DE-ATT  TO    SERVER-ATT                               DOHELP
       WRITE ENTRY-REPLY.                                           DOHELP
       GO TO F0110.                                                 DOHELP
F4030-FN.    EXIT.                                                  DOHELP
           ************************************                     DOHELP
           *                                  *                     DOHELP
           *  TRANSFER TO ANOTHER SCREEN      *                     DOHELP
           *                                  *                     DOHELP
           ************************************                     DOHELP
F4040.     IF OPER NOT = "O" GO TO F4040-FN.                        DOHELP
       MOVE OPER  TO S-WWSS-OPER                                    DOHELP
       MOVE  5-HELP-PROGE TO S-WWSS-PROGE                           DOHELP
       MOVE COMMON-AREA TO SERVER-COMMON                            DOHELP
       MOVE COMMUNICATION-MONITOR TO SERVER-MONIT                   DOHELP
       MOVE  DE-ATT  TO    SERVER-ATT                               DOHELP
       WRITE ENTRY-REPLY.                                           DOHELP
       GO TO F0110.                                                 DOHELP
F4040-FN.    EXIT.                                                  DOHELP
F40-FN.      EXIT.                                                  DOHELP
END-OF-RECEPTION.      EXIT.                                        DOHELP
           ************************************                     DOHELP
           *                                  *                     DOHELP
           *  DISPLAY PREPARATION             *                     DOHELP
           *                                  *                     DOHELP
           ************************************                     DOHELP
F50.      IF OCF = "0" GO TO END-OF-DISPLAY.                        DOHELP
F5010.                                                              DOHELP
       MOVE ZERO TO CATX.                                           DOHELP
       MOVE ZERO TO CONFIGURATIONS.                                 DOHELP
       MOVE ALL "1" TO FIRST-ON-SEGMENT.                            DOHELP
       IF SCR-ER > "1"  GO TO F6999-ITER-FT.                        DOHELP
       MOVE SPACE TO  O-HELP.                                       DOHELP
       PERFORM F8115 THRU F8115-FN.                                 DOHELP
F5010-FN.    EXIT.                                                  DOHELP
F5020.    IF  K-SHELP-ERTYP NOT = SPACE                             DOHELP
          NEXT SENTENCE ELSE   GO TO F5020-FN.                      DOHELP
       MOVE  SPACE  TO EM00-ERTYP.                                  DOHELP
         IF K-SHELP-ERCOD < "001"                                   DOHELP
       MOVE  SPACE  TO EM00-ERCOD.                                  DOHELP
       MOVE  ZERO   TO EM00-LINUM                                   DOHELP
       PERFORM F80-EM00-P  THRU F80-FN.                             DOHELP
         IF IK = "1"   GO TO F5020-FN.                              DOHELP
         IF EM00-ERCOD  NOT = SPACE                                 DOHELP
       MOVE  EM00-ERMSG TO 7-HELP-ERMS                              DOHELP
       MOVE 7-HELP-ERMSC TO HELP-LIENT                              DOHELP
       MOVE  "DOCUMENTATION OF DATA ELEMENT "                       DOHELP
              TO HELP-LIBEC         ELSE                          DOHELP
       MOVE   EM00-ERMSG TO HELP-LIENT                              DOHELP
       MOVE  "DOCUMENTATION OF THE SCREEN   "                       DOHELP
              TO HELP-LIBEC.                                        DOHELP
F5020-FN.    EXIT.                                                  DOHELP
F50-FN.      EXIT.                                                  DOHELP
           ************************************                     DOHELP
           *                                  *                     DOHELP
           *  CATEGORY PROCESSING LOOP        *                     DOHELP
           *                                  *                     DOHELP
           ************************************                     DOHELP
F55.         EXIT.                                                  DOHELP
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F5510.                                                              DOHELP
       MOVE SPACE TO CAT-ER.                                        DOHELP
