```
DDDDDDDDDDDD     EEEEEEEEEEEEEEE  BBBBBBBBBBBB     UUU         UUU     GGGGGGGGGGGG
DDDDDDDDDDDD     EEEEEEEEEEEEEEE  BBBBBBBBBBBB     UUU         UUU     GGGGGGGGGGGG
DDDDDDDDDDDD     EEEEEEEEEEEEEEE  BBBBBBBBBBBB     UUU         UUU     GGGGGGGGGGGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG
DDD         DDD  EEEEEEEEEEEE     BBBBBBBBBBBB     UUU         UUU  GGG
DDD         DDD  EEEEEEEEEEEE     BBBBBBBBBBBB     UUU         UUU  GGG
DDD         DDD  EEEEEEEEEEEE     BBBBBBBBBBBB     UUU         UUU  GGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG   GGGGGGGGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG   GGGGGGGGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG   GGGGGGGGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG         GGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG         GGG
DDD         DDD  EEE              BBB         BBB  UUU         UUU  GGG         GGG
DDDDDDDDDDDD     EEEEEEEEEEEEEEE  BBBBBBBBBBBB     UUUUUUUUUUUUUUU     GGGGGGGGG
DDDDDDDDDDDD     EEEEEEEEEEEEEEE  BBBBBBBBBBBB     UUUUUUUUUUUUUUU     GGGGGGGGG
DDDDDDDDDDDD     EEEEEEEEEEEEEEE  BBBBBBBBBBBB     UUUUUUUUUUUUUUU     GGGGGGGGG
```

```
                                                K  2
**FILE**ID**DBGCVTDX




          DDDDDDDD    BBBBBBBB      GGGGGGGG    CCCCCCCC  VV      VV  TTTTTTTTTT  DDDDDDDD    XX      XX
          DDDDDDDD    BBBBBBBB      GGGGGGGG    CCCCCCCC  VV      VV  TTTTTTTTTT  DDDDDDDD    XX      XX
          DD      DD  BB      BB  GG          CC          VV      VV      TT      DD      DD  XX      XX
          DD      DD  BB      BB  GG          CC          VV      VV      TT      DD      DD  XX      XX
          DD      DD  BB      BB  GG          CC          VV      VV      TT      DD      DD    XX  XX
          DD      DD  BB      BB  GG          CC          VV      VV      TT      DD      DD    XX  XX
          DD      DD  BBBBBBBB    GG          CC          VV      VV      TT      DD      DD      XX
          DD      DD  BBBBBBBB    GG          CC          VV      VV      TT      DD      DD      XX
          DD      DD  BB      BB  GG  GGGGGG  CC          VV      VV      TT      DD      DD    XX  XX
          DD      DD  BB      BB  GG  GGGGGG  CC          VV      VV      TT      DD      DD    XX  XX
          DD      DD  BB      BB  GG      GG  CC            VV  VV        TT      DD      DD  XX      XX      ....
          DD      DD  BB      BB  GG      GG  CC            VV  VV        TT      DD      DD  XX      XX      ....
          DDDDDDDD    BBBBBBBB      GGGGGG      CCCCCCCC      VV          TT      DDDDDDDD    XX      XX      ....
          DDDDDDDD    BBBBBBBB      GGGGGG      CCCCCCCC      VV          TT      DDDDDDDD    XX      XX      ....

          LL              IIIIII      SSSSSSSS
          LL              IIIIII      SSSSSSSS
          LL                II      SS
          LL                II      SS
          LL                II      SS
          LL                II      SS
          LL                II        SSSSSS
          LL                II        SSSSSS
          LL                II              SS
          LL                II              SS
          LL                II              SS
          LL                II              SS
          LLLLLLLLLL    IIIIII    SSSSSSSS
          LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
0 MODULE DBGCVTDX (IDENT = 'V04-000') =
0
1 BEGIN
1 !
1 !****************************************************************************
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1 !*                                                                          *
1 !*                                                                          *
1 !****************************************************************************
1 !
1 !  WRITTEN BY
1 !       Farokh Morshed              01-09-1981
1 !
1 !  MODIFIED BY:
1 !       * These modifications are to LIB$$FIND_CVT_PATH, and were done before
1 !       * debug modifications.
1 !       *
1 !       1-001 - Original.  FM1001        01-09-1981
1 !       1-002 - Put in a check for DSC$W_LENGTH to be 1 when class A, or NCA, and
1 !               if class NCA stride must be 1.  FM 9-9-81
1 !       1-003 - Put in a new data type, DSC$K_DTYPE_VT.  FM 1-DEC-81.
1 !       1-004 - Put in a feature where DST_INFO [D_LEN] can be picked up for
1 !               LIB$CVT_DX_DX. FM 2-DEC-81.
1 !
1 !       * These modifications are to LIB$CVT_DX_DX, and were done before
1 !       * debug modifications.
1 !       *
1 !       1-001 - Original.  FM1001        01-09-1981
1 !       1-002 - Fix the problem with (SMLINT, LRGINT, DEC) to NBDS having an explicit
1 !               sign when plus should be implied.  Also [DEC_NBDS] scaled twice,
1 !               changed it to scale only once.  FM 5-NOV-81.
1 !       1-003 - Fix the problem with [K_DEC_NBDS].  The length of CLASS_S_DESC was
1 !               not being reset. FM
1 !       1-004 - Put in a new data type, DSC$K_DTYPE_VT.  Cleaned up data type B
1 !               out of NBDS.  FM 1-DEC-81.
1 !       1-005 - Fix the bug where destination length is not picked up from DST_INFO.
1 !               FM 2-DEC-81.
1 !       1-006 - Constants which are addressed by things like PACK_ZERO should be
1 !               all longwords.
1 !       1-007 - LIB$_ROPRAND was left out of the exception handler.  FM 8-FEB-82.
```

```
1 !        1-008 - A couple of missing dots fixed -Q -> G and H.
1 !
1 !        * DEBUG modifications start here.
1 !        *
1 !        1-001 - Victoria Holt   Sept., 1982
1 !                Created module DBGCVTDX.  This module includes the two routines
1 !                FIND_CVT_PATH and DBG$CVT_DX_DX (originally LIB$$FIN_CVT_PATH
1 !                and LIB$CVT_DX_DX, respectively).  Both routines have been
1 !                modified to include additional DEBUG and language specific
1 !                dtypes and classes.
1 !        1-002 - VJH
1 !                Added routine DBG$COVER_DX_DX from DBGEVALOP.
1 !                Modified handler so that it signals errors rather than
1 !                returning a status code.
1 !        1-003 - WC3     Jul-83
1 !                Add support for Absolute Date Time to CVT_DX_DX
1 !        1-004 - WC3     Jul-83
1 !                Fix the decimal text to Octaword conversion
1 !        1-005 - BAB     Dec-83
1 !                Added support for scaled binary conversions. To and From.
1 !        1-006 - BAB     Jan-84
1 !                Fixed the bug where DEP/QUAD I=8000000000000000 does not work.
1 !                Also DEP/OCTA I=80000000000000000000000000000000.
1 !
1
1 REQUIRE 'SRC$:DBGPROLOG.REQ';
1
1 LINKAGE
1     JSB_R0 = JSB (REGISTER = 0): PRESERVE (0, 1),
1     JSB_R1 = JSB (REGISTER = 0, REGISTER = 1): PRESERVE (0, 1),
1     JSB_RETR0_R1 = JSB (REGISTER = 0, REGISTER = 1): PRESERVE (1),
1     JSB_R2 = JSB (REGISTER = 0, REGISTER = 1, REGISTER = 2): PRESERVE (0, 1),
1     JSB_R3 = JSB (REGISTER = 0, REGISTER = 1, REGISTER = 2, REGISTER = 3): PRESERVE (0, 1),
1     JSB_R6 = JSB (REGISTER = 0, REGISTER = 1, REGISTER = 2, REGISTER = 3, REGISTER = 4, REGISTER = 5):
1     PRESERVE (0, 1),
1     SCOPYR_JSB_R6 = JSB (REGISTER = 0, REGISTER = 1, REGISTER = 2): NOPRESERVE (2),
1     SCOPY_JSB_R6 = JSB (REGISTER = 0, REGISTER = 1): NOPRESERVE (2, 3, 4, 5, 6);
1
1 FORWARD ROUTINE
1     DBG$COVER_DX_DX,                            ! Accepts value descriptors; calls DBG$CVT_DX_DX.
1     COVER_VMSDESC_SETUP,                        ! Set up vms descriptor
1     DBG$CVT_DX_DX:  NOVALUE,                    ! Routine that does any-to-any type conversion.
1     CVT_HANDLER,                                ! Error handler.
1     FIND_CVT_PATH;                              ! Routine to find the conversion path
1                                                 ! being done and report any
1
1 EXTERNAL ROUTINE
1     DBG$CVT_ASHP_R1: JSB_R6 NOVALUE,
1     DBG$CVT_CMPH_R1: JSB_RETR0_R1,
1     DBG$CVT_CVTDH_R1: JSB_R1 NOVALUE,
1     DBG$CVT_CVTLB_R1: JSB_R1 NOVALUE,
1     DBG$CVT_CVTLH_R1: JSB_R1 NOVALUE,
1     DBG$CVT_CVTLW_R1: JSB_R1 NOVALUE,
1     DBG$CVT_CVTRDQ_R1: JSB_R1 NOVALUE,
1     DBG$CVT_CVTHD_R1: JSB_R1 NOVALUE,
1     DBG$CVT_CVTHF_R1: JSB_R1 NOVALUE,
1     DBG$CVT_CVTHG_R1: JSB_R1 NOVALUE,
;   115          0248  1        DBG$CVT_CVTGH_R1: JSB_R1 NOVALUE,
;   116          0249  1        DBG$CVT_CVTRHL_R1: JSB_R1 NOVALUE,
;   117          0250  1        DBG$CVT_CVTRHO_R1: JSB_R1 NOVALUE,
;   118          0251  1        DBG$CVT_CVTRHQ_R1: JSB_R1 NOVALUE,
;   119          0252  1        DBG$CVT_CVTROUD_R1: JSB_R1 NOVALUE,
;   120          0253  1        DBG$CVT_CVTROUH_R1: JSB_R1 NOVALUE,
;   121          0254  1        DBG$CVT_DIVD2_R1: JSB_R1 NOVALUE,
;   122          0255  1        DBG$CVT_DIVH2_R1: JSB_R1 NOVALUE,
;   123          0256  1        DBG$CVT_DIVP_R1: JSB_R6 NOVALUE,
;   124          0257  1        DBG$CVT_MULD2_R1: JSB_R1 NOVALUE,
;   125          0258  1        DBG$CVT_MULH2_R1: JSB_R1 NOVALUE,
;   126          0259  1        DBG$CVT_MULP_R1: JSB_R6 NOVALUE,
;   127          0260  1        DBG$GET_SET_TYPEID,
;   128          0261  1        DBG$INS_ENCODE,
;   129          0262  1        DBG$MAP_DTYPE_CLASS,
;   130          0263  1        DBG$PERFORM_TYPEID_CHECK,
;   131          0264  1        DBG$STA_TYP_SUBRNG:  NOVALUE,
;   132          0265  1        DBG$STA_TYP_ATOMIC:  NOVALUE,
;   133          0266  1        DBG$STRIP_ZEROES,
;   134          0267  1        FOR$CVT_D_TE,
;   135          0268  1        FOR$CVT_D_TF,
;   136          0269  1        FOR$CVT_G_TE,
;   137          0270  1        FOR$CVT_G_TF,
;   138          0271  1        FOR$CVT_H_TE,
;   139          0272  1        FOR$CVT_H_TF,
;   140          0273  1        DBG$CVT_SCALE_OU_UP_BY_10_R1: JSB_R0 NOVALUE,
;   141          0274  1        DBG$CVT_SCALE_OU_DOWN_BY_10_R1: JSB_R0 NOVALUE,
;   142          0275  1        LIB$$CVT_SCALE_OU_UP_BY_10_R1: JSB_R0 NOVALUE,
;   143          0276  1        LIB$$CVT_SCALE_OU_DOWN_BY_10_R1: JSB_R0 NOVALUE,
;   144          0277  1        DBG$CVT_SCALE_OU_UP_BY_2_R1: JSB_R0 NOVALUE,
;   145          0278  1        DBG$CVT_SCALE_OU_DOWN_BY_2_R1: JSB_R0 NOVALUE,
;   146          0279  1        LIB$MATCH_COND,
;   147          0280  1        LIB$SIG_TO_RET: NOVALUE,
;   148          0281  1        LIB$SCOPY_R_DX6: SCOPYR_JSB_R6,
;   149          0282  1        LIB$SCOPY_DXDX6: SCOPY_JSB_R6,
;   150          0283  1        LIB$STOP: NOVALUE,
;   151          0284  1        MTH$CVT_D_G: NOVALUE,
;   152          0285  1        OTS$CVT_L_TI,
;   153          0286  1        OTS$CVT_T_D,
;   154          0287  1        OTS$CVT_T_G,
;   155          0288  1        OTS$CVT_T_H,
;   156          0289  1        SYS$ASCTIM,
;   157          0290  1        SYS$BINTIM;
;   158          0291  1
;   159          0292  1    EXTERNAL
;   160          0293  1        LIB$AB_CVTTP_U,                         ! These are the translation tables
;   161          0294  1        LIB$AB_CVT_O_U,                         ! used when translating to or from
;   162          0295  1        LIB$AB_CVTTP_O,                         ! packed decimal.
;   163          0296  1        LIB$AB_CVT_U_O,
;   164          0297  1        LIB$AB_CVTPT_U,
;   165          0298  1        LIB$AB_CVTPT_O,
;   166          0299  1        LIB$AB_CVTPT_Z,
;   167          0300  1        LIB$AB_CVTTP_Z,
;   168          0301  1        DBG$GL_OPCODE_NAME:  REF VECTOR[, BYTE];    ! Used in error messages.
;   169          0302  1
;   170          0303  1    EXTERNAL LITERAL
;   171          0304  1       LIB$_STRTRU;                             ! String truncated.
```

```
1
1 BUILTIN
1              CVTTP,
1              CVTSP,
1              CVTLF,
1              CVTLD,
1              CVTPT,
1              CVTPS,
1              CMPP,
1              CMPD,
1              CVTDL,
1              CVTHL,
1              CVTRDL,
1              CVTRFL,
1              CVTDF,
1              CVTPL,
1              CVTLP,
1              BICPSW,
1              BISPSW,
1              TESTBITSC,
1              SUBM,
1              MOVP;
1
1 OWN
1              DECIMAL_CONVERT,                  ! Tells if this is a packed decimal conversion.
1                                                !   Needed so that "conversion error" can be
1                                                !   signalled rather than "reserved operand".
1              SAVE_RESULT;                      ! Used when signalling underflow.
```

```
1 ! Literals.
1 !
1 LITERAL
1
1
1     ! Some general values:
1     !
1     K_FIRST_LONGWORD = 0,                      ! Position of first longword in buffer.
1     K_INTMED_DATA_LENGTH = 32,                 ! Intermediate data buffer length
1     K_OUTPUT_BUFFER_LENGTH = 32,               ! Output buffer length
1     K_LRGST_WU = 65535,                        ! Largest unsigned word.
1     K_LRGST_LU = 4294967295,                   ! Largest unsigned longword.
1     K_LRGST_NEG_L = -2147483648,               ! Largest negative longword.
1     K_LRGCLSSUP = DSC$K_CLASS_UBS,             ! Largest CLASS supported by routine
1     K_SMLCLSSUP = DSC$K_CLASS_S,               ! Smallest CLASS supported by routine
1     K_MAX_DATA_TYPES = 43,                     ! Total number of DATA TYPES in the standard
1     K_MAX_CLASSES = 15,                        ! Total number of classes supported,
1                                                ! including the error case 0.
1     K_MIN_CLASS = DSC$K_CLASS_S,               ! Smallest class supported.
1     K_MAX_CLASS = DSC$K_CLASS_UBS,             ! Largest class supported.
1     K_MAX_CLASS_STA = DSC$K_CLASS_UBA,         ! Max. class number supported by standard.
1     K_MIN_DTYPE_STA = DSC$K_DTYPE_V,           ! Min. data type number supported by standard.
1     K_MAX_DTYPE_STA = DSC$K_DTYPE_SVU,         ! Max. data type number supported by standard.
1     K_ACTUAL_CLASSES = 7,                      ! Total classes that are allowed by the STATES table.
1     K_MSTNEGERR = -7,                          ! Most negative error state
1     K_LRGST_NEG_B = -128,                      ! Largest negative signed byte.
1     K_LRGST_NEG_W = -32768,                    ! Largest negative signed word.
1     K_LRGST_B = 127,                           ! Largest positive signed byte.
1     K_LRGST_W = 32767,                         ! Largest positive signed word.
1     K_LRGST_BU = 255,                          ! Largest unsigned byte.
1     K_LRGST_L = 2147483647,                    ! Largest signed longword.
1     K_PACK_LU_LEN = 10,
1
1
1     ! Status returned by FIND_CVT_PATH.