       IF CATX = "0" MOVE " " TO CATX GO TO F5510-FN.               DOHELP
       IF CATX = " " MOVE "R" TO CATX MOVE ZERO TO ICATR.           DOHELP
       IF CATX NOT = "R" OR  ICATR > IRR GO TO F5510-R.             DOHELP
       IF ICATR > ZERO                                              DOHELP
       MOVE  O-HELP-LIGNE           TO                              DOHELP
             P-HELP-LIGNE   (ICATR).                                DOHELP
       ADD 1 TO ICATR.                                              DOHELP
       IF ICATR NOT > IRR                                           DOHELP
       MOVE  P-HELP-LIGNE   (ICATR) TO                              DOHELP
             O-HELP-LIGNE.                                          DOHELP
       GO TO F5510-FN.                                              DOHELP
F5510-R.     EXIT.                                                  DOHELP
F5510-Z.                                                            DOHELP
       IF CATX = "R" MOVE "Z" TO CATX GO TO F5510-FN.               DOHELP
F5510-900. GO TO F6999-ITER-FT.                                     DOHELP
F5510-FN.    EXIT.                                                  DOHELP
F55-FN.      EXIT.                                                  DOHELP
           ************************************                     DOHELP
           *                                  *                     DOHELP
           *  SEGMENT ACCESS FOR DISPLAY      *                     DOHELP
           *                                  *                     DOHELP
           ************************************                     DOHELP
F60.         EXIT.                                                  DOHELP
F60R.  IF CATX NOT = "R" OR FT = "1" GO TO F60R-FN.                 DOHELP
F60R-FN.     EXIT.                                                  DOHELP
F6010.  IF CATX NOT = "R" OR FT = "1"  GO TO F6010-FN.              DOHELP
       MOVE "0" TO EM00-CF.                                         DOHELP
       IF          EM00-FST = "1"                                   DOHELP
       MOVE     K-REM00-EMKEY  (1) TO EM00-EMKEY                    DOHELP
       MOVE        EM00-LIBRA   TO  C-HELP-LIBRA                    DOHELP
       MOVE        EM00-ENTYP   TO  C-HELP-ENTYP                    DOHELP
       MOVE        EM00-PROGR   TO  C-HELP-PROGR                    DOHELP
       MOVE        EM00-ERCOD   TO  C-HELP-ERCOD                    DOHELP
       PERFORM F80-EM00-P  THRU F80-FN                              DOHELP
       MOVE ZERO TO EM00-FST    ELSE                                DOHELP
       PERFORM F80-EM00-RN THRU F80-FN.                             DOHELP
       IF IK = "0"                                                  DOHELP
         IF        EM00-LIBRA NOT = C-HELP-LIBRA                    DOHELP
         OR        EM00-ENTYP NOT = C-HELP-ENTYP                    DOHELP
         OR        EM00-PROGR NOT = C-HELP-PROGR                    DOHELP
       MOVE "1" TO IK.                                              DOHELP
       IF IK = "1" MOVE "G109" TO XERCD MOVE "1" TO FT              DOHELP
       PERFORM F81UT THRU F81UT-FN      GO TO F6010-FN.             DOHELP
       MOVE "1" TO EM00-CF.                                         DOHELP
       MOVE  EM00-ERCOD  TO K-SHELP-ERCOD                           DOHELP
       MOVE  EM00-ERTYP  TO K-SHELP-ERTYP                           DOHELP
       MOVE  EM00-LINUM  TO K-SHELP-LINUM.                          DOHELP
       IF   EM00-ERCOD  NOT = C-HELP-ERCOD                          DOHELP
       AND  EM00-ERCOD  > "000"                                     DOHELP
       MOVE "1"  TO FT    GO TO F6010-FN.                           DOHELP
       IF   EM00-ERTYP  = SPACE                                     DOHELP
       NEXT SENTENCE ELSE GO TO F6010-FN.                           DOHELP
       IF   EM00-ERCOD  > ZERO                                      DOHELP
       MOVE EM00-ERMSG    TO 7-HELP-ERMS                            DOHELP
       MOVE 7-HELP-ERMSC  TO HELP-LIENT                             DOHELP
       MOVE  "DOCUMENTATION OF DATA ELEMENT "                       DOHELP
               TO HELP-LIBEC                                        DOHELP
              ELSE                                                  DOHELP
       MOVE  EM00-ERMSG     TO HELP-LIENT                           DOHELP
       MOVE  "DOCUMENTATION OF THE SCREEN   "                       DOHELP