1     !
1     K_UNSCLAROU = -1,                          ! Unsupported CLASS by routine.
1     K_UNSDTYROU = -2,                          ! Unsupported DATA TYPE by routine.
1     K_UNSDESROU = -3,                          ! Unsupported descriptor by routine.
1     K_UNSDESSTA = -4,                          ! Unsupported descriptor by standard.
1     K_UNSCLASTA = -5,                          ! Unsupported CLASS by standard.
1     K_UNSDTYSTA = -6,                          ! Unsupported DTYPE by standard
1     K_INVNBDS = -7,                            ! Invalid NBDS
1                                                ! because either array size is larger
1                                                ! than a WU or it is not a one
1                                                ! dimensional array.
1     K_SUPPORTED = 1,                           ! This descriptor is supported, and valid.
1
1
1     ! These are the values of the members of K_ACTUAL_CLASSES:
1     ! (K_ACTUAL_CLASSES being those classes that not only exist, but are
1     ! actually used by the caller.  Any other valid classes not in this
1     ! group are presently treated as an error condition.)
1     !
1     K_STATE1_CLASS_S = DSC$K_CLASS_S,
1     K_STATE2_CLASS_D = DSC$K_CLASS_D,
1     K_STATE4_CLASS_A = DSC$K_CLASS_A,
        K_STATE9_CLASS_SD = DSC$K_CLASS_SD,
        K_STATE10_CLASS_NCA = DSC$K_CLASS_NCA,
        K_STATE11_CLASS_VS = DSC$K_CLASS_VS,
        K_STATE13_CLASS_UBS = DSC$K_CLASS_UBS,


        ! These are the intermediate data type groupings.  All data types fit into
        ! one of these groups.  The groups can represent either the left or right
        ! hand side of the conversion index.  When combined together (as in
        ! K_SMLINT_SMLINT - convert small integer to small integer, eg. byte to
        ! word), they represent the current state.
        !
        K_SMLINT = 1,
        K_LRGINT = 2,
        K_SMLFLT_CMPLX = 3,
        K_LRGFLT_CMPLX = 4,
        K_DEC = 5,
        K_NBDS = 6,

        K_TOT_CAT = 6,


        ! These are the index values to the main CASE statement in DBG$CVT_DX_DX.
        !
        K_SMLINT_SMLINT = 1,
        K_SMLINT_LRGINT = 2,
        K_SMLINT_SMLFLTCMPLX = 3,
        K_SMLINT_LRGFLTCMPLX = 4,
        K_SMLINT_DEC = 5,
        K_SMLINT_NBDS = 6,
        K_LRGINT_SMLINT = 7,
        K_LRGINT_LRGINT = 8,
        K_LRGINT_SMLFLTCMPLX = 9,
        K_LRGINT_LRGFLTCMPLX = 10,
        K_LRGINT_DEC = 11,
        K_LRGINT_NBDS = 12,
        K_SMLFLTCMPLX_SMLINT = 13,
        K_SMLFLTCMPLX_LRGINT = 14,
        K_SMLFLTCMPLX_SMLFLTCMPLX = 15,
        K_SMLFLTCMPLX_LRGFLTCMPLX = 16,
        K_SMLFLTCMPLX_DEC = 17,
        K_SMLFLTCMPLX_NBDS = 18,
        K_LRGFLTCMPLX_SMLINT = 19,
        K_LRGFLTCMPLX_LRGINT = 20,
        K_LRGFLTCMPLX_SMLFLTCMPLX = 21,
        K_LRGFLTCMPLX_LRGFLTCMPLX = 22,
        K_LRGFLTCMPLX_DEC = 23,
        K_LRGFLTCMPLX_NBDS = 24,
        K_DEC_SMLINT = 25,
        K_DEC_LRGINT = 26,
        K_DEC_SMLFLTCMPLX = 27,
        K_DEC_LRGFLTCMPLX = 28,
        K_DEC_DEC = 29,
        K_DEC_NBDS = 30,
        K_NBDS_SMLINT = 31,
        K_NBDS_LRGINT = 32,
        K_NBDS_SMLFLTCMPLX = 33,
	K_NBDS_LRGFLTCMPLX = 34,
	K_NBDS_DEC = 35,
	K_NBDS_NBDS = 36,


	! Length of source and destination info records in bytes.
	! The info records are used to hold information gathered in FIND_CVT_PATH,
	! so that it can be easily recovered and used by DBG$CVT_DX_DX.
	!
	K_SRC_INFO_LENGTH = 8,
	K_DST_INFO_LENGTH = 8,
	K_TEMP_BUF_LENGTH = 50,


	! Define bit patterns for calling OTS conversion routines.
	!
	K_IGN_BLKS = 1,
	K_ENB_UNDERFLOW = 4,
	K_IGN_TABS = 16,
	K_ENB_SCALE = 64,


	! Bit map to use to set all arithmetic traps
	!
	K_SET_ARITHMETIC_TRAP = 32 + 64 + 128;
```

```
  1 ! Macros.
  1 !
  1 MACRO
  1
  1
  1     ! These macros define portions of intermediate data buffer.
  1     !
  1     LONG_1 =    0, 0, 32, 0 %,
  1     LONG_2 =    4, 0, 32, 0 %,
  1     LONG_3 =    8, 0, 32, 0 %,
  1     LONG_4 =   12, 0, 32, 0 %,
  1     LONG_5 =   16, 0, 32, 0 %,
  1     LONG_6 =   20, 0, 32, 0 %,
  1     LONG_7 =   24, 0, 32, 0 %,
  1     LONG_8 =   28, 0, 32, 0 %,
  1     S_LONG_1 = 0, 0, 32, 1 %,
  1     S_LONG_2 = 4, 0, 32, 1 %,
  1     S_BYTE_1 = 0, 0,  8, 1 %,
  1     BYTE_1 =    0, 0,  8, 0 %,
  1     BYTE_2 =    1, 0,  8, 0 %,
  1     S_WORD_1 = 0, 0, 16, 1 %,
  1     WORD_1 =    0, 0, 16, 0 %,
  1     WORD_2 =    2, 0, 16, 0 %,
  1     NIBBLE_1 = 0, 0,  4, 0 %,
  1
  1
  1     ! This macro calculates final states given the current state and the token.
  1     !
M 1     FINAL_STATE (CLASS, DATA_TYPE) =
M 1         ((K_MAX_DATA_TYPES *
M 1         BEGIN
M 1             CASE CLASS FROM K_MIN_CLASS TO K_MAX_CLASS OF
M 1                 SET
M 1
M 1                 ! These are presenty the only classes permitted.
M 1                 !
M 1                 [K_STATE1_CLASS_S]:     0;
M 1                 [K_STATE2_CLASS_D]:     1;
M 1                 [K_STATE4_CLASS_A]:     2;
M 1                 [K_STATE9_CLASS_SD]:    3;
M 1                 [K_STATE10_CLASS_NCA]: 4;
M 1                 [K_STATE11_CLASS_VS]:  5;
M 1                 [K_STATE13_CLASS_UBS]: 6;
M 1                 [INRANGE]:
M 1                     BEGIN
M 1                     $DBG_ERROR ('DBGCVTDX:  invalid class');
M 1                     0
M 1                     END;
M 1                 TES
  1         END ) + DATA_TYPE) %,
  1
  1
  1     ! Again, the SRC and DST_INFO records are filled in by FIND_CVT_PATH
  1     ! so that information concerning the source and/or destination descriptors
  1     ! is readily available to DBG$CVT_DX_DX.
  1     !
  1     ! These macros are used for SRC_INFO or DST_INFO scale fields.
```

```
        !
        M_SCALE = 0, 0, 8, 1 %,
        M_BIN_SCALE = 7, 1, 1, 0 %,


        ! This macro is used for SRC_INFO or DST_INFO length field.
        !
        M_LEN = 5, 0, 16, 0 %,


        ! Define the start state.
        !
        START_STATE = VECTOR [K_MAX_CLASSES, BYTE, SIGNED] %,


        ! These MACROs are defined for the purpose of clarity, less typing, and anticipation
        ! of future support of BUILTINs.
        !
        ASHP     = DBG$CVT_ASHP_R1 %,
        CMPH     = DBG$CVT_CMPH_R1 %,
        CVTDH    = DBG$CVT_CVTDH_R1 %,
        CVTHD    = DBG$CVT_CVTHD_R1 %,
        CVTHF    = DBG$CVT_CVTHF_R1 %,
        CVTHG    = DBG$CVT_CVTHG_R1 %,
        CVTGH    = DBG$CVT_CVTGH_R1 %,
        CVTLB    = DBG$CVT_CVTLB_R1 %,
        CVTLH    = DBG$CVT_CVTLH_R1 %,
        CVTLW    = DBG$CVT_CVTLW_R1 %,
        CVTRDQ   = DBG$CVT_CVTRDQ_R1 %,
        CVTRHL   = DBG$CVT_CVTRHL_R1 %,
        CVTRHO   = DBG$CVT_CVTRHO_R1 %,
        CVTRHQ   = DBG$CVT_CVTRHQ_R1 %,
        CVTROUD  = DBG$CVT_CVTROUD_R1 %,
        CVTROUH  = DBG$CVT_CVTROUH_R1 %,
        DIVD2    = DBG$CVT_DIVD2_R1 %,
        DIVH2    = DBG$CVT_DIVH2_R1 %,
        DIVP     = DBG$CVT_DIVP_R1 %,
        MULD2    = DBG$CVT_MULD2_R1 %,
        MULH2    = DBG$CVT_MULH2_R1 %,
        MULP     = DBG$CVT_MULP_R1 %,


    ! The following macros scale the intermediate data.
    !
    ! These macros scale the longword in INTMED_DATA buffer.
    !
    M_SCALE_L_L =
        WHILE .BIN_SCALE GTR 0 DO
            BEGIN
            INTMED_DATA [LONG_1] = .INTMED_DATA [S_LONG_1]*2;
            BIN_SCALE = .BIN_SCALE - 1;
            END;
        WHILE .BIN_SCALE LSS 0 DO
            BEGIN
            INTMED_DATA [LONG_1] = .INTMED_DATA [S_LONG_1]/2;
            BIN_SCALE = .BIN_SCALE + 1;
            END;
```

```
;   455         M 0586  1       WHILE .SCALE GTR 0 DO
;   456         M 0587  1           BEGIN
;   457         M 0588  1           INTMED_DATA [LONG_1] = .INTMED_DATA [S_LONG_1]*10;
;   458         M 0589  1           SCALE = .SCALE - 1;
;   459         M 0590  1           END;
;   460         M 0591  1       WHILE .SCALE LSS 0 DO
;   461         M 0592  1           BEGIN
;   462         M 0593  1           INTMED_DATA [LONG_1] = .INTMED_DATA [S_LONG_1]/10;
;   463         M 0594  1           SCALE = .SCALE + 1;
;   464         M 0595  1           END
;   465           0596  1       %,
;   466           0597  1
;   467           0598  1
;   468           0599  1       ! Convert L to OU and scale it.  INTMED_DATA is used for L and OU
;   469           0600  1       !
;   470         M 0601  1       M_SCALE_L_OU =
;   471         M 0602  1
;   472         M 0603  1           IF .INTMED_DATA [S_LONG_1] LSS 0
;   473         M 0604  1           THEN
;   474         M 0605  1               BEGIN
;   475         M 0606  1               INTMED_DATA [LONG_1] = ABS (.INTMED_DATA [S_LONG_1]);
;   476         M 0607  1               SRC_INFO [S_SIGN] = 1;
;   477         M 0608  1               END;
;   478         M 0609  1
;   479         M 0610  1           WHILE .SCALE GTR 0 DO
;   480         M 0611  1               BEGIN
;   481         M 0612  1               LIB$$CVT_SCALE_OU_UP_BY_10_R1 (INTMED_DATA);
;   482         M 0613  1               SCALE = .SCALE - 1;
;   483         M 0614  1               END;
;   484         M 0615  1
;   485         M 0616  1           WHILE .SCALE LSS 0 DO
;   486         M 0617  1               BEGIN
;   487         M 0618  1               LIB$$CVT_SCALE_OU_DOWN_BY_10_R1 (INTMED_DATA);
;   488         M 0619  1               SCALE = .SCALE + 1;
;   489         M 0620  1               END;
;   490         M 0621  1
;   491         M 0622  1           WHILE .BIN_SCALE GTR 0 DO
;   492         M 0623  1               BEGIN
;   493         M 0624  1               DBG$CVT_SCALE_OU_UP_BY_2_R1 (INTMED_DATA);
;   494         M 0625  1               BIN_SCALE = .BIN_SCALE - 1;
;   495         M 0626  1               END;
;   496         M 0627  1
;   497         M 0628  1           WHILE .BIN_SCALE LSS 0 DO
;   498         M 0629  1               BEGIN
;   499         M 0630  1               DBG$CVT_SCALE_OU_DOWN_BY_2_R1 (INTMED_DATA);
;   500         M 0631  1               BIN_SCALE = .BIN_SCALE + 1;
;   501         M 0632  1               END
;   502         M 0633  1
;   503           0634  1       %,
;   504           0635  1
;   505           0636  1
;   506           0637  1       ! Convert L to D, and scale it.  INTMED_DATA buffer is used for L and D.
;   507           0638  1       !
;   508         M 0639  1       M_SCALE_L_D =
;   509         M 0640  1           CVTLD (INTMED_DATA, INTMED_DATA);
;   510         M 0641  1
;   511         M 0642  1           WHILE .BIN_SCALE GTR 0 DO
```

```
                BEGIN
                MULD2 (UPLIT (%D'2'), INTMED_DATA);
                BIN_SCALE = .BIN_SCALE - 1;
                END;

            WHILE .BIN_SCALE LSS 0 DO
                BEGIN
                DIVD2 (UPLIT (%D'2'), INTMED_DATA);
                BIN_SCALE = .BIN_SCALE + 1;
                END;

            WHILE .SCALE GTR 0 DO
                BEGIN
                MULD2 (UPLIT (%D'10'), INTMED_DATA);
                SCALE = .SCALE - 1;
                END;

            WHILE .SCALE LSS 0 DO
                BEGIN
                DIVD2 (UPLIT (%D'10'), INTMED_DATA);
                SCALE = .SCALE + 1;
                END

        %,

        ! Convert L to P, and scale it.  INTMED_DATA is the buffer for L and P.
        !
        M_SCALE_L_P =

            IF .INTMED_DATA [S_LONG_1] LSS 0 THEN SRC_INFO [S_SIGN] = 1;

            NO_DIGITS = 31;
            CVTLP (INTMED_DATA, NO_DIGITS, INTMED_DATA);

            IF .SCALE NEQ 0
            THEN
                BEGIN
                MOVP (NO_DIGITS, INTMED_DATA, TEMP_BUF1);
                IF .CVT_ROUND_FLAG
                THEN
                    ASHP (SCALE, NO_DIGITS, TEMP_BUF1, %REF (5), NO_DIGITS, INTMED_DATA)
                ELSE
                    ASHP (SCALE, NO_DIGITS, TEMP_BUF1, %REF (0), NO_DIGITS, INTMED_DATA);

                END;

            WHILE .BIN_SCALE GTR 0 DO
                BEGIN
                MOVP (NO_DIGITS, INTMED_DATA, TEMP_BUF1);
                MULP (%REF (1), UPLIT (%P'2'), NO_DIGITS, TEMP_BUF1, NO_DIGITS, INTMED_DATA);
                BIN_SCALE = .BIN_SCALE - 1;
                END;

            WHILE .BIN_SCALE LSS 0 DO
                BEGIN
                MOVP (NO_DIGITS, INTMED_DATA, TEMP_BUF1);
        DIVP (%REF (1), UPLIT (%P'2'), NO_DIGITS, TEMP_BUF1, NO_DIGITS, INTMED_DATA);
        BIN_SCALE = .BIN_SCALE + 1;
        END

%,


! Scale the OU in INTMED_DATA buffer.
!
M_SCALE_OU_OU =

    WHILE .SCALE GTR 0 DO
        BEGIN
        LIB$$CVT_SCALE_OU_UP_BY_10_R1 (INTMED_DATA);
        SCALE = .SCALE - 1;
        END;

    WHILE .SCALE LSS 0 DO
        BEGIN
        LIB$$CVT_SCALE_OU_DOWN_BY_10_R1 (INTMED_DATA);
        SCALE = .SCALE + 1;
        END;

    WHILE .BIN_SCALE GTR 0 DO
        BEGIN
        DBG$CVT_SCALE_OU_UP_BY_2_R1 (INTMED_DATA);
        BIN_SCALE = .BIN_SCALE - 1;
        END;

    WHILE .BIN_SCALE LSS 0 DO
        BEGIN
        DBG$CVT_SCALE_OU_DOWN_BY_2_R1 (INTMED_DATA);
        BIN_SCALE = .BIN_SCALE + 1;
        END

%,


! Convert OU to D, and scale it.  INTMED_DATA is used for OU and D.
!
M_SCALE_OU_D =
    CVTROUD (INTMED_DATA, TEMP_BUF1);
    CH$MOVE (8, TEMP_BUF1, INTMED_DATA);

    WHILE .BIN_SCALE GTR 0 DO
        BEGIN
        MULD2 (UPLIT (%D'2'), INTMED_DATA);
        BIN_SCALE = .BIN_SCALE - 1;
        END;

    WHILE .BIN_SCALE LSS 0 DO
        BEGIN
        DIVD2 (UPLIT (%D'2'), INTMED_DATA);
        BIN_SCALE = .BIN_SCALE + 1;
        END;

    WHILE .SCALE GTR 0 DO
```

```
;   626          M 0757  1                  BEGIN
;   627          M 0758  1                  MULD2 (UPLIT (%D'10'), INTMED_DATA);
;   628          M 0759  1                  SCALE = .SCALE - 1;
;   629          M 0760  1                  END;
;   630          M 0761  1
;   631          M 0762  1              WHILE .SCALE LSS 0 DO
;   632          M 0763  1                  BEGIN
;   633          M 0764  1                  DIVD2 (UPLIT (%D'10'), INTMED_DATA);
;   634          M 0765  1                  SCALE = .SCALE + 1;
;   635          M 0766  1                  END
;   636          M 0767  1
;   637            0768  1          %,
;   638            0769  1
;   639            0770  1
;   640            0771  1          ! Convert OU to H, and scale it.  INTMED_DATA is used for OU and H.
;   641            0772  1          !
;   642          M 0773  1          M_SCALE_OU_H =
;   643          M 0774  1              CVTROUH (INTMED_DATA, TEMP_BUF1);
;   644          M 0775  1              CH$MOVE (16, TEMP_BUF1, INTMED_DATA);
;   645          M 0776  1
;   646          M 0777  1              WHILE .BIN_SCALE GTR 0 DO
;   647          M 0778  1                  BEGIN
;   648          M 0779  1                  MULH2 (UPLIT (%H'2'), INTMED_DATA);
;   649          M 0780  1                  BIN_SCALE = .BIN_SCALE - 1;
;   650          M 0781  1                  END;
;   651          M 0782  1
;   652          M 0783  1              WHILE .BIN_SCALE LSS 0 DO
;   653          M 0784  1                  BEGIN
;   654          M 0785  1                  DIVH2 (UPLIT (%H'2'), INTMED_DATA);
;   655          M 0786  1                  BIN_SCALE = .BIN_SCALE + 1;
;   656          M 0787  1                  END;
;   657          M 0788  1
;   658          M 0789  1              WHILE .SCALE GTR 0 DO
;   659          M 0790  1                  BEGIN
;   660          M 0791  1                  MULH2 (UPLIT (%H'10'), INTMED_DATA);
;   661          M 0792  1                  SCALE = .SCALE - 1;
;   662          M 0793  1                  END;
;   663          M 0794  1
;   664          M 0795  1              WHILE .SCALE LSS 0 DO
;   665          M 0796  1                  BEGIN
;   666          M 0797  1                  DIVH2 (UPLIT (%H'10'), INTMED_DATA);
;   667          M 0798  1                  SCALE = .SCALE + 1;
;   668          M 0799  1                  END
;   669          M 0800  1
;   670            0801  1          %,
;   671            0802  1
;   672            0803  1
;   673            0804  1          ! Convert L to H, and scale it.  INTMED_DATA is used for L and H.
;   674            0805  1          !
;   675          M 0806  1          M_SCALE_L_H =
;   676          M 0807  1              CVTLH (INTMED_DATA, INTMED_DATA);
;   677          M 0808  1
;   678          M 0809  1              WHILE .BIN_SCALE GTR 0 DO
;   679          M 0810  1                  BEGIN
;   680          M 0811  1                  MULH2 (UPLIT (%H'2'), INTMED_DATA);
;   681          M 0812  1                  BIN_SCALE = .BIN_SCALE - 1;
;   682          M 0813  1                  END;
;  683          M 0814  1
;  684          M 0815  1           WHILE .BIN_SCALE LSS 0 DO
;  685          M 0816  1               BEGIN
;  686          M 0817  1               DIVH2 (UPLIT (%H'2'), INTMED_DATA);
;  687          M 0818  1               BIN_SCALE = .BIN_SCALE + 1;
;  688          M 0819  1               END;
;  689          M 0820  1
;  690          M 0821  1           WHILE .SCALE GTR 0 DO
;  691          M 0822  1               BEGIN
;  692          M 0823  1               MULH2 (UPLIT (%H'10'), INTMED_DATA);
;  693          M 0824  1               SCALE = .SCALE - 1;
;  694          M 0825  1               END;
;  695          M 0826  1
;  696          M 0827  1           WHILE .SCALE LSS 0 DO
;  697          M 0828  1               BEGIN
;  698          M 0829  1               DIVH2 (UPLIT (%H'10'), INTMED_DATA);
;  699          M 0830  1               SCALE = .SCALE + 1;
;  700          M 0831  1               END
;  701          M 0832  1
;  702            0833  1       %,
;  703            0834  1
;  704            0835  1
;  705            0836  1       ! Scale D in INTMED_DATA.
;  706            0837  1       !
;  707          M 0838  1       M_SCALE_D_D =
;  708          M 0839  1
;  709          M 0840  1           WHILE .BIN_SCALE GTR 0 DO
;  710          M 0841  1               BEGIN
;  711          M 0842  1               MULD2 (UPLIT (%D'2'), INTMED_DATA);
;  712          M 0843  1               MULD2 (UPLIT (%D'2'), INTMED_DATA+8);
;  713          M 0844  1               BIN_SCALE = .BIN_SCALE - 1;
;  714          M 0845  1               END;
;  715          M 0846  1
;  716          M 0847  1           WHILE .BIN_SCALE LSS 0 DO
;  717          M 0848  1               BEGIN
;  718          M 0849  1               DIVD2 (UPLIT (%D'2'), INTMED_DATA);
;  719          M 0850  1               DIVD2 (UPLIT (%D'2'), INTMED_DATA+8);
;  720          M 0851  1               BIN_SCALE = .BIN_SCALE + 1;
;  721          M 0852  1               END;
;  722          M 0853  1
;  723          M 0854  1           WHILE .SCALE GTR 0 DO
;  724          M 0855  1               BEGIN
;  725          M 0856  1               MULD2 (UPLIT (%D'10'), INTMED_DATA);
;  726          M 0857  1               MULD2 (UPLIT (%D'10'), INTMED_DATA+8);
;  727          M 0858  1               SCALE = .SCALE - 1;
;  728          M 0859  1               END;
;  729          M 0860  1
;  730          M 0861  1           WHILE .SCALE LSS 0 DO
;  731          M 0862  1               BEGIN
;  732          M 0863  1               DIVD2 (UPLIT (%D'10'), INTMED_DATA);
;  733          M 0864  1               DIVD2 (UPLIT (%D'10'), INTMED_DATA+8);
;  734          M 0865  1               SCALE = .SCALE + 1;
;  735          M 0866  1               END
;  736          M 0867  1
;  737            0868  1       %,
;  738            0869  1
;  739            0870  1
```

```
! Convert D to H, and scale it.  INTMED_DATA is used for D and H.
!
M_SCALE_D_H =
    CVTDH (INTMED_DATA, TEMP_BUF1);
    CVTDH (INTMED_DATA+8, INTMED_DATA+16);
    CH$MOVE (16, TEMP_BUF1, INTMED_DATA);

    WHILE .BIN_SCALE GTR 0 DO
        BEGIN
        MULH2 (UPLIT (%H'2'), INTMED_DATA);
        MULH2 (UPLIT (%H'2'), INTMED_DATA+16);
        BIN_SCALE = .BIN_SCALE - 1;
        END;

    WHILE .BIN_SCALE LSS 0 DO
        BEGIN
        DIVH2 (UPLIT (%H'2'), INTMED_DATA);
        DIVH2 (UPLIT (%H'2'), INTMED_DATA+16);
        BIN_SCALE = .BIN_SCALE + 1;
        END;

    WHILE .SCALE GTR 0 DO
        BEGIN
        MULH2 (UPLIT (%H'10'), INTMED_DATA);
        MULH2 (UPLIT (%H'10'), INTMED_DATA+16);
        SCALE = .SCALE - 1;
        END;

    WHILE .SCALE LSS 0 DO
        BEGIN
        DIVH2 (UPLIT (%H'10'), INTMED_DATA);
        DIVH2 (UPLIT (%H'10'), INTMED_DATA+16);
        SCALE = .SCALE + 1;
        END

%,


! Convert G to H, and scale it.  INTMED_DATA is used for G and H.
!
M_SCALE_G_H =
    BEGIN
    CVTGH (INTMED_DATA, TEMP_BUF1);
    CVTGH (INTMED_DATA+8, INTMED_DATA+16);
    CH$MOVE (16, TEMP_BUF1, INTMED_DATA);

    WHILE .BIN_SCALE GTR 0 DO
        BEGIN
        MULH2 (UPLIT (%H'2'), INTMED_DATA);
        MULH2 (UPLIT (%H'2'), INTMED_DATA+16);
        BIN_SCALE = .BIN_SCALE - 1;
        END;

    WHILE .BIN_SCALE LSS 0 DO
        BEGIN
        DIVH2 (UPLIT (%H'2'), INTMED_DATA);
        DIVH2 (UPLIT (%H'2'), INTMED_DATA+16);
```

```
                BIN_SCALE = .BIN_SCALE + 1;
                END;

        WHILE .SCALE GTR 0 DO
                BEGIN
                MULH2 (UPLIT (%H'10'), INTMED_DATA);
                MULH2 (UPLIT (%H'10'), INTMED_DATA+16);
                SCALE = .SCALE - 1;
                END;

        WHILE .SCALE LSS 0 DO
                BEGIN
                DIVH2 (UPLIT (%H'10'), INTMED_DATA);
                DIVH2 (UPLIT (%H'10'), INTMED_DATA+16);
                SCALE = .SCALE + 1;
                END;
        END

    %,

    ! Scale H in INTMED_DATA.
    !
    M_SCALE_H_H =

        WHILE .BIN_SCALE GTR 0 DO
                BEGIN
                MULH2 (UPLIT (%H'2'), INTMED_DATA);
                MULH2 (UPLIT (%H'2'), INTMED_DATA+16);
                BIN_SCALE = .BIN_SCALE - 1;
                END;

        WHILE .BIN_SCALE LSS 0 DO
                BEGIN
                DIVH2 (UPLIT (%H'2'), INTMED_DATA);
                DIVH2 (UPLIT (%H'2'), INTMED_DATA+16);
                BIN_SCALE = .BIN_SCALE + 1;
                END;

        WHILE .SCALE GTR 0 DO
                BEGIN
                MULH2 (UPLIT (%H'10'), INTMED_DATA);
                MULH2 (UPLIT (%H'10'), INTMED_DATA+16);
                SCALE = .SCALE - 1;
                END;

        WHILE .SCALE LSS 0 DO
                BEGIN
                DIVH2 (UPLIT (%H'10'), INTMED_DATA);
                DIVH2 (UPLIT (%H'10'), INTMED_DATA+16);
                SCALE = .SCALE + 1;
                END

    %,


    ! Scale P in INTMED_DATA
    !
    M_SCALE_P_P =
        NO_DIGITS = .SRC_INFO [S_LEN];

        IF (CMPP (NO_DIGITS, INTMED_DATA, %REF (1), .PACK_ZERO) LSS 0) THEN SRC_INFO [S_SIGN] = 1;

        IF .SCALE NEQ 0
        THEN
            BEGIN
            MOVP (NO_DIGITS, INTMED_DATA, TEMP_BUF1);
            IF .CVT_ROUND_FLAG
            THEN
                ASHP (SCALE, NO_DIGITS, TEMP_BUF1, %REF (5), NO_DIGITS, INTMED_DATA)
            ELSE
                ASHP (SCALE, NO_DIGITS, TEMP_BUF1, %REF (0), NO_DIGITS, INTMED_DATA);
            END;


!       I (PS) added the following code, because, if I deposit a packed decimal
!       number 999.888 into a 4 digits decimal number scaled -2, I want to get
!       a result of 99.88, instead of later on I will get overflow error, and
!       have nothing as result.  Check to see if the siganificant digits of
!       source is greater than the siganificant digits of the destination.
!
!       This piece of code is used only if both operands are packed.
!

        IF (.SOURCE[DSC$W_LENGTH] + .SOURCE[DSC$B_SCALE] GTR
            .DESTINATION[DSC$W_LENGTH] + .DESTINATION[DSC$B_SCALE]) AND
           (.SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_P AND
            .DESTINATION[DSC$B_DTYPE] EQL DSC$K_DTYPE_P)
        THEN
            BEGIN
            LOCAL
                HIGH_NIBBLE_PTR: REF VECTOR[,BYTE],
                LOW_NIBBLE_PTR: REF VECTOR[,BYTE];


            ! Point to the last digits.
            !
            HIGH_NIBBLE_PTR = INTMED_DATA + 16 - 1;


            ! Backup the pointer to the siganificant digit
            ! needs to be truncated.  Zero out everything
            ! before that.
            !
            LOW_NIBBLE_PTR = .HIGH_NIBBLE_PTR -
                    (.DESTINATION[DSC$W_LENGTH] / 2 + 1) + 1;


            ! If destination digits is even, we need to
            ! zero out one nibble.  Note: this may be already zero.
            !
            IF (.DESTINATION[DSC$W_LENGTH] MOD 2) EQL 0
            THEN
                LOW_NIBBLE_PTR[0] = .LOW_NIBBLE_PTR[0] AND %X'0F';


        ! Zero out everything before it.  Note: this may be already
        ! zero.
        !
        LOW_NIBBLE_PTR = .LOW_NIBBLE_PTR - 1;
        WHILE .LOW_NIBBLE_PTR GEQ INTMED_DATA DO
            BEGIN
            LOW_NIBBLE_PTR[0] = %X'00';
            LOW_NIBBLE_PTR = .LOW_NIBBLE_PTR - 1;
            END;

        SIGNAL(DBG$_INUMTRUNC, 1, .DBG$GL_OPCODE_NAME);
        END

%,


! Convert P to OU, and scale it.  INTMED_DATA is used for P and OU.
!
M_SCALE_P_OU =
    NO_DIGITS = .SRC_INFO [S_LEN];
    CVTPS (NO_DIGITS, INTMED_DATA, NO_DIGITS, TEMP_BUF1);
    CLASS_S_DESC [DSC$W_LENGTH] = .NO_DIGITS + 1;
    CLASS_S_DESC [DSC$A_POINTER] = TEMP_BUF1;
    OTS$CVT_T_H (CLASS_S_DESC, TEMP_BUF2);

    IF .TEMP_BUF2 [0, 15, 1, 0]
    THEN
        BEGIN
        TEMP_BUF2 [0, 15, 1, 0] = 0;
        SRC_INFO [S_SIGN] = 1;
        END;

    CVTRHO (TEMP_BUF2, INTMED_DATA);

    WHILE .SCALE GTR 0 DO
        BEGIN
        LIB$$CVT_SCALE_OU_UP_BY_10_R1 (INTMED_DATA);
        SCALE = .SCALE - 1;
        END;

    WHILE .SCALE LSS 0 DO
        BEGIN
        LIB$$CVT_SCALE_OU_DOWN_BY_10_R1 (INTMED_DATA);
        SCALE = .SCALE + 1;
        END;

    WHILE .BIN_SCALE GTR 0 DO
        BEGIN
        DBG$CVT_SCALE_OU_UP_BY_2_R1 (INTMED_DATA);
        BIN_SCALE = .BIN_SCALE - 1;
        END;

    WHILE .BIN_SCALE LSS 0 DO
        BEGIN
        DBG$CVT_SCALE_OU_DOWN_BY_2_R1 (INTMED_DATA);
```

```
                BIN_SCALE = .BIN_SCALE + 1;
                END

        %,


        ! Convert P to D, and scale it.  INTMED_DATA is used for P and D.
        !
        M_SCALE_P_D =
            NO_DIGITS = .SRC_INFO [S_LEN];

            ! In the case of scaled packed, we need to get the scale this way.
            !
            IF .SOURCE[DSC$B_CLASS] EQL DSC$K_CLASS_SD
            THEN
                SCALE = - .SOURCE[DSC$B_SCALE];

            CVTPS (NO_DIGITS, INTMED_DATA, NO_DIGITS, TEMP_BUF1);
            CLASS_S_DESC [DSC$W_LENGTH] = .NO_DIGITS + 1;
            CLASS_S_DESC [DSC$A_POINTER] = TEMP_BUF1;
            STATUS = OTS$CVT_T_D (CLASS_S_DESC, INTMED_DATA, 0, .SCALE, (K_ENB_UNDERFLOW OR K_ENB_SCALE));

            IF NOT .STATUS
            THEN
                IF .SCALE LSS 0
                    THEN SIGNAL (DBG$_IFLTUND, 1, .DBG$GL_OPCODE_NAME)
                    ELSE SIGNAL (DBG$_FLTOVF, 1, .DBG$GL_OPCODE_NAME); %,


        ! Convert P to H, and scale it.  INTMED_DATA is used for P and H.