               TO HELP-LIBEC.                                       DOHELP
       GO TO F6010.                                                 DOHELP
F6010-FN.    EXIT.                                                  DOHELP
F60-FN.      EXIT.                                                  DOHELP
           ************************************                     DOHELP
           *                                  *                     DOHELP
           *  DATA ELEMENT TRANSFER           *                     DOHELP
           *                                  *                     DOHELP
           ************************************                     DOHELP
F65.         EXIT.                                                  DOHELP
F6520. IF FT = "1" OR EM00-ERTYP = " " GO TO F6520-FN.              DOHELP
       IF ICATR > IRR  GO TO F6520-FN.                              DOHELP
        MOVE SPACE TO 7-HELP-ERMSGD.                                DOHELP
         IF  EM00-ERTYP = "1"                                       DOHELP
        MOVE   EM00-ERMSG  TO 7-HELP-ERMS                           DOHELP
        MOVE 7-HELP-ERMSG2 TO 7-HELP-SIGNI                          DOHELP
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           MOVE 7-HELP-ERMSC  TO 7-HELP-ERMSC1                    DOHELP
           MOVE 7-HELP-ERMSG1 TO 7-HELP-VALRU                     DOHELP
           GO TO F6520-900.                                       DOHELP
           IF  EM00-ERTYP = "0"                                   DOHELP
           MOVE   SPACE       TO 7-HELP-XEMKY                     DOHELP
           MOVE   EM00-ERMSG  TO 7-HELP-LITAC                     DOHELP
           GO TO F6520-900.                                       DOHELP
           MOVE   EM00-ERMSG  TO 7-HELP-LITAC.                    DOHELP
           IF     EM00-LINUM  NOT = ZERO                          DOHELP
           GO TO F6520-900.                                       DOHELP
           MOVE   EM00-ERCOD  TO 7-HELP-XEMKY                     DOHELP
           MOVE   EM00-ERTYP  TO 7-HELP-ERTYP.                    DOHELP
   F6520-900.                                                     DOHELP
           MOVE 7-HELP-ERMSGD TO O-HELP-ERMSGD.                   DOHELP
   F6520-FN.    EXIT.                                             DOHELP
   F6530.   IF CATX NOT = "Z"  GO TO F6530-FN.                    DOHELP
           MOVE  HELP-LIENT  TO O-HELP-LIENT                      DOHELP
           MOVE  HELP-LIBEC  TO O-HELP-LIBEC.                     DOHELP
           MOVE "CHOICE.....:" TO O-HELP-LICHOI                   DOHELP
           MOVE "(E: END - T: TOP - S: NEXT)   "                  DOHELP
                 TO O-HELP-LIOPT.                                 DOHELP
            IF XERCD NOT = "G109"                                 DOHELP
           MOVE "S"  TO O-HELP-OPDOC  GO TO F6530-FN.             DOHELP
           MOVE "E"  TO O-HELP-OPDOC.                             DOHELP
           IF K-SHELP-ERCOD NUMERIC AND K-SHELP-ERCOD > ZERO      DOHELP
           ADD 1 TO K-SHELP-ERCOD9.                               DOHELP
   F6530-FN.    EXIT.                                             DOHELP
   F65-FN.      EXIT.                                             DOHELP
   F6999-ITER-FI.  GO TO F55.                                     DOHELP
   F6999-ITER-FT.     EXIT.                                       DOHELP
   F6999-FN.    EXIT.                                             DOHELP
   F70.                                                           DOHELP
          GO TO F7020.                                            DOHELP
              ************************************                 DOHELP
              *                                  *                 DOHELP
              *  ERROR PROCESSING                *                 DOHELP
              *                                  *                 DOHELP
              ************************************                 DOHELP
   F7010.     MOVE ZERO TO K01 K02 K04 MOVE 1 TO K03.             DOHELP
          MOVE LIBRA TO EM00-LIBRA MOVE PROGR TO EM00-PROGR       DOHELP
          MOVE ZERO TO EM00-LINUM MOVE "H" TO EM00-ENTYP.         DOHELP
   F7010-A.   IF K02 = INR AND K03 < IRR MOVE INA TO K02          DOHELP
          ADD 1 TO K03. ADD 1 TO K01 K02.                         DOHELP
          IF DE-ER (K01) > "1" OR < "0" MOVE "Y" TO DE-AT (4, K01) DOHELP
          MOVE "B" TO DE-AT (1, K01)                              DOHELP