        !
        M_SCALE_P_H =
            NO_DIGITS = .SRC_INFO [S_LEN];

            ! In the case of scaled packed, we need to get the scale this way.
            !
            IF .SOURCE[DSC$B_CLASS] EQL DSC$K_CLASS_SD
            THEN
                SCALE = - .SOURCE[DSC$B_SCALE];

            CVTPS (NO_DIGITS, INTMED_DATA, NO_DIGITS, TEMP_BUF1);
            CLASS_S_DESC [DSC$W_LENGTH] = .NO_DIGITS + 1;
            CLASS_S_DESC [DSC$A_POINTER] = TEMP_BUF1;
            STATUS = OTS$CVT_T_H (CLASS_S_DESC, INTMED_DATA, 0, .SCALE, (K_ENB_UNDERFLOW OR K_ENB_SCALE));

            IF NOT .STATUS
            THEN
                IF .SCALE LSS 0
                    THEN SIGNAL (DBG$_IFLTUND, 1, .DBG$GL_OPCODE_NAME)
                    ELSE SIGNAL (DBG$_FLTOVF, 1, .DBG$GL_OPCODE_NAME); %;
```

```
1 ! Structure and Field Definitions.
1 !
1 ! STATES is a structure into which go all the states other than the first.
1 ! The final states and the states that never get used (such as the states that
1 ! contain non-supported CLASSes) will not be in this structure.
1 !
1 STRUCTURE
1     STATES [STATE, TOKEN] =
1         [K_ACTUAL_CLASSES*K_MAX_DATA_TYPES]
3         (STATES + (K_MAX_DATA_TYPES*
4         BEGIN
4         CASE STATE FROM K_MIN_CLASS TO K_MAX_CLASS OF
4             SET
4             [K_STATE1_CLASS_S]:     0;
4             [K_STATE2_CLASS_D]:     1;
4             [K_STATE4_CLASS_A]:     2;
4             [K_STATE9_CLASS_SD]:    3;
4             [K_STATE10_CLASS_NCA]: 4;
4             [K_STATE11_CLASS_VS]:  5;
4             [K_STATE13_CLASS_UBS]: 6;
4             [INRANGE, OUTRANGE]:
5                 BEGIN
5                 $DBG_ERROR ('DBGCVTDX:  invalid class');
5                 0
4                 END;
4             TES
4         END
1         ) + TOKEN)<0, %BPUNIT, 1>;
1
1
1 ! SRC and DST INFO record fields.
1 !
1 FIELD
1     SRC_INFO_FIELDS =
1         SET
1         S_SCALE = [0, 0, 8, 1],
1         S_POINTER = [1, 0, 32, 0],
1         S_LEN = [5, 0, 16, 0],
1         S_SIGN = [7, 0, 1, 0],
1         S_BIN_SCALE = [7, 1, 1, 0]      ! Flag indicating scale is binary
1         TES;
1
1 FIELD
1     DST_INFO_FIELDS =
1         SET
1         D_SCALE = [0, 0, 8, 1],
1         D_LEN = [5, 0, 16, 0],
1         D_BIN_SCALE = [7, 1, 1, 0]      ! Flag indicating scale is binary
1         TES;
```

```
1 ! State Table.
1 !
1 ! Start States (all classes).  CLASS_TABLE.
1 ! These are the start state entries.
1 ! For each CLASS in the standard there is an entry here.  They are:
1 !        Z      ,S     ,D     ,V      ,A
1 !       ,P      ,none  ,J     ,none   ,SD
1 !       ,NCA    ,VS    ,VSA   ,UBS    ,UBA.
1 !
1 BIND
1     CLASS_TABLE = UPLIT BYTE
1     %( Start state.  All classes. )%
1     (K_UNSCLAROU,DSC$K_CLASS_S,DSC$K_CLASS_D,K_UNSCLAROU,DSC$K_CLASS_A
1     ,K_UNSCLAROU,K_UNSCLASTA,K_UNSCLAROU,K_UNSCLASTA,DSC$K_CLASS_SD
1     ,DSC$K_CLASS_NCA,DSC$K_CLASS_VS,K_UNSCLAROU,DSC$K_CLASS_UBS,K_UNSCLAROU): START_STATE;
1
1
1 ! Remaining States.  DTYPE_TABLE.
1 !
1 ! This is the rest of the state table.  It is separate for space efficiency.
1 ! Each state contains entries for each data type supported by the standard.
1 ! Note that for space efficiency the final states are not in the vector.
1 ! Also since each state represents a supported CLASS, if a CLASS is not
1 ! supported (by the standard or routine), then the state has no entry in
1 ! the vector.  The index table for the vector will index to the proper place
1 ! in the vector below.
1 ! The table below shows graphically what descriptors are valid.
1 !
1 !                                   DSC$K__DTYPE__x
1 !                  BU WU LU B W L Q F D G H T NU NL NLO NR NRO NZ P VT AC AZ TF V SV VU SVU
1 !DSC$K__CLASS__S   x  x  x  x x x x x x x x x x  x  x   x  x   x  x             x x
1 !DSC$K__CLASS__D                            x
1 !DSC$K__CLASS__SD           x x x x x x x x x x  x  x   x  x   x  x
1 !DSC$K__CLASS__VS                           x                       x  x  x
1 !DSC$K__CLASS__A   x                        x
1 !DSC$K__CLASS__NCA x                        x
1 !DSC$K__CLASS__UBS                                                           x       x   x
1 !
1 !
1 ! Note that these data types are hard coded in (zero based vector, and position
1 ! of each data type is determined be the value of the symbol), so if data type
1 ! values are ever rearranged this table must be rearranged.
1 !
1 BIND
1     DTYPE_TABLE = UPLIT BYTE
1     %( State zero. Class z. )%
1     %( State one.  Class s. )%
1         (K_UNSDTYROU,DSC$K_DTYPE_V,DSC$K_DTYPE_BU,DSC$K_DTYPE_WU,DSC$K_DTYPE_LU
1         ,DSC$K_DTYPE_QU,DSC$K_DTYPE_B,DSC$K_DTYPE_W,DSC$K_DTYPE_L,DSC$K_DTYPE_Q
1         ,DSC$K_DTYPE_F,DSC$K_DTYPE_D,DSC$K_DTYPE_FC,DSC$K_DTYPE_DC,DSC$K_DTYPE_T
1         ,DSC$K_DTYPE_NU,DSC$K_DTYPE_NL,DSC$K_DTYPE_NLO,DSC$K_DTYPE_NR,DSC$K_DTYPE_NRO
1         ,DSC$K_DTYPE_NZ,DSC$K_DTYPE_P,DSC$K_DTYPE_ZI,K_UNSDTYROU,K_UNSDESSTA
1         ,K_UNSDTYROU,DSC$K_DTYPE_O,DSC$K_DTYPE_G,DSC$K_DTYPE_H,DSC$K_DTYPE_GC
1         ,DSC$K_DTYPE_HC,K_UNSDTYROU,K_UNSDTYROU,K_UNSDTYROU,K_UNSDTYROU
1         ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,DSC$K_DTYPE_TF
1         ,DSC$K_DTYPE_SV,K_UNSDTYROU
1     %( State two.  Class d. )%
```

```
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,DSC$K_DTYPE_T
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
        %( State three.  Class v. )%
        %( State four.  Class a. )%
            ,K_UNSDTYROU,K_UNSDTYROU,DSC$K_DTYPE_BU,K_UNSDESROU,K_UNSDESROU
            ,K_UNSDTYROU,K_UNSDESROU,K_UNSDESROU,K_UNSDESROU,K_UNSDESROU
            ,K_UNSDESROU,K_UNSDESROU,K_UNSDTYROU,K_UNSDTYROU,DSC$K_DTYPE_T
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDTYROU
            ,K_UNSDTYROU,K_UNSDTYROU,K_UNSDESROU,K_UNSDESROU,K_UNSDTYROU
            ,K_UNSDESSTA,K_UNSDTYROU,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
        %( State five.  Class p. )%
        %( State six.  Class 'undefined' )%
        %( State seven.  Class j. )%
        %( State eight.  Class 'undefined' )%
        %( State nine.  Class sd. )%
            ,K_UNSDESSTA,K_UNSDESSTA,DSC$K_DTYPE_BU,DSC$K_DTYPE_WU,DSC$K_DTYPE_LU
            ,DSC$K_DTYPE_QU,DSC$K_DTYPE_B,DSC$K_DTYPE_W,DSC$K_DTYPE_L,DSC$K_DTYPE_Q
            ,DSC$K_DTYPE_F,DSC$K_DTYPE_D,DSC$K_DTYPE_FC,DSC$K_DTYPE_DC,DSC$K_DTYPE_T
            ,DSC$K_DTYPE_NU,DSC$K_DTYPE_NL,DSC$K_DTYPE_NLO,DSC$K_DTYPE_NR,DSC$K_DTYPE_NRO
            ,DSC$K_DTYPE_NZ,DSC$K_DTYPE_P,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,DSC$K_DTYPE_O,DSC$K_DTYPE_G,DSC$K_DTYPE_H,DSC$K_DTYPE_GC
            ,DSC$K_DTYPE_HC,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
        %( State ten.  Class nca. )%
            ,K_UNSDTYROU,K_UNSDTYROU,DSC$K_DTYPE_BU,K_UNSDESROU,K_UNSDESROU
            ,K_UNSDTYROU,K_UNSDESROU,K_UNSDESROU,K_UNSDESROU,K_UNSDESROU
            ,K_UNSDESROU,K_UNSDESROU,K_UNSDTYROU,K_UNSDTYROU,DSC$K_DTYPE_T
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDTYROU
            ,K_UNSDTYROU,K_UNSDTYROU,K_UNSDESROU,K_UNSDESROU,K_UNSDTYROU
            ,K_UNSDESSTA,K_UNSDTYROU,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
        %( State eleven.  Class vs. )%
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,DSC$K_DTYPE_T
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
            ,K_UNSDESSTA,K_UNSDESSTA,DSC$K_DTYPE_VT,DSC$K_DTYPE_AC
            ,DSC$K_DTYPE_AZ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
        %( State twelve.  Class vsa. )%
        %( State thirteen.  Class ubs. )%
            ,K_UNSDTYROU,DSC$K_DTYPE_V,DSC$K_DTYPE_BU,DSC$K_DTYPE_WU,DSC$K_DTYPE_LU
```

```
; 1183        1312  1               ,DSC$K_DTYPE_QU,DSC$K_DTYPE_B,DSC$K_DTYPE_W,DSC$K_DTYPE_L,DSC$K_DTYPE_Q
; 1184        1313  1               ,DSC$K_DTYPE_F,DSC$K_DTYPE_D,DSC$K_DTYPE_FC,DSC$K_DTYPE_DC,DSC$K_DTYPE_T
; 1185        1314  1               ,DSC$K_DTYPE_NU,DSC$K_DTYPE_NL,DSC$K_DTYPE_NLO,DSC$K_DTYPE_NR,DSC$K_DTYPE_NRO
; 1186        1315  1               ,DSC$K_DTYPE_NZ,DSC$K_DTYPE_P,K_UNSDTYROU,K_UNSDTYROO,K_UNSDESSTA
; 1187        1316  1               ,K_UNSDTYROU,DSC$K_DTYPE_O,DSC$K_DTYPE_G,DSC$K_DTYPE_H,DSC$K_DTYPE_GC
; 1188        1317  1               ,DSC$K_DTYPE_HC,K_UNSDTYROU,K_UNSDTYROO,K_UNSDTYROU,DSC$K_DTYPE_VU
; 1189        1318  1               ,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA,K_UNSDESSTA
; 1190        1319  1               ,DSC$K_DTYPE_TF,DSC$K_DTYPE_SV,DSC$K_DTYPE_SVU
; 1191        1320  1           %( State fourteen.  Class uba. )%
; 1192        1321  1           %( Add more states below )%
; 1193        1322  1           ) : STATES;
; 1194        1323  1
; 1195        1324  1
; 1196        1325  1   ! Final States.
; 1197        1326  1   !
; 1198        1327  1   !These are the final states that are valid CLASS, DATA TYPE combinations.
; 1199        1328  1   !The rest of the final states are error states.
; 1200        1329  1   !The first argument to the macro is CLASS, and the second is the DATA TYPE.
; 1201        1330  1   !
; 1202        1331  1   LITERAL
; 1203        1332  1       K_S_BU = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_BU),
; 1204        1333  1       K_S_WU = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_WU),
; 1205        1334  1       K_S_LU = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_LU),
; 1206        1335  1       K_S_B = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_B),
; 1207        1336  1       K_S_W = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_W),
; 1208        1337  1       K_S_L = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_L),
; 1209        1338  1       K_S_V = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_V),
; 1210        1339  1       K_S_SV = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_SV),
; 1211        1340  1       K_S_TF = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_TF),
; 1212        1341  1       K_S_Q = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_Q),
; 1213        1342  1       K_S_QU = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_QU),
; 1214        1343  1       K_S_O = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_O),
; 1215        1344  1       K_S_F = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_F),
; 1216        1345  1       K_S_FC = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_FC),
; 1217        1346  1       K_S_D = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_D),
; 1218        1347  1       K_S_DC = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_DC),
; 1219        1348  1       K_S_T = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_T),
; 1220        1349  1       K_S_NU = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_NU),
; 1221        1350  1       K_S_NL = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_NL),
; 1222        1351  1       K_S_NLO = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_NLO),
; 1223        1352  1       K_S_NR = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_NR),
; 1224        1353  1       K_S_NRO = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_NRO),
; 1225        1354  1       K_S_NZ = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_NZ),
; 1226        1355  1       K_S_ZI = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_ZI),
; 1227        1356  1       K_S_P = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_P),
; 1228        1357  1       K_S_G = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_G),
; 1229        1358  1       K_S_GC = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_GC),
; 1230        1359  1       K_S_H = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_H),
; 1231        1360  1       K_S_HC = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_HC),
; 1232        1361  1       K_UBS_V = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_V),
; 1233        1362  1       K_UBS_BU = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_BU),
; 1234        1363  1       K_UBS_WU = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_WU),
; 1235        1364  1       K_UBS_LU = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_LU),
; 1236        1365  1       K_UBS_B = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_B),
; 1237        1366  1       K_UBS_W = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_W),
; 1238        1367  1       K_UBS_L = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_L),
; 1239        1368  1       K_UBS_Q = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_Q),
; 1240      1369 1      K_UBS_QU = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_QU),
; 1241      1370 1      K_UBS_F = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_F),
; 1242      1371 1      K_UBS_D = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_D),
; 1243      1372 1      K_UBS_FC = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_FC),
; 1244      1373 1      K_UBS_DC = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_DC),
; 1245      1374 1      K_UBS_T = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_T),
; 1246      1375 1      K_UBS_NU = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_NU),
; 1247      1376 1      K_UBS_NL = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_NL),
; 1248      1377 1      K_UBS_NLO = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_NLO),
; 1249      1378 1      K_UBS_NR = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_NR),
; 1250      1379 1      K_UBS_NRO = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_NRO),
; 1251      1380 1      K_UBS_NZ = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_NZ),
; 1252      1381 1      K_UBS_P = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_P),
; 1253      1382 1      K_UBS_O = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_O),
; 1254      1383 1      K_UBS_G = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_G),
; 1255      1384 1      K_UBS_H = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_H),
; 1256      1385 1      K_UBS_GC = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_GC),
; 1257      1386 1      K_UBS_HC = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_HC),
; 1258      1387 1      K_UBS_SV = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_SV),
; 1259      1388 1      K_UBS_VU = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_VU),
; 1260      1389 1      K_UBS_SVU = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_SVU),
; 1261      1390 1      K_UBS_TF = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_TF),
; 1262      1391 1      K_D_T = FINAL_STATE (DSC$K_CLASS_D, DSC$K_DTYPE_T),
; 1263      1392 1      K_A_BU = FINAL_STATE (DSC$K_CLASS_A, DSC$K_DTYPE_BU),
; 1264      1393 1      K_A_T = FINAL_STATE (DSC$K_CLASS_A, DSC$K_DTYPE_T),
; 1265      1394 1      K_SD_BU = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_BU),
; 1266      1395 1      K_SD_WU = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_WU),
; 1267      1396 1      K_SD_LU = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_LU),
; 1268      1397 1      K_SD_B = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_B),
; 1269      1398 1      K_SD_W = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_W),
; 1270      1399 1      K_SD_L = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_L),
; 1271      1400 1      K_SD_Q = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_Q),
; 1272      1401 1      K_SD_QU = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_QU),
; 1273      1402 1      K_SD_O = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_O),
; 1274      1403 1      K_SD_F = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_F),
; 1275      1404 1      K_SD_FC = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_FC),
; 1276      1405 1      K_SD_D = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_D),
; 1277      1406 1      K_SD_DC = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_DC),
; 1278      1407 1      K_SD_G = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_G),
; 1279      1408 1      K_SD_GC = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_GC),
; 1280      1409 1      K_SD_H = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_H),
; 1281      1410 1      K_SD_HC = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_HC),
; 1282      1411 1      K_SD_T = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_T),
; 1283      1412 1      K_SD_NU = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_NU),
; 1284      1413 1      K_SD_NL = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_NL),
; 1285      1414 1      K_SD_NLO = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_NLO),
; 1286      1415 1      K_SD_NR = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_NR),
; 1287      1416 1      K_SD_NRO = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_NRO),
; 1288      1417 1      K_SD_NZ = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_NZ),
; 1289      1418 1      K_SD_P = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_P),
; 1290      1419 1      K_NCA_BU = FINAL_STATE (DSC$K_CLASS_NCA, DSC$K_DTYPE_BU),
; 1291      1420 1      K_NCA_T = FINAL_STATE (DSC$K_CLASS_NCA, DSC$K_DTYPE_T),
; 1292      1421 1      K_VS_AC = FINAL_STATE (DSC$K_CLASS_VS, DSC$K_DTYPE_AC),
; 1293      1422 1      K_VS_AZ = FINAL_STATE (DSC$K_CLASS_VS, DSC$K_DTYPE_AZ),
; 1294      1423 1      K_VS_T = FINAL_STATE (DSC$K_CLASS_VS, DSC$K_DTYPE_T),
; 1295      1424 1      K_VS_VT = FINAL_STATE (DSC$K_CLASS_VS, DSC$K_DTYPE_VT),
; 1296      1425 1      K_SMLFINSTA = FINAL_STATE (DSC$K_CLASS_S, DSC$K_DTYPE_V),           ! Smallest final state supported.