          MOVE "N" TO DE-AT (2, K01)                              DOHELP
          MOVE "W" TO DE-AT (3, K01)                              DOHELP
             IF K04 < IER MOVE DE-ER (K01) TO EM00-ERTYP          DOHELP
          MOVE K02 TO EM00-ERCOD9 MOVE EM00-XEMKY TO EM00-ERMSG   DOHELP
          PERFORM F80-EM00-R THRU F80-FN ADD 1 TO K04              DOHELP
          MOVE  EM00-ERMSG  TO    O-HELP-ERMSG (K04).             DOHELP
          IF K01 < INT      GO TO F7010-A.                        DOHELP
          MOVE ZERO TO K50R.                                      DOHELP
   F7010-B.                                                       DOHELP
           ADD 1 TO K50R IF K50R > K50L OR K04 NOT < IER GO TO     DOHELP
           F7010-FN. MOVE T-XEMKY (K50R) TO EM00-XEMKY EM00-ERMSG DOHELP
           PERFORM F80-EM00-R THRU F80-FN. ADD 1 TO K04            DOHELP
          MOVE  EM00-ERMSG  TO    O-HELP-ERMSG (K04)              DOHELP
          GO TO F7010-B.                                          DOHELP
   F7010-FN.    EXIT.                                             DOHELP
              ************************************                 DOHELP
              *                                  *                 DOHELP
              *  POSITIONING OF ATTRIBUTES       *                 DOHELP
              *                                  *                 DOHELP
              ************************************                 DOHELP
   F7020.                                                         DOHELP
          MOVE ZERO TO TALLY  INSPECT DE-ATT1 (4)                 DOHELP
          TALLYING TALLY FOR CHARACTERS BEFORE "Y".               DOHELP
          IF TALLY     NOT <       0001                           DOHELP
          MOVE ZERO TO TALLY  INSPECT DE-ATT1 (4)                 DOHELP
          TALLYING TALLY FOR CHARACTERS BEFORE "Z".               DOHELP
          IF TALLY     NOT <       0001                           DOHELP
          MOVE ZERO TO TALLY  INSPECT DE-ATT1 (4)                 DOHELP
          TALLYING TALLY FOR CHARACTERS BEFORE "X".               DOHELP
          IF TALLY     NOT <       0001                           DOHELP
          MOVE ZERO TO TALLY.                                     DOHELP
          MOVE SPACE  TO DE-ATT1 (4) ADD 1 TO TALLY               DOHELP
          MOVE TALLY  TO S-WWSS-ERCOD9.                           DOHELP
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F7020-FN.    EXIT.                                                  DOHELP
F7030.                                                              DOHELP
          IF    ER-HELP-OPDOC = "5"                                 DOHELP
       MOVE  "INVALID CHOICE" TO O-HELP-ERMSG (1).                  DOHELP
       IF  XERCD = "G109"                                           DOHELP
       MOVE  "*** END ***   " TO O-HELP-ERMSG (1).                  DOHELP
F7030-FN.    EXIT.                                                  DOHELP
F70-FN.      EXIT.                                                  DOHELP
END-OF-DISPLAY.    EXIT.                                            DOHELP
F8Z.         EXIT.                                                  DOHELP
           ************************************                     DOHELP
           *                                  *                     DOHELP
           *  DISPLAY                         *                     DOHELP
           *                                  *                     DOHELP
           ************************************                     DOHELP
F8Z10.                                                              DOHELP
       IF SCR-ER  NOT > "1"                                         DOHELP
       AND DE-AT (4, 001) = "X"                                     DOHELP
       PERFORM F7020 THRU F7020-FN.                                 DOHELP
       MOVE SCR-ER TO S-WWSS-SCR-ER                                 DOHELP
       MOVE OPER  TO S-WWSS-OPER                                    DOHELP
       MOVE COMMON-AREA TO SERVER-COMMON                            DOHELP
       MOVE COMMUNICATION-MONITOR TO SERVER-MONIT                   DOHELP
       MOVE  DE-ATT  TO    SERVER-ATT                               DOHELP
       MOVE OUTPUT-SCREEN-FIELDS  TO SERVER-MSG.                    DOHELP
       WRITE ENTRY-REPLY.                                           DOHELP
F8Z10-FN.    EXIT.                                                  DOHELP
           ************************************                     DOHELP
           *                                  *                     DOHELP
           *  END OF PROGRAM                  *                     DOHELP
           *                                  *                     DOHELP
           ************************************                     DOHELP
F8Z20.                                                              DOHELP
       GO TO F0110.                                                 DOHELP
F8Z20-FN.    EXIT.                                                  DOHELP
F8Z-FN.      EXIT.                                                  DOHELP
           ************************************                     DOHELP
           *                                  *                     DOHELP
           *  PHYSICAL SEGMENT ACCESS ROUTINES *                     DOHELP
           *                                  *                     DOHELP
           ************************************                     DOHELP
F80.         EXIT.                                                  DOHELP
F80-EM00-R.                                                         DOHELP
       READ    EM-FILE    INVALID KEY GO TO F80-KO.                 DOHELP
       GO TO F80-OK.                                                DOHELP
F80-EM00-P.                                                         DOHELP
       START   EM-FILE    KEY NOT <                                 DOHELP
              EM00-EMKEY  INVALID KEY GO TO F80-KO.                 DOHELP
F80-EM00-RN.                                                        DOHELP
       READ    EM-FILE    NEXT AT END GO TO F80-KO.                 DOHELP
       GO TO F80-OK.                                                DOHELP
F8001-FN.    EXIT.                                                  DOHELP
F80-OK.  MOVE "0" TO IK MOVE PROGR TO XPROGR GO TO F80-FN.          DOHELP
F80-KO.  MOVE "1" TO IK MOVE PROGR TO XPROGR.                       DOHELP
F8099-FN.    EXIT.                                                  DOHELP
F80-FN.      EXIT.                                                  DOHELP
F81.         EXIT.                                                  DOHELP
           ************************************                     DOHELP
           *                                  *                     DOHELP
           *  ABNORMAL END PROCEDURE          *                     DOHELP
           *                                  *                     DOHELP
           ************************************                     DOHELP
F81ER.                                                              DOHELP
       MOVE "X"   TO S-WWSS-OPER                                    DOHELP
       MOVE COMMON-AREA TO SERVER-COMMON                            DOHELP
       MOVE COMMUNICATION-MONITOR TO SERVER-MONIT                   DOHELP
       WRITE ENTRY-REPLY.                                           DOHELP
       GO TO F0110.                                                 DOHELP
F81ER-FN.    EXIT.                                                  DOHELP
F81FI.                                                              DOHELP
       CLOSE   EM-FILE.                                             DOHELP
F81FI-FN.    EXIT.                                                  DOHELP
           ************************************                     DOHELP
           *                                  *                     DOHELP
           *  MEMORIZATION OF USER'S ERRORS   *                     DOHELP
           *                                  *                     DOHELP
           ************************************                     DOHELP
F81UT.     IF K50L < K50M ADD 1 TO K50L                             DOHELP
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          MOVE XEMKY TO T-XEMKY (K50L). MOVE "E" TO CAT-ER.          DOHELP
    F81UT-FN.    EXIT.                                               DOHELP
    F8115.       EXIT.                                               DOHELP
    F8115-FN.    EXIT.                                               DOHELP
    F81-FN.      EXIT.                                               DOHELP
```

8. CHART OF VARIABLES AND CONSTANTS

CHART OF ON-LINE CONSTANTS AND VARIABLES	
CURPOS	CURSOR POSITIONING IN RECEPTION SCREEN WHERE CPOSL = LINE NUMBER & CPOSC = COLUMN NUMBER (except for DPS7 FORMS).
CPOSN	"ABSOLUTE" CURSOR POSITIONING WHERE CPOSL = 1 AND CPOSC = 1 (except for DPS7 FORMS).