; 1297          1426  1     K_LRGFINSTA = FINAL_STATE (DSC$K_CLASS_UBS, DSC$K_DTYPE_SVU),        ! Largest final state supported.
; 1298          1427  1     K_TOP_SD = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_HC),             ! Top state for class SD.
; 1299          1428  1     K_BOTTOM_SD = FINAL_STATE (DSC$K_CLASS_SD, DSC$K_DTYPE_B);           ! Bottom state for class SD.
```

```
1 GLOBAL ROUTINE DBG$COVER_DX_DX (SRC_VALUE_DESC, DST_VALUE_DESC, CVT_ROUND_FLAG) =
1 !
1 ! FUNCTION
1 !       This routine is a cover function for DBG$CVT_DX_DX. It has
1 !       two purposes:
1 !       1. To declare a handler which screens errors and changes them to
1 !       the appropriate DEBUG error.
1 !       2. To dummy in the correct class for DBG$CVT_DX_DX
1 !
1 ! INPUTS
1 !       SRC_VALUE_DESC  - Pointer to a value descriptor to be type-converted.
1 !
1 !       DST_VALUE_DESC  - Pointer to the target value descriptor.
1 !
1 !       CVT_ROUND_FLAG  - A flag set to TRUE to indicate the rounding takes
1 !                         place in conversion.
1 !
1 ! OUTPUTS
1 !       A pointer to a value descriptor is returned.  The target descriptor
1 !       is filled in with the result of the conversion.
1 !
2    BEGIN
2
2    MAP
2       SRC_VALUE_DESC: REF DBG$VALDESC,
2       DST_VALUE_DESC: REF DBG$VALDESC;
2
2    LOCAL
2       DUMMY,                              ! A dummy parameter.
2       FCODE,                              ! Fcode for the data object
2       STATUS,                             ! Return status from typeid check.
2       SOURCE_CLASS: BYTE,                 ! Class of Source VMS descriptor
2       TARGET_CLASS: BYTE,                 ! Class of Target VMS descriptor
2       SOURCE_DTYPE: BYTE,                 ! Dtype of Source VMS descriptor
2       TARGET_DTYPE: BYTE,                 ! Dtype of Target VMS descriptor
2       SOURCE_LENGTH: WORD,                ! Length of Source VMS descriptor
2       TARGET_LENGTH: WORD,                ! Length of Target VMS descriptor
2       DESC_VAL: REF DBG$VALDESC,          ! Pointer to source or target value descriptor
2       DESC_PTR: REF BLOCK[,BYTE],         ! Pointer to source or target descriptor.
2       SOURCE: REF BLOCK[,BYTE],           ! Address of VMS descriptor
2       TARGET: REF BLOCK[,BYTE],           ! Address of VMS descriptor
2       TYPEID_INDEX;                       ! Typeid index to perform the typeid
2                                           !       check
2
2
2    ! Recover the VMS descriptors.
2    !
2    SOURCE = SRC_VALUE_DESC[DBG$A_VALUE_VMSDESC];
2    TARGET = DST_VALUE_DESC[DBG$A_VALUE_VMSDESC];
2
2
2    ! Save pointer to result.
2    !
2    SAVE_RESULT = .DST_VALUE_DESC[DBG$L_VALUE_POINTER];
2
2
2    ! Dummy in the correct class field. (First saving away the old ones.)
```

```
    !
    SOURCE_CLASS = .SOURCE[DSC$B_CLASS];
    TARGET_CLASS = .TARGET[DSC$B_CLASS];
    SOURCE_DTYPE = .SOURCE[DSC$B_DTYPE];
    TARGET_DTYPE = .TARGET[DSC$B_DTYPE];
    SOURCE_LENGTH = .SOURCE[DSC$W_LENGTH];


    ! The debugger doesn't handle dynamic string descriptors.  Some output is
    ! better than none, so we treat them as regular string descriptors, and
    ! truncate/pad as required.
    !
    IF .SOURCE_CLASS EQL DSC$K_CLASS_D AND .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_T
    THEN
        SOURCE[DSC$B_CLASS] = DSC$K_CLASS_S;
    IF .TARGET_CLASS EQL DSC$K_CLASS_D AND .TARGET[DSC$B_DTYPE] EQL DSC$K_DTYPE_T
    THEN
        TARGET[DSC$B_CLASS] = DSC$K_CLASS_S;


    ! If class field is zero, map in correct class/dtype.
    !
    IF .SOURCE[DSC$B_CLASS] EQL 0
    THEN
        SOURCE[DSC$B_CLASS] = DBG$MAP_DTYPE_CLASS(.SOURCE[DSC$B_DTYPE], FALSE);

    IF .TARGET[DSC$B_CLASS] EQL 0
    THEN
        TARGET[DSC$B_CLASS] = DBG$MAP_DTYPE_CLASS(.TARGET[DSC$B_DTYPE], FALSE);


    ! Case on the Fcode.  If the target data is one of the non-standard
    ! data types then typeid and/or range value will be validated by
    ! calling DBG$PERFORM_TYPEID_CHECK.  First set up the routine check
    ! index according to fcode.
    !
    FCODE = .DST_VALUE_DESC[DBG$B_DHDR_FCODE];
    CASE .FCODE FROM RST$K_TYPE_MINIMUM TO RST$K_TYPE_MAXIMUM OF
        SET
        [RST$K_TYPE_ENUM]:
            TYPEID_INDEX = ORT$K_TYPEID_ENUM_ENUM;

        [RST$K_TYPE_SET]:
            TYPEID_INDEX = ORT$K_TYPEID_SET_SET;

        [RST$K_TYPE_SUBRNG]:
            TYPEID_INDEX = ORT$K_TYPEID_SUBRNG_SUBRNG;

        [INRANGE, OUTRANGE]:
            TYPEID_INDEX = 0;

        TES;


    ! If routine check index is set up, call dbg$perform_typeid_check
    ! to perform the typeid check.
    !
```

```
IF .TYPEID_INDEX NEQ 0
THEN
    BEGIN
    STATUS = DBG$PERFORM_TYPEID_CHECK(.TYPEID_INDEX,
                .SRC_VALUE_DESC, .DST_VALUE_DESC, 0);

    IF NOT .STATUS THEN SIGNAL(DBG$_OPNOTALLOW, 1, .DBG$GL_OPCODE_NAME);
    END;

! Now, typeid has checked, deposit is legal operation for both
! standard and non-standard data types at this point.
! Fixup the class and dtype fields to be vax standard format, so
! DBG$CVT_DX_DX can be called to perform the conversion.
!
INCR I FROM 0 TO 1 DO
    BEGIN
    IF .I EQL 0
    THEN
        BEGIN
        DESC_VAL = .SRC_VALUE_DESC;
        DESC_PTR = .SOURCE;
        END
    ELSE
        BEGIN
        DESC_VAL = .DST_VALUE_DESC;
        DESC_PTR = .TARGET;
        END;

    IF (.DESC_VAL[DBG$B_VALUE_DTYPE] EQL 0 AND
        .DESC_VAL[DBG$B_VALUE_CLASS] EQL 0)
    THEN
        DESC_PTR = COVER_VMSDESC_SETUP(.DESC_VAL[DBG$L_DHDR_TYPEID],
                        .DESC_PTR);
    END;


! Adjust the length of the source.  So we won't get truncation message.
! This is used for, ie., DEP enum=1, where enum is allocated 1 byte, and
! 1 is 1 longword.  in some cases, we'll get integer overflow message.
!
SELECTONE .FCODE OF
    SET
    [RST$K_TYPE_ENUM, RST$K_TYPE_SUBRNG]:
        BEGIN
        IF .SRC_VALUE_DESC[DBG$L_DHDR_TYPEID] EQL 0
        THEN
            BEGIN
            IF .SRC_VALUE_DESC[DBG$B_DHDR_FCODE] EQL RST$K_TYPE_ATOMIC
            THEN
                BEGIN
                SOURCE[DSC$B_CLASS] = .TARGET[DSC$B_CLASS];
                SOURCE[DSC$B_DTYPE] = .TARGET[DSC$B_DTYPE];
                SOURCE[DSC$W_LENGTH] = .TARGET[DSC$W_LENGTH];
                END;

            END;
```

```
3
2               END;
2
2           [OTHERWISE]:
2               0;
2           TES;
2
2
2       ! Do the conversion.  Put everything back.
2       !
2       SELECTONE .FCODE OF
2           SET
2           [RST$K_TYPE_RFA]:
2               CH$MOVE(.DST_VALUE_DESC[DBG$W_VALUE_LENGTH],
2                   .SRC_VALUE_DESC[DBG$L_VALUE_POINTER], .DST_VALUE_DESC[DBG$L_VALUE_POINTER]);
2
2           [RST$K_TYPE_SET]:
3               BEGIN
3               LOCAL
3                   INDEX,
3                   SETVALUE: REF BITVECTOR[];
3
3               IF .SRC_VALUE_DESC[DBG$B_DHDR_FCODE] EQL RST$K_TYPE_SET
3               THEN
4                   BEGIN
4                   CH$MOVE(.DST_VALUE_DESC[DBG$W_VALUE_LENGTH],
4                       .SRC_VALUE_DESC[DBG$L_VALUE_POINTER], .DST_VALUE_DESC[DBG$L_VALUE_POINTER]);
4                   END
4
3               ELSE
4                   BEGIN
4                   INDEX = ..SRC_VALUE_DESC[DBG$L_VALUE_POINTER];
4                   IF .INDEX LSS 0 THEN SIGNAL(DBG$_BITRANGE);
4                   SETVALUE = .DST_VALUE_DESC[DBG$L_VALUE_POINTER];
5                   IF .INDEX LEQ (.DST_VALUE_DESC[DBG$W_VALUE_LENGTH] * 8 - 1)
4                   THEN
4                       SETVALUE[.INDEX] = 1
4                   ELSE
4                       SIGNAL(DBG$_BITRANGE);
3                   END;
2               END;
2
2           [OTHERWISE]:
2               DBG$CVT_DX_DX (.SOURCE, .TARGET, DUMMY, .CVT_ROUND_FLAG);
2           TES;
2
2
2       SOURCE[DSC$B_CLASS] = .SOURCE_CLASS;
2       SOURCE[DSC$B_DTYPE] = .SOURCE_DTYPE;
2       SOURCE[DSC$W_LENGTH] = .SOURCE_LENGTH;
2       TARGET[DSC$B_CLASS] = .TARGET_CLASS;
2       TARGET[DSC$B_DTYPE] = .TARGET_DTYPE;
2
2
2       ! Do range check.
2       !
2       IF .TYPEID_INDEX NEQ 0
```

```
; 1529          1657  2          THEN
; 1530          1658  3              BEGIN
; 1531          1659  3              STATUS = DBG$PERFORM_TYPEID_CHECK (.TYPEID_INDEX,
; 1532          1660  3                          .SRC_VALUE_DESC, 0, .DST_VALUE_DESC);
; 1533          1661  3              IF NOT .STATUS
; 1534          1662  3              THEN
; 1535          1663  3                  SIGNAL (DBG$_IVALOUTBNDS, 1, .DBG$GL_OPCODE_NAME);
; 1536          1664  2              END;
; 1537          1665  2
; 1538          1666  2          RETURN .DST_VALUE_DESC;
; 1539          1667  1          END;


                                                                            .TITLE  DBGCVTDX
                                                                            .IDENT  \V04-000\

                                                                            .PSECT  DBG$PLIT,NOWRT,  SHR,  PIC,0

FF  0D  FF  0B  0A  09  FB  FF  FB  FF  04  FF  02  01  FF  00000 P.AAB:   .BYTE   -1, 1, 2, -1, 4, -1, -5, -1, -5, 9, 10, -       ;
                                                                                    11, -1, 13, -1                                  ;
0E  0D  0C  0B  0A  09  08  07  06  05  04  03  02  01  FE  0000F P.AAC:   .BYTE   -2, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, -        ;
1D  1C  1B  1A  FE  FC  FE  16  15  14  13  12  11  10  0F  0001E                  12, 13, 14, 15, 16, 17, 18, 19, 20, 21, -      ;
FC  FC  FE  29  28  FC  FC  FC  FC  FC  FE  FE  FE  FE  1E  0002D                  22, -2, -4, -2, 26, 27, 28, 29, 30, -2, -      ;
FC  FC  0E  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  0003C                  -2, -2, -2, -4, -4, -4, -4, -4, 40, 41, -      ;
FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  0004B                  -2, -4, -4, -4, -4, -4, -4, -4, -4, -4, -      ;
FD  02  FE  FE  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  0005A                  -4, -4, -4, -4, -4, 14, -4, -4, -4, -4, -      ;
FC  FC  FC  FC  0E  FE  FE  FD  FD  FD  FD  FD  FD  FE  FD  00069                  -4, -4, -4, -4, -4, -4, -4, -4, -4, -4, -      ;
FC  FC  FE  FC  FE  FD  FD  FE  FE  FE  FC  FC  FC  FC  FC  00078                  -4, -4, -4, -4, -4, -4, -4, -4, -4, -4, -      ;
05  04  03  02  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  00087                  -4, -4, -4, -4, -2, -2, 2, -3, -3, -2, -       ;
14  13  12  11  10  0F  0E  0D  0C  0B  0A  09  08  07  06  00096                  -3, -3, -3, -3, -3, -3, -2, -2, 14, -4, -      ;
FC  FC  FC  FC  FC  1E  1D  1C  1B  1A  FC  FC  FC  FC  15  000A5                  -4, -4, -4, -4, -4, -4, -4, -4, -2, -2, -      ;
FD  FD  FE  FD  FD  02  FE  FE  FC  FC  FC  FC  FC  FC  FC  000B4                  -2, -3, -3, -2, -4, -2, -4, -4, -4, -4, -      ;
FC  FC  FC  FC  FC  FC  FC  FC  0E  FE  FE  FD  FD  FD  FD  000C3                  -4, -4, -4, -4, -4, -4, -4, -4, -4, 2, 3, -    ;
FC  FC  FC  FC  FC  FC  FE  FC  FE  FD  FD  FE  FE  FE  FC  000D2                  4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, -    ;
FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  000E1                  16, 17, 18, 19, 20, 21, -4, -4, -4, -4, -      ;
FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  0E  FC  FC  FC  FC  000F0                  26, 27, 28, 29, 30, -4, -4, -4, -4, -4, -      ;
27  26  25  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  FC  000FF                  -4, -4, -4, -4, -4, -4, -4, -2, -2, 2, -       ;
0B  0A  09  08  07  06  05  04  03  02  01  FE  FC  FC  FC  0010E                  -3, -3, -2, -3, -3, -3, -3, -3, -3, -2, -      ;
1A  FE  FC  FE  FE  15  14  13  12  11  10  0F  0E  0D  0C  0011D                  -2, 14, -4, -4, -4, -4, -4, -4, -4, -4, -      ;
29  28  FC  FC  FC  FC  FC  22  FE  FE  FE  1E  1D  1C  1B  0012C                  -4, -2, -2, -2, -3, -3, -2, -4, -2, -4, -      ;
                                                            2A  0013B                  -4, -4, -4, -4, -4, -4, -4, -4, -4, -4, -      ;
                                                                                    -4, -4, -4, -4, -4, -4, -4, -4, -4, -4, -      ;
                                                                                    -4, -4, -4, -4, 14, -4, -4, -4, -4, -4, -      ;
                                                                                    -4, -4, -4, -4, -4, -4, -4, -4, -4, -4, -      ;
                                                                                    -4, -4, -4, -4, -4, -4, -4, 37, 38, 39, -      ;
                                                                                    -4, -4, -4, -2, 1, 2, 3, 4, 5, 6, 7, 8, -      ;
                                                                                    9, 10, 11, 12, 13, 14, 15, 16, 17, 18, -       ;
                                                                                    19, 20, 21, -2, -2, -4, -2, 26, 27, 28, -      ;
                                                                                    29, 30, -2, -2, -2, 34, -4, -4, -4, -4, -      ;
                                                                                    -4, 40, 41, 42                                 ;
76  6E  69  20  20  3A  58  44  54  56  43  47  42  44  18  0013C P.AAD:   .ASCII  <24>\DBGCVTDX:  invalid class\                 ;
                    73  73  61  6C  63  20  64  69  6C  61  0014B                                                                 ;
76  6E  69  20  20  3A  58  44  54  56  43  47  42  44  18  00155 P.AAE:   .ASCII  <24>\DBGCVTDX:  invalid class\                 ;
                    73  73  61  6C  63  20  64  69  6C  61  00164                                                                 ;
76  6E  69  20  20  3A  58  44  54  56  43  47  42  44  18  0016E P.AAF:   .ASCII  <24>\DBGCVTDX:  invalid class\                 ;
                    73  73  61  6C  63  20  64  69  6C  61  0017D                                                                 ;
76  6E  69  20  20  3A  58  44  54  56  43  47  42  44  18  00187 P.AAG:   .ASCII  <24>\DBGCVTDX:  invalid class\                 ;
```

```
                         73 73 61 6C 63 20 64 69 6C 61 00196
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 001A0 P.AAH:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 001AF
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 001B9 P.AAI:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 001C8
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 001D2 P.AAJ:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 001E1
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 001EB P.AAK:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 001FA
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00204 P.AAL:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00213
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0021D P.AAM:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0022C
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00236 P.AAN:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00245
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0024F P.AAO:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0025E
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00268 P.AAP:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00277
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00281 P.AAQ:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00290
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0029A P.AAR:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 002A9
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 002B3 P.AAS:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 002C2
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 002CC P.AAT:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 002DB
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 002E5 P.AAU:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 002F4
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 002FE P.AAV:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0030D
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00317 P.AAW:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00326
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00330 P.AAX:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0033F
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00349 P.AAY:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00358
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00362 P.AAZ:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00371
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0037B P.ABA:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0038A
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00394 P.ABB:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 003A3
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 003AD P.ABC:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 003BC
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 003C6 P.ABD:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 003D5
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 003DF P.ABE:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 003EE
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 003F8 P.ABF:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00407
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00411 P.ABG:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00420
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0042A P.ABH:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00439
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00443 P.ABI:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00452
```

```
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0045C P.ABJ:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 0046B                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00475 P.ABK:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 00484                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0048E P.ABL:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 0049D                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 004A7 P.ABM:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 004B6                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 004C0 P.ABN:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 004CF                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 004D9 P.ABO:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 004E8                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 004F2 P.ABP:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 00501                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0050B P.ABQ:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 0051A                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00524 P.ABR:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 00533                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0053D P.ABS:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 0054C                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00556 P.ABT:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 00565                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0056F P.ABU:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 0057E                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00588 P.ABV:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 00597                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 005A1 P.ABW:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 005B0                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 005BA P.ABX:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 005C9                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 005D3 P.ABY:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 005E2                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 005EC P.ABZ:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 005FB                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00605 P.ACA:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 00614                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0061E P.ACB:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 0062D                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00637 P.ACC:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 00646                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00650 P.ACD:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 0065F                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00669 P.ACE:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 00678                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00682 P.ACF:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 00691                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0069B P.ACG:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 006AA                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 006B4 P.ACH:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 006C3                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 006CD P.ACI:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 006DC                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 006E6 P.ACJ:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 006F5                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 006FF P.ACK:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
               73 73 61 6C 63 20 64 69 6C 61 0070E                                                         :
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00718 P.ACL:  .ASCII  <24>\DBGCVTDX:  invalid class\            :
```

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               73 73 61 6C 63 20 64 69 6C 61 00727
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00731 P.ACM:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00740
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0074A P.ACN:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00759
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00763 P.ACO:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00772
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0077C P.ACP:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0078B
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00795 P.ACQ:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 007A4
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 007AE P.ACR:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 007BD
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 007C7 P.ACS:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 007D6
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 007E0 P.ACT:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 007EF
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 007F9 P.ACU:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00808
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00812 P.ACV:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00821
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0082B P.ACW:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0083A
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00844 P.ACX:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00853
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0085D P.ACY:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0086C
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00876 P.ACZ:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00885
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0088F P.ADA:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0089E
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 008A8 P.ADB:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 008B7
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 008C1 P.ADC:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 008D0
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 008DA P.ADD:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 008E9
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 008F3 P.ADE:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00902
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0090C P.ADF:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0091B
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00925 P.ADG:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00934
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 0093E P.ADH:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0094D
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00957 P.ADI:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00966
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00970 P.ADJ:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 0097F
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00989 P.ADK:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00998
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 009A2 P.ADL:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 009B1
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 009BB P.ADM:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 009CA
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 009D4 P.ADN:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 009E3
```

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76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 009ED P.ADO:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 009FC
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00A06 P.ADP:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00A15
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00A1F P.ADQ:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00A2E
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00A38 P.ADR:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00A47
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00A51 P.ADS:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00A60
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00A6A P.ADT:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00A79
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00A83 P.ADU:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00A92
76 6E 69 20 20 3A 58 44 54 56 43 47 42 44 18 00A9C P.ADV:  .ASCII  <24>\DBGCVTDX:  invalid class\
               73 73 61 6C 63 20 64 69 6C 61 00AAB

                                                           .PSECT  DBG$OWN,NOEXE,  PIC,2

                                                 00000 DECIMAL_CONVERT:
                                                           .BLKB   4
                                                 00004 SAVE_RESULT:
                                                           .BLKB   4

                                                       CLASS_TABLE=          P.AAB
                                                       DTYPE_TABLE=          P.AAC
                                                           .EXTRN  DBG$CVT_ASHP_R1
                                                           .EXTRN  DBG$CVT_CMPH_R1
                                                           .EXTRN  DBG$CVT_CVTDH_R1
                                                           .EXTRN  DBG$CVT_CVTLB_R1
                                                           .EXTRN  DBG$CVT_CVTLH_R1
                                                           .EXTRN  DBG$CVT_CVTLW_R1
                                                           .EXTRN  DBG$CVT_CVTRDH_R1
                                                           .EXTRN  DBG$CVT_CVTHD_R1
                                                           .EXTRN  DBG$CVT_CVTHF_R1
                                                           .EXTRN  DBG$CVT_CVTHG_R1
                                                           .EXTRN  DBG$CVT_CVTGH_R1
                                                           .EXTRN  DBG$CVT_CVTRHL_R1
                                                           .EXTRN  DBG$CVT_CVTRHO_R1
                                                           .EXTRN  DBG$CVT_CVTRHQ_R1
                                                           .EXTRN  DBG$CVT_CVTROUD_R1
                                                           .EXTRN  DBG$CVT_CVTROUH_R1
                                                           .EXTRN  DBG$CVT_DIVD2_R1
                                                           .EXTRN  DBG$CVT_DIVH2_R1
                                                           .EXTRN  DBG$CVT_DIVP_R1
                                                           .EXTRN  DBG$CVT_MULD2_R1
                                                           .EXTRN  DBG$CVT_MULH2_R1
                                                           .EXTRN  DBG$CVT_MULP_R1
                                                           .EXTRN  DBG$GET_SET_TYPEID
                                                           .EXTRN  DBG$INS_ENCODE, DBG$MAP_DTYPE_CLASS
                                                           .EXTRN  DBG$PERFORM_TYPEID_CHECK
                                                           .EXTRN  DBG$STA_TYP_SUBRNG
                                                           .EXTRN  DBG$STA_TYP_ATOMIC
                                                           .EXTRN  DBG$STRIP_ZEROES
                                                           .EXTRN  FOR$CVT_D_TE, FOR$CVT_D_TF
                                                           .EXTRN  FOR$CVT_G_TE, FOR$CVT_G_TF
                                                           .EXTRN  FOR$CVT_H_TE, FOR$CVT_H_TF
```

```
                                                        .EXTRN  DBG$CVT_SCALE_OU_UP_BY_10_R1
                                                        .EXTRN  DBG$CVT_SCALE_OU_DOWN_BY_TO_R1
                                                        .EXTRN  LIB$$CVT_SCALE_OU_UP_BY_TO_R1
                                                        .EXTRN  LIB$$CVT_SCALE_OU_DOWN_BY_TO_R1
                                                        .EXTRN  DBG$CVT_SCALE_OU_UP_BY_2_R1
                                                        .EXTRN  DBG$CVT_SCALE_OU_DOWN_BY_2_R1
                                                        .EXTRN  LIB$MATCH_COND, LIB$SIG_TO_RET
                                                        .EXTRN  LIB$SCOPY_R_DX6
                                                        .EXTRN  LIB$SCOPY_DXDX6
                                                        .EXTRN  LIB$STOP, MTH$CVT_D_G
                                                        .EXTRN  OTS$CVT_L_TI, OTS$CVT_T_D
                                                        .EXTRN  OTS$CVT_T_G, OTS$CVT_T_H
                                                        .EXTRN  SYS$ASCTIM, SYS$BINTIM
                                                        .EXTRN  LIB$AB_CVTTP_U, LIB$AB_CVT_O_U
                                                        .EXTRN  LIB$AB_CVTTP_O, LIB$AB_CVT_U_O
                                                        .EXTRN  LIB$AB_CVTPT_U, LIB$AB_CVTPT_O
                                                        .EXTRN  LIB$AB_CVTPT_Z, LIB$AB_CVTTP_Z
                                                        .EXTRN  DBG$GL_OPCODE_NAME
                                                        .EXTRN  LIB$_STRTRU

                                                        .PSECT  DBG$CODE,NOWRT,  SHR,  PIC,0

                              0FFC 00000                .ENTRY  DBG$COVER_DX_DX, Save R2,R3,R4,R5,R6,R7,R8,-; 1429
                                                                R9,R10,R11                                         ;
             5E          24   C2 00002                  SUBL2   #36, SP                                            ;
             58      04  AC   D0 00005                  MOVL    SRC_VALUE_DESC, R8                                 ; 1476
             56      14  A8   9E 00009                  MOVAB   20(R8), SOURCE                                     ;
             57      08  AC   D0 0000D                  MOVL    DST_VALUE_DESC, R7                                 ; 1477
             59      14  A7   9E 00011                  MOVAB   20(R7), TARGET                                     ;
00000000'    EF      18  A7   D0 00015                  MOVL    24(R7), SAVE_RESULT                                ; 1482
             5B      03  A6   9E 0001D                  MOVAB   3(SOURCE), R11                                     ; 1487
       10    AE          6B   90 00021                  MOVB    (R11), SOURCE_CLASS                                ;
             5A      03  A9   9E 00025                  MOVAB   3(TARGET), R10                                     ; 1488
       0C    AE          6A   90 00029                  MOVB    (R10), TARGET_CLASS                                ;
       08    AE      02  A6   90 0002D                  MOVB    2(SOURCE), SOURCE_DTYPE                            ; 1489
       04    AE      02  A9   90 00032                  MOVB    2(TARGET), TARGET_DTYPE                            ; 1490
             6E          66   B0 00037                  MOVW    (SOURCE), SOURCE_LENGTH                            ; 1491
             02      10  AE   91 0003A                  CMPB    SOURCE_CLASS, #2                                   ; 1498
                         09   12 0003E                  BNEQ    1$                                                 ;
             0E      02  A6   91 00040                  CMPB    2(SOURCE), #14                                     ;
                         03   12 00044                  BNEQ    1$                                                 ;
             6B          01   90 00046                  MOVB    #1, (R11)                                          ; 1500
             02      0C  AE   91 00049 1$:              CMPB    TARGET_CLASS, #2                                   ; 1501
                         09   12 0004D                  BNEQ    2$                                                 ;
             0E      02  A9   91 0004F                  CMPB    2(TARGET), #14                                     ;
                         03   12 00053                  BNEQ    2$                                                 ;
             6A          01   90 00055                  MOVB    #1, (R10)                                          ; 1503
                         6B   95 00058 2$:              TSTB    (R11)                                              ; 1508
                         10   12 0005A                  BNEQ    3$                                                 ;
                         7E   D4 0005C                  CLRL    -(SP)                                              ; 1510
             7E      02  A6   9A 0005E                  MOVZBL  2(SOURCE), -(SP)                                   ;
00000000G    00          02   FB 00062                  CALLS   #2, DBG$MAP_DTYPE_CLASS                            ;
             6B          50   90 00069                  MOVB    R0, (R11)                                          ;
                         6A   95 0006C 3$:              TSTB    (R10)                                              ; 1512
                         10   12 0006E                  BNEQ    4$                                                 ;
                         7E   D4 00070                  CLRL    -(SP)                                              ; 1514
             7E      02  A9   9A 00072                  MOVZBL  2(TARGET), -(SP)                                   ;
```

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                      00000000G  00         02  FB 00076       CALLS   #2, DBG$MAP_DTYPE_CLASS              ;
                                 6A         50  90 0007D       MOVB    R0, (R10)                            ;
                                 54     06  A7  9A 00080 4$:   MOVZBL  6(R7), FCODE                         ; 1522
                         15      01         54  CF 00084       CASEL   FCODE, #1, #21                       ; 1523
   0031          002C          002C       002C     00088 5$:   .WORD   6$-5$,-                              ;
   0037          002C          002C       002C     00090               6$-5$,-                              ;
   002C          002C          002C       003D     00098               6$-5$,-                              ;
   002C          002C          002C       002C     000A0               7$-5$,-                              ;
   002C          002C          002C       002C     000A8               6$-5$,-                              ;
                               002C       002C     000B0               6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       8$-5$,-                              ;
                                                                       9$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$,-                              ;
                                                                       6$-5$                                ;
                                        14  AE  D4 000B4 6$:   CLRL    TYPEID_INDEX                         ; 1535
                                            10  11 000B7       BRB     10$                                  ;
                          14     AE         01  D0 000B9 7$:   MOVL    #1, TYPEID_INDEX                     ; 1526
                                            0A  11 000BD       BRB     10$                                  ;
                          14     AE         02  D0 000BF 8$:   MOVL    #2, TYPEID_INDEX                     ; 1529
                                            04  11 000C3       BRB     10$                                  ;
                          14     AE         04  D0 000C5 9$:   MOVL    #4, TYPEID_INDEX                     ; 1532
                                        18  AE  D4 000C9 10$:  CLRL    24(SP)                               ; 1543
                                        14  AE  D5 000CC       TSTL    TYPEID_INDEX                         ;
                                            30  13 000CF       BEQL    11$                                  ;
                                        18  AE  D6 000D1       INCL    24(SP)                               ;
                                            7E  D4 000D4       CLRL    -(SP)                                ; 1546
                                            57  DD 000D6       PUSHL   R7                                   ; 1547
                                            58  DD 000D8       PUSHL   R8                                   ;
                                        20  AE  DD 000DA       PUSHL   TYPEID_INDEX                         ; 1546
                      00000000G  00         04  FB 000DD       CALLS   #4, DBG$PERFORM_TYPEID_CHECK         ;
                             1C  AE         50  D0 000E4       MOVL    R0, STATUS                           ;
                                 15     1C  AE  E8 000E8       BLBS    STATUS, 11$                          ; 1549
                                 00000000G  00  DD 000EC       PUSHL   DBG$GL_OPCODE_NAME                   ;
                                            01  DD 000F2       PUSHL   #1                                   ;
                                 000289CA   8F  DD 000F4       PUSHL   #166346                              ;
                      00000000G  00         03  FB 000FA       CALLS   #3, LIB$SIGNAL                       ;
                                            53  D4 00101 11$:  CLRL    I                                    ; 1558
                                            08  12 00103 12$:  BNEQ    13$                                  ; 1560
                                 52         58  D0 00105       MOVL    R8, DESC_VAL                         ; 1563
                                 50         56  D0 00108       MOVL    SOURCE, DESC_PTR                     ; 1564
                                            06  11 0010B       BRB     14$                                  ; 1560
                                 52         57  D0 0010D 13$:  MOVL    R7, DESC_VAL                         ; 1568
                                 50         59  D0 00110       MOVL    TARGET, DESC_PTR                     ; 1569
                                        16  A2  95 00113 14$:  TSTB    22(DESC_VAL)                         ; 1572
                                            0F  12 00116       BNEQ    15$                                  ;
```

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                                   17    A2   95 00118        TSTB    23(DESC_VAL)                                     ; 1573
                                         0A   12 0011B        BNEQ    15$                                              ;
                                         50   DD 0011D        PUSHL   DESC_PTR                                         ; 1576
                                   08    A2   DD 0011F        PUSHL   8(DESC_VAL)                                      ; 1575
                     0000V   CF          02   FB 00122        CALLS   #2, COVER_VMSDESC_SETUP                          ;
                D8           53          01   F3 00127  15$:  AOBLEQ  #1, I, 12$                                       ; 1558
                             04          54   D1 0012B        CMPL    FCODE, #4                                        ; 1586
                                         05   13 0012E        BEQL    16$                                              ;
                             09          54   D1 00130        CMPL    FCODE, #9                                        ;
                                         16   12 00133        BNEQ    17$                                              ;
                                   08    A8   D5 00135  16$:  TSTL    8(R8)                                            ; 1588
                                         11   12 00138        BNEQ    17$                                              ;
                             02    06    A8   91 0013A        CMPB    6(R8), #2                                        ; 1591
                                         0B   12 0013E        BNEQ    17$                                              ;
                             6B          6A   90 00140        MOVB    (R10), (R11)                                     ; 1594
                     02      A6    02    A9   90 00143        MOVB    2(TARGET), 2(SOURCE)                             ; 1595
                             66          69   B0 00148        MOVW    (TARGET), (SOURCE)                               ; 1596
                             14          54   D1 0014B  17$:  CMPL    FCODE, #20                                       ; 1612
                                         0B   13 0014E        BEQL    18$                                              ;
                             08          54   D1 00150        CMPL    FCODE, #8                                        ; 1616
                                         49   12 00153        BNEQ    22$                                              ;
                             08    06    A8   91 00155        CMPB    6(R8), #8                                        ; 1622
                                         09   12 00159        BNEQ    19$                                              ;
        18      B7      18   B8    14    A7   28 0015B  18$:  MOVC3   20(R7), @24(R8), @24(R7)                         ; 1626
                                         49   11 00162        BRB     23$                                              ; 1622
                             52    18    B8   D0 00164  19$:  MOVL    @24(R8), INDEX                                   ; 1631
                                         0D   18 00168        BGEQ    20$                                              ; 1632
                              00028248   8F   DD 0016A        PUSHL   #164424                                          ;
                 00000000G   00          01   FB 00170        CALLS   #1, LIB$SIGNAL                                   ;
                             51    18    A7   D0 00177  20$:  MOVL    24(R7), SETVALUE                                 ; 1633
                             50    14    A7   3C 0017B        MOVZWL  20(R7), R0                                       ; 1634
                             50          08   C4 0017F        MULL2   #8, R0                                           ;
                                         50   D7 00182        DECL    R0                                               ;
                             50          52   D1 00184        CMPL    INDEX, R0                                        ;
                                         06   14 00187        BGTR    21$                                              ;
                20           61          52   E2 00189        BBSS    INDEX, (SETVALUE), 23$                           ; 1636
                                         1E   11 0018D        BRB     23$                                              ;
                              00028248   8F   DD 0018F  21$:  PUSHL   #164424                                          ; 1638
                 00000000G   00          01   FB 00195        CALLS   #1, LIB$SIGNAL                                   ;
                                         0F   11 0019C        BRB     23$                                              ; 1610
                                   0C    AC   DD 0019E  22$:  PUSHL   CVT_ROUND_FLAG                                   ; 1643
                                   24    AE   9F 001A1        PUSHAB  DUMMY                                            ;
                                 0240    8F   BB 001A4        PUSHR   #^M<R6,R9>                                       ;
                     0000V   CF          04   FB 001A8        CALLS   #4, DBG$CVT_DX_DX                                ;
                             6B    10    AE   90 001AD  23$:  MOVB    SOURCE_CLASS, (R11)                              ; 1647
                     02      A6    08    AE   90 001B1        MOVB    SOURCE_DTYPE, 2(SOURCE)                          ; 1648
                             66          6E   B0 001B6        MOVW    SOURCE_LENGTH, (SOURCE)                          ; 1649
                             6A    0C    AE   90 001B9        MOVB    TARGET_CLASS, (R10)                              ; 1650
                     02      A9    04    AE   90 001BD        MOVB    TARGET_DTYPE, 2(TARGET)                          ; 1651
                             2D    18    AE   E9 001C2        BLBC    24(SP), 24$                                      ; 1656
                                         57   DD 001C6        PUSHL   R7                                               ; 1660
                                         7E   D4 001C8        CLRL    -(SP)                                            ; 1659
                                         58   DD 001CA        PUSHL   R8                                               ; 1660
                                   20    AE   DD 001CC        PUSHL   TYPEID_INDEX                                     ; 1659
                 00000000G   00          04   FB 001CF        CALLS   #4, DBG$PERFORM_TYPEID_CHECK                     ;
                        1C   AE          50   D0 001D6        MOVL    R0, STATUS                                       ;
                             15    1C    AE   E8 001DA        BLBS    STATUS, 24$                                      ; 1661
```

```
                         00000000G  00  DD 001DE        PUSHL   DBG$GL_OPCODE_NAME                    ; 1663
                                    01  DD 001E4        PUSHL   #1                                    ;
                         0002874B   8F  DD 001E6        PUSHL   #165707                               ;
           00000000G  00            03  FB 001EC        CALLS   #3, LIB$SIGNAL                        ;
                      50            57  D0 001F3 24$:   MOVL    R7, R0                                ; 1666
                                        04 001F6        RET                                           ; 1667

; Routine Size:  503 bytes,    Routine Base:  DBG$CODE + 0000
```

```
1 ROUTINE COVER_VMSDESC_SETUP(TYPEID, VMSDESC) =
1 !
1 ! FUNCTION
1 !       This routine is a hack routine called depending on FCODE in the
1 !       TYPEID. The purpose of this routine is to plunge in the class code
1 !       and dtype so that the DBG$CVT_DX_DX can be called.
1 !
1 ! INPUTS
1 !       TYPEID  - Typeid of the data object.
1 !
1 !       VMSDESC - Vax standard Descriptor.
1 !
1 ! OUTPUTS
1 !       VMSDESC is returned.
1 !
1
2    BEGIN
2    MAP
2       TYPEID: REF RST$ENTRY,
2       VMSDESC: REF BLOCK[,BYTE];
2
2    VMSDESC[DSC$B_CLASS] = DSC$K_CLASS_S;
2    SELECTONE .TYPEID[RST$B_FCODE] OF
2       SET
2       [RST$K_TYPE_ENUM]:
3           BEGIN
3           SELECTONE .VMSDESC[DSC$W_LENGTH] OF
3               SET
3               [1]:
3                   VMSDESC[DSC$B_DTYPE] = DSC$K_DTYPE_BU;
3               [2]:
3                   VMSDESC[DSC$B_DTYPE] = DSC$K_DTYPE_WU;
3               [OTHERWISE]:
3                   VMSDESC[DSC$B_DTYPE] = DSC$K_DTYPE_LU;
3               TES;
2           END;
2
2       [RST$K_TYPE_SUBRNG]:
3           BEGIN
3           LOCAL
3               DUMMY1, DUMMY2, DUMMY3, DTYPE;
3
3           WHILE .TYPEID[RST$B_FCODE] EQL RST$K_TYPE_SUBRNG DO
3               DBG$STA_TYP_SUBRNG(.TYPEID, TYPEID, DUMMY1, DUMMY2, DUMMY3);
3
3           SELECTONE .TYPEID[RST$B_FCODE] OF
3               SET
3               [RST$K_TYPE_ENUM]:
3                   VMSDESC = COVER_VMSDESC_SETUP(.TYPEID, .VMSDESC);
3
3               [RST$K_TYPE_ATOMIC]:
4                   BEGIN
4                   DBG$STA_TYP_ATOMIC(.TYPEID, DTYPE, DUMMY3);
4                   IF .DTYPE EQL DST$K_BOOL THEN DTYPE = DSC$K_DTYPE_TF;
4                   VMSDESC[DSC$B_DTYPE] = .DTYPE;
4
4
```

```
; 1598          1725 4                    ! In here we have a bit of problem, for the size of
; 1599          1726 4                    ! the parant and the size of the subrange is different.
; 1600          1727 4                    ! For example, subrange's parant can be longword integer
; 1601          1728 4                    ! and subrange can be 1 byte.  In order for the type
; 1602          1729 4                    ! converter to take the right value, we adjust the dtype
; 1603          1730 4                    ! by the length.
; 1604          1731 4                    !
; 1605          1732 5                    IF (.DTYPE NEQ DSC$K_DTYPE_T AND .DTYPE NEQ DSC$K_DTYPE_TF)
; 1606          1733 4                    THEN
; 1607          1734 5                        BEGIN
; 1608          1735 5                        SELECTONE .VMSDESC[DSC$W_LENGTH] OF
; 1609          1736 5                            SET
; 1610          1737 5                            [1]:
; 1611          1738 5                                VMSDESC[DSC$B_DTYPE] = DSC$K_DTYPE_B;
; 1612          1739 5                            [2]:
; 1613          1740 5                                VMSDESC[DSC$B_DTYPE] = DSC$K_DTYPE_W;
; 1614          1741 5                            [OTHERWISE]:
; 1615          1742 5                                VMSDESC[DSC$B_DTYPE] = DSC$K_DTYPE_L;
; 1616          1743 5                            TES;
; 1617          1744 4                        END;
; 1618          1745 3                    END;
; 1619          1746 3
; 1620          1747 3                TES;
; 1621          1748 3
; 1622          1749 2            END;
; 1623          1750 2
; 1624          1751 2        [RST$K_TYPE_SET, RST$K_TYPE_TPTR]:
; 1625          1752 2            VMSDESC[DSC$B_DTYPE] = DSC$K_DTYPE_L;
; 1626          1753 2
; 1627          1754 2        [RST$K_TYPE_RFA]:
; 1628          1755 2            VMSDESC[DSC$B_CLASS] = 0;
; 1629          1756 2
; 1630          1757 2        [OTHERWISE]:
; 1631          1758 2            $DBG_ERROR('DBGCVTDX\COVER_VMSDESC_SETUP');
; 1632          1759 2        TES;
; 1633          1760 2
; 1634          1761 2    RETURN .VMSDESC;
; 1635          1762 1    END;


                                                                  .PSECT  DBG$PLIT,NOWRT,  SHR,  PIC,0

52  45  56  4F  43  5C  58  44  54  56  43  47  42  44  1C  00AB5 P.ADW:  .ASCII  <28>\DBGCVTDX\<92>\COVER_VMSDESC_SETUP\     ;
    50  55  54  45  53  5F  43  53  45  44  53  4D  56  5F  00AC4                                                             ;


                                                                  .PSECT  DBG$CODE,NOWRT,  SHR,  PIC,0

                                      000C 00000 COVER_VMSDESC_SETUP:
                                                                  .WORD   Save R2,R3                                       ; 1668
                   5E           10  C2 00002                      SUBL2   #16, SP                                          ;
                   52       08  AC  D0 00005                      MOVL    VMSDESC, R2                                      ; 1689
             03    A2           01  90 00009                      MOVB    #1, 3(R2)                                        ;
                   50       04  AC  D0 0000D                      MOVL    TYPEID, R0                                       ; 1690
                   50           18  C0 00011                      ADDL2   #24, R0                                          ;
```

```
                50            60  9A 00014          MOVZBL  (R0), R0                          ;
                04            50  91 00017          CMPB    R0, #4                            ; 1692
                              1C  12 0001A          BNEQ    3$                                ;
                01            62  B1 0001C          CMPW    (R2), #1                          ; 1696
                              06  12 0001F          BNEQ    1$                                ;
        02      A2            02  90 00021          MOVB    #2, 2(R2)                         ; 1697
                              53  11 00025          BRB     6$                                ;
                02            62  B1 00027 1$:      CMPW    (R2), #2                          ; 1698
                              06  12 0002A          BNEQ    2$                                ;
        02      A2            03  90 0002C          MOVB    #3, 2(R2)                         ; 1699
                              48  11 00030          BRB     6$                                ;
        02      A2            04  90 00032 2$:      MOVB    #4, 2(R2)                         ; 1701
                              42  11 00036          BRB     6$                                ; 1690
                09            50  91 00038 3$:      CMPB    R0, #9                            ; 1705
                              03  13 0003B          BEQL    4$                                ;
                            0085  31 0003D          BRW     10$                               ;
                50      04    AC  D0 00040 4$:      MOVL    TYPEID, R0                        ; 1710
                09      18    A0  91 00044          CMPB    24(R0), #9                        ;
                              17  12 00048          BNEQ    5$                                ;
                        08    AE  9F 0004A          PUSHAB  DUMMY3                            ; 1711
                        04    AE  9F 0004D          PUSHAB  DUMMY2                            ;
                        0C    AE  9F 00050          PUSHAB  DUMMY1                            ;
                        04    AC  9F 00053          PUSHAB  TYPEID                            ;
                              50  DD 00056          PUSHL   R0                                ;
   00000000G    00            05  FB 00058          CALLS   #5, DBG$STA_TYP_SUBRNG            ;
                              DF  11 0005F          BRB     4$                                ;
                53      04    AC  D0 00061 5$:      MOVL    TYPEID, R3                        ; 1713
                50      18    A3  9A 00065          MOVZBL  24(R3), R0                        ;
                04            50  91 00069          CMPB    R0, #4                            ; 1715
                              0E  12 0006C          BNEQ    7$                                ;
                              52  DD 0006E          PUSHL   R2                                ; 1716
                              53  DD 00070          PUSHL   R3                                ;
        8A      AF            02  FB 00072          CALLS   #2, COVER_VMSDESC_SETUP           ;
        08      AC            50  D0 00076          MOVL    R0, VMSDESC                       ;
                              78  11 0007A 6$:      BRB     14$                               ;
                02            50  91 0007C 7$:      CMPB    R0, #2                            ; 1718
                              73  12 0007F          BNEQ    14$                               ;
                        08    AE  9F 00081          PUSHAB  DUMMY3                            ; 1720
                        10    AE  9F 00084          PUSHAB  DTYPE                             ;
                              53  DD 00087          PUSHL   R3                                ;
   00000000G    00            03  FB 00089          CALLS   #3, DBG$STA_TYP_ATOMIC            ;
   0000009E     8F      0C    AE  D1 00090          CMPL    DTYPE, #158                       ; 1721
                              04  12 00098          BNEQ    8$                                ;
        0C      AE            28  D0 0009A          MOVL    #40, DTYPE                        ;
        02      A2      0C    AE  90 0009E 8$:      MOVB    DTYPE, 2(R2)                      ; 1722
                0E      0C    AE  D1 000A3          CMPL    DTYPE, #14                        ; 1732
                              4B  13 000A7          BEQL    14$                               ;
                28      0C    AE  D1 000A9          CMPL    DTYPE, #40                        ;
                              45  13 000AD          BEQL    14$                               ;
                01            62  B1 000AF          CMPW    (R2), #1                          ; 1737
                              06  12 000B2          BNEQ    9$                                ;
        02      A2            06  90 000B4          MOVB    #6, 2(R2)                         ; 1738
                              3A  11 000B8          BRB     14$                               ;
                02            62  B1 000BA 9$:      CMPW    (R2), #2                          ; 1739
                              10  12 000BD          BNEQ    11$                               ;
        02      A2            07  90 000BF          MOVB    #7, 2(R2)                         ; 1740
                              2F  11 000C3          BRB     14$                               ;
```

```
                 06              50  91 000C5 10$:      CMPB    R0, #6                                    ; 1751
                                 05  13 000C8           BEQL    11$                                       ;
                 08              50  91 000CA           CMPB    R0, #8                                    ;
                                 06  12 000CD           BNEQ    12$                                       ;
           02    A2              08  90 000CF 11$:      MOVB    #8, 2(R2)                                 ; 1752
                                 1F  11 000D3           BRB     14$                                       ;
                 14              50  91 000D5 12$:      CMPB    R0, #20                                   ; 1754
                                 05  12 000D8           BNEQ    13$                                       ;
                          03     A2  94 000DA           CLRB    3(R2)                                     ; 1755
                                 15  11 000DD           BRB     14$                                       ;
                    00000000'    EF  9F 000DF 13$:      PUSHAB  P.ADW                                     ; 1758
                                 01  DD 000E5           PUSHL   #1                                        ;
                    00028362     8F  DD 000E7           PUSHL   #164706                                   ;
       00000000G  00             03  FB 000ED           CALLS   #3, LIB$SIGNAL                            ;
                 50       08     AC  D0 000F4 14$:      MOVL    VMSDESC, R0                               ; 1761
                                     04 000F8           RET                                               ; 1762

; Routine Size:  249 bytes,    Routine Base:  DBG$CODE + 01F7
```

```
GLOBAL ROUTINE DBG$CVT_DX_DX (SOURCE, DESTINATION, OUTLEN):  NOVALUE =
!
!                       This is the general data type conversion facility.
!                       Given two parameters, one the source descriptor,
!                       second the destination descriptor this routine
!                       will convert the source to destination.
!                       The permitted set of class, data type and combination
!                       of the two is a subset of the ones allowed in the
!                       calling standard.
!
!       The following is a general description of DBG$CVT_DX_DX.
!
!       This module is divided into two routines on the bases of functional
!       modularity.  The front-end (FIND_CVT_PATH), and back-end (DBG$CVT_DX_DX).
!       The front-end converts the source into an intermediate data type, and
!       frees the back-end of any error checking of invalid classes and/or
!       data types (or combination of the two), and of decisions that require
!       knowledge of which class or data type is being converted.  The only
!       information that the back-end knows about is what the conversion path
!       is, and where the intermediate data is.  The back-end then scales the
!       intermediate data if necessary and converts it to the destination
!       data type.  Note that even though a scale may not be necessary, the
!       intermediate data is still converted to a second intermediate data type
!       just to be consistent.
!
!    1.  Upon entry to DBG$CVT_DX_DX, FIND_CVT_PATH routine is called.
!        FIND_CVT_PATH has 4 functions, they are:
!                   a. Find any errors concerning the class and data type of
!                      source and destination descriptor.  These errors can be
!                      invalid class, invalid data type, or invalid combination
!                      of a class and data type.  It can also tell which descriptors
!                      are supported by the VAX-11 calling standard and which are
!                      supported by this routine.
!
!                   b. Figure out what the conversion path is, i.e. class,dtype --> class,dtype.
!                      These paths are given names such as K_SMLINT_DEC, which reads
!                      "from small integer to decimal" (categories are defined later).
!
!                   c. Convert the source data to an intermediate data.  The strategy
!                      used to select the appropriate intermediate data is explained later.
!                      Precision should not be lost in converting to the intermediate type.
!
!                   d. Put whatever information needed about the source and destination
!                      descriptor in two structures passed by DBG$CVT_DX_DX.
!                      These two structures SRC_INFO, and DST_INFO, contain the kind
!                      of information that can only be visible when the class, and
!                      data type of the source and destination descriptors are being
!                      manipulated. These two structures can be expanded to contain
!                      more information as new class, and data types may require it.
!
!
!    2.  The following is an overview of the design of FIND_CVT_PATH:
!        The problem to be solved is to recognize "valid" descriptors.
!        A descriptor is valid if the CLASS and DATA TYPE fields of the
!        descriptor satisfy certain conditions.
!        With this problem in mind we shall use some formal language theory
!        and applications to solve it.
```

```
1 !            Let us take a hypothetical problem that is very close but smaller in
1 !            magnitude of the original problem and solve it.
1 !            Suppose that the set of classes that we are interested in are
1 !            CLASS = { c1, c2, c3 }, and the set of data types are
1 !            DTYPE = { d1, d2, d3, d4 }.  Then suppose that only a certain combinations
1 !            of CLASS and DTYPE are valid, and they are c1d3, c2d1, c3d2, c3d4.
1 !            Hence language L(G) is consisted of sentences { c1d3, c2d1, c3d2, c3d4 }.
1 !            First we need to come up with a grammar for the language L(G).
1 !            Grammar for L(G) :
1 !                   Z  -->  <S1>d3 | <S2>d1 | <S3>d2 | <S3>d4
1 !                   S1 -->  c1
1 !                   S2 -->  c2
1 !                   S3 -->  c3
1 !                   S4 -->  c4
1 !            A close look shows that this is a Chomsky type 3 regular grammar,
1 !            because productions are all
1 !                   NON-TERMINAL --> terminal
1 !                            or
1 !                   NON_TERMINAL --> <NON-TERMINAL>terminal
1 !            This type of grammar has the nice feature that its sentential forms
1 !            can be "accepted" by a finite state machine.
1 !            The sentential forms of this grammar can also be accepted by a
1 !            deterministic finite automaton (DFA) because each right hand side
1 !            has a unique left hand side.
1 !            A DFA can be written to recognize sentences of this grammar and to
1 !            reject sentences that are not in the language.
1 !            The original problem is very similar to this hypothetical one, the
1 !            only difference is that the set of CLASSES and DTYPES is larger.
1 !            FIND_CVT_PATH is just a DFA that accepts sentences of language L(V)
1 !            when L(V) is pairs of VAX-11 DSC$K_CLASS_x DSC$K_DTYPE_y.  The
1 !            grammar for L(V) is very similar to the grammar for L(G) above.
1 !
1 !        3.  In order to achieve the conflicting goals:  fast, not large in size,
1 !            expandable, no loss of precision as a result of intermediate values,
1 !            there is a need for  a  compromise.  The strategy for categorizing
1 !            the data types is based on three goals:  precision should not be lost
1 !            as a result of converting to intermediate data types, data types of
1 !            the same category should share similar internal representations so
1 !            they can be converted to and from each other easily, and data types
1 !            that have to be converted through software should be separated from
1 !            those that have associated machine instructions.  The third goal
1 !            provides easy and fast conversions for those data types with
1 !            associated machine instructions.
1 !            The current categories were formulated by the following strategy:
1 !                Divide  the  integers into two groups, small and large integers.
1 !                Divide the floating numbers into two categories small and large
1 !                floating. The small category will be the data types
1 !                that machine instructions are available for their conversions.
1 !                The large category consist of data types that there are no machine instructions for
1 !                their conversions or the instructions must be emulated (LIB$EMULATE)
1 !                for some VAX machines.
1 !            This categorization will provide conversions that are fast and smooth.
1 !            As a result we have the following :
1 !
1 !            INTEGER       --> SMALL_INTEGER | LARGE_INTEGER
1 !            FLOAT         --> SMALL_FLOAT | LARGE_FLOAT
1 !            SMALL_INTEGER --> bu | wu | b | w | l          !Intermediate L
```

```
!          LARGE_INTEGER --> lu ¦ q                          !Intermediate OU
!          SMALL_FLOAT   --> f ¦ d                           !Intermediate D
!          LARGE_FLOAT   --> g ¦ h                           !Intermediate H
!          DEC           --> nu ¦ nl ¦ nlo ¦ nr ¦ nro ¦ nz !Intermediate P
!          NBDS          --> nbds                            !Intermediate T
!
!     4.  Upon return from FIND_CVT_PATH, the main routine then enters a
!         CASE statement that selects the desired conversion.  This CASE
!         is explained in detail in the first paragraph of the statement.
!
! AUTHOR:         Farokh Morshed          01-09-1981
!
! FUNCTIONAL DESCRIPTION:
!
!       Upon entry, FIND_CVT_PATH is called to identify which conversion is to be
!       done, i.e. from which CLASS, DTYPE combination to which CLASS, DTYPE
!       combination.
!       Also, FIND_CVT_PATH will do all the work of identifying the errors such
!       as unsupported class, data type, or combinations.
!       This routine is just a tree of CASE statements, where the outermost
!       level CASE statement labels have been determined by the FIND_CVT_PATH
!       routine.
!
! CALLING SEQUENCE:
!
!       ret_status.wlc.v = DBG$CVT_DX_DX ( SOURCE.rx.dx, DESTINATION.wx.dx
!                                          <OUTLEN.wwu.r> <CVT_ROUND_FLAG>)
!
! FORMAL PARAMETERS:
!
!       SOURCE                  Address of source descriptor.
!       DESTINATION             Address of destination descriptor.
!       OUTLEN                  Output length.  Optional parameter for this
!                               routine to put the length of actual data (without padding) in.
!                               This is used only when destination is of data
!                               type T.
!       CVT_ROUND_FLAG          A flag set to true to indicate the conversion
!                               result is rounded.
!
! IMPLICIT INPUTS:
!
!       NONE
!
! IMPLICIT OUTPUTS:
!
!       NONE
!
! SIDE EFFECTS
!       Every routine in this module turns on every arithmetic trap in PSW.
!       Caller must have LIB$EMULATE as handler if any G or H conversions are
!       asked for.
!
  BEGIN

  LOCAL
      CVT_ROUND_FLAG,
        SRC_INFO:  BLOCK [K_SRC_INFO_LENGTH, BYTE] FIELD (SRC_INFO_FIELDS),      ! Source information structu
        DST_INFO:  BLOCK [K_DST_INFO_LENGTH, BYTE] FIELD (DST_INFO_FIELDS),      ! Destination information st
        OUTPUT_BUFFER:  BLOCK[K_OUTPUT_BUFFER_LENGTH, BYTE],
        OUTPUT,
        DESTINATION_PTR,                                                         ! Ptr to destination
        INTMED_DATA:  BLOCK [K_INTMED_DATA_LENGTH, BYTE],                        ! Intermediate data buffer.
        TEMP_BUF1:  BLOCK [K_TEMP_BUF_LENGTH, BYTE],                             ! Holds temporary data.
        TEMP_BUF2:  BLOCK [K_TEMP_BUF_LENGTH, BYTE],                             ! Holds temporary data.
        CLASS_S_DESC:  BLOCK [8, BYTE],                                          ! A class S descriptor for a
        CLASS_SOURCE:  BYTE,                                                     ! Class of source VMS descri
        CLASS_TARGET:  BYTE,                                                     ! Class of target VMS descri
        FINAL_LEN,                                                               ! Length of data in TEMP_BUF
        CVT_PATH,                                                                ! Calculated convert path.
        NO_DIGITS,                                                               ! Number of digits in decima
        DIGITS_IN_FRACT,                                                         ! Fractional digits (OTS$CVT
        FLOAT_SCALE,                                                             ! Scale of a Floating number
        SIGN,                                                                    ! Sign of the Floating numbe
        STATUS,                                                                  ! Return status.
        LRGST_P_LU,                                                              ! Largest LU in a packed dec
        LRGST_D_LU,                                                              ! Largest LU in a double flo
        PACK_ZERO,                                                               ! A zero in a packed decimal
        LRGST_H_LU,                                                              ! Largest LU in a H floating
        BUF_OFFSET,                                                              ! Offset to actual data in T
        NEXT_BLANK,                                                              ! Location of next blank in
        OUTPUT_STR_LEN,                                                          ! Length of actual string th
        SRC_POS,                                                                 ! Bit offset in source.
        DST_POS,                                                                 ! Bit offset in destination.
                                                                                 ! to destination (optional p
        BIN_SCALE,
        SCALE;                                                                   ! Effective scale (source sc

    MAP
        OUTPUT:  REF BLOCK[, BYTE],
        DESTINATION_PTR: REF BLOCK[, BYTE],
        SOURCE:  REF BLOCK[,BYTE],                                               ! Source VMS descriptor.
        DESTINATION:  REF BLOCK[,BYTE];                                          ! Destination VMS descriptor

    BUILTIN
        ACTUALPARAMETER,
        ACTUALCOUNT;


    ! Establish CVT_HANDLER as handler.
    !
    ENABLE
        CVT_HANDLER;


    ! These literals are used a few lines down to test whether we
    ! are doing a conversion from decimal string or packed.
    !
    LITERAL
        MIN_DEC_DTYPE = DSC$K_DTYPE_NU, ! 15
        MAX_DEC_DTYPE = DSC$K_DTYPE_P;  ! 21

    !++
    !  If the destination or source is Absolute Date Time cut it off here
```

```
2       !  and do the conversion.
2       !--
2       IF (.DESTINATION [DSC$B_DTYPE] EQL DSC$K_DTYPE_ADT)  OR                        !
3          (.SOURCE [DSC$B_DTYPE] EQL DSC$K_DTYPE_ADT)                                 !
2       THEN                                                                           !
2           IF (.DESTINATION [DSC$B_DTYPE] EQL DSC$K_DTYPE_T)  AND                     ! ADT to text
3              (.SOURCE [DSC$B_DTYPE] EQL DSC$K_DTYPE_ADT)                             !
2           THEN                                                                       !
3               BEGIN                                                                  !
3               LOCAL                                                                  !
3                   TEMP;                                                              !
3               CLASS_S_DESC[dsc$b_class]   = dsc$k_class_s;                           ! Build the string descripto
3               CLASS_S_DESC[dsc$b_dtype]   = dsc$k_dtype_t;                           !
3               CLASS_S_DESC[dsc$w_length]  = 23;                                      !
3               CLASS_S_DESC[dsc$a_pointer] = .DESTINATION [DSC$A_POINTER];            !
4               IF NOT (SYS$ASCTIM (TEMP, CLASS_S_DESC, .SOURCE [DSC$A_POINTER], 0))!
3               THEN                                                                   !
3                   SIGNAL( DBG$_DELTIMTOO );                                          
3               OUTPUT_STR_LEN = .TEMP;                                                !
3               END                                                                    !
2           ELSE                                                                       !
2               IF (.DESTINATION [DSC$B_DTYPE] EQL DSC$K_DTYPE_ADT)  AND               ! Text to ADT
3                  (.SOURCE [DSC$B_DTYPE] EQL DSC$K_DTYPE_T)                           !
2               THEN                                                                   !
3                   BEGIN                                                              !
3                   CLASS_S_DESC[dsc$b_class]   = dsc$k_class_s;                       ! Build the string descripto
3                   CLASS_S_DESC[dsc$b_dtype]   = dsc$k_dtype_t;                       !
3                   CLASS_S_DESC [DSC$W_LENGTH] = .SOURCE [DSC$W_LENGTH];              !
3                   CLASS_S_DESC [DSC$A_POINTER] = .SOURCE [DSC$A_POINTER];            !
4                   IF NOT (SYS$BINTIM( CLASS_S_DESC, .DESTINATION [DSC$A_POINTER]))!
3                   THEN                                                               !
3                       SIGNAL( DBG$_ABSDATSYN );                                      ! He didn't like to text for
3                   END                                                                !
2               ELSE                                                                   !
2                   SIGNAL( DBG$_ILLTYPE )                                             ! Nothing but ADT to text or
2       ELSE                                                                           !
3       BEGIN                                                                          !
3       ! Get the conversion rounding flag.  TRUE = round.
3       !
3       IF ACTUALCOUNT() GTR 3
3       THEN
3           CVT_ROUND_FLAG = ACTUALPARAMETER(4)
3       ELSE
3           CVT_ROUND_FLAG = FALSE;
3
3
3       ! Strip the non-significant zeros for packed decimal.
3       !
3       IF .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_P AND
3          .DESTINATION[DSC$B_DTYPE] NEQ DSC$K_DTYPE_T
3       THEN
3           SOURCE = DBG$STRIP_ZEROES(.SOURCE);
3
3
3       ! This flag is so that a special error can
3       ! be signalled for reserved operand during a decimal string conversion.
3       ! Note that this test relies on the fact that the dtypes for the
```

```
! decimal string data types are cover the range from the MIN_DEC_DTYPE
! code to the MAX_DEC_DTYPE code.
!
DECIMAL_CONVERT =
    (.SOURCE[DSC$B_DTYPE] GEQ MIN_DEC_DTYPE) AND
    (.SOURCE[DSC$B_DTYPE] LEQ MAX_DEC_DTYPE);


! DESTINATION_PTR is used to indicate the destination
! of the converted data.  If the data type is unaligned, then
! the output-buffer pointer points to a temporary buffer.  Else,
! the output-buffer pointer points to the caller's buffer.
!
IF .DESTINATION[DSC$B_CLASS] EQL DSC$K_CLASS_UBS
THEN
    BEGIN
    OUTPUT = OUTPUT_BUFFER;
    DESTINATION_PTR = .DESTINATION[DSC$A_POINTER];
    END
ELSE
    OUTPUT = .DESTINATION[DSC$A_POINTER];


! Zero and blank out these records for FIND_CVT_PATH.
!
CH$FILL (0, K_SRC_INFO_LENGTH, SRC_INFO);
CH$FILL (0, K_DST_INFO_LENGTH, DST_INFO);
CH$FILL (0, K_INTMED_DATA_LENGTH, INTMED_DATA);
CH$FILL (%C' ', K_TEMP_BUF_LENGTH, TEMP_BUF1);
CH$FILL (%C' ', K_TEMP_BUF_LENGTH, TEMP_BUF2);
OUTPUT_STR_LEN = 0;


! This descriptor is always class S, dtype T.
! It is used on various occasions to call routines that require
! descriptors as their parameters.
!
CLASS_S_DESC [DSC$B_DTYPE] = DSC$K_DTYPE_T;
CLASS_S_DESC [DSC$B_CLASS] = DSC$K_CLASS_S;


! Initialize some constants.
!
LRGST_P_LU = UPLIT (%P'+4294967295');
LRGST_D_LU = UPLIT (%D'+4294967295');
LRGST_H_LU = UPLIT (%H'+4294967295');
PACK_ZERO = UPLIT (%P'+0');


! SRC_INFO structure will contain the information about the source data.  In
! most cases it will point to the INTMED_DATA buffer because the source data is
! usually converted to an intermediate, so before calling FIND_CVT_PATH we
! set up the pointer and length fields of SRC_INFO to be INTMED