INA	NUMBER OF DATA ELEMENTS IN SCREEN-TOP CATEGORY
INR	INA + NUMBER OF DATA ELEMENTS IN REPETITIVE CATEGORY
INZ	INR + NUMBER OF DATA ELEMENTS IN SCREEN-BOTTOM CATEGORY
IRR	NUMBER OF REPETITIONS IN REPETITIVE CATEGORY
INT	NUMBER OF INPUT FIELDS IN SCREEN
IER	NUMBER OF SCREEN-RELATED ERROR MESSAGES
SESSI	SESSION NUMBER OF GENERATED PROGRAM
LIBRA	LIBRARY CODE
USERCO	USER CODE
DATGN	DATE OF GENERATED PROGRAM
TIMGN	TIME OF GENERATED PROGRAM
PROGR	PROGRAM CODE
PROGE	PROGRAM EXTERNAL NAME
PRDOC	HELP PROGRAM EXTERNAL NAME

CHART OF ON-LINE CONSTANTS AND VARIABLES (CONT'D)	
DATOR	YEAR-MONTH-DAY FORMATTED MACHINE DATE
DATSEP	SEPARATOR USED IN DATES DEFAULT VALUE: '/'
DAT6 DAT7 DAT8	DATE FORMATTING: DDMMYY OR YYMMDD ALSO OUTPUT FORMATS (DD/MM/YY FOR INSTANCE) IF A VARIABLE DATA ELEMENT (V) HAS A DATE FORMAT
DATCTY	FIELD FOR CENTURY LOAD
DAT6C DAT7C	NON-FORMATTED DATE WITH CENTURY
DAT8C	FORMATTED DATE WITH CENTURY: MM/DD/CCYY
DAT8G	GREGORIAN FORMATTED DATE: CCYY/MM/DD
TIMCO	TIME
TIMDAY	FORMATTED TIME: HH:MM:SS
5-scrn- PROGE	THIS FIELD CONTAINS THE NAME OF THE PROGRAM TO BRANCH TO

CHART OF VALIDATION VARIABLES AND INDICATORS	
ICF	CONFIGURATION VARIABLE '1' = SCREEN IN INPUT '0' = NO SCREEN IN INPUT
OCF	CONFIGURATION VARIABLE '1' = SCREEN IN OUTPUT '0' = NO SCREEN IN OUTPUT
OPER	OPERATION CODE 'A' = INQUIRY 'M' = UPDATE 'S' = SCREEN CONTINUATION 'E' = CONVERSATION END 'P' = PREVIOUS DISPLAY 'O' = TRANSFER TO ANOTHER SCREEN
OPERD	OPERATION CODE FOR DEFERRED BRANCHING 'O' = DEFERRED CALL OF ANOTHER SCREEN INITIALIZED IN F0520 AND MOVED INTO OPER IN F40
CATX	CATEGORY BEING PROCESSED '0' = BEGINNING OF RECEPTION OR DISPLAY ' ' = SCREEN TOP 'R' = REPETITIVE CATEGORY 'Z' = SCREEN BOTTOM
CATM	TRANSACTION CODE 'C' = CREATION 'M' = MODIFICATION 'A' = DELETION 'X' = IMPLICIT UPDATE
ICATR	INDICATOR OF CATEGORY BEING PROCESSED (REPETITIVE CATEGORY ONLY)
FT	END OF REPETITIVE CATEGORY INDICATOR '0' LINES TO DISPLAY '1' NO MORE LINES TO DISPLAY
ddss-CF	SEGMENT CONFIGURATION INDICATOR (seg. ddss) '1' THE SEGMENT IS PROCESSED '0' THE SEGMENT IS NOT PROCESSED

CHART OF VALIDATION VARIABLES AND INDICATORS (CONT'D)		
IK	PHYSICAL FILE ACCESS ERROR INDICATOR	
	'0' NO ERROR	
	'1' ERROR	

ERROR VARIABLES		
SCR-ER	STORAGE OF SCREEN ERROR	
	'1' NO ERROR	
	'4' ERROR	
CAT-ER	STORAGE OF ERROR ON CURRENT CATEGORY	
	' ' NO ERROR	
	'E' ERROR	
ER-scrn-delcod	MEMORIZATION OF DATA ELEMENT ERROR	
	'0' DATA ELEMENT ABSENT	
	'1' DATA ELEMENT PRESENT	
	'2' INVALID ABSENCE	
	'4' INVALID CLASS	
	'5' INVALID VALUE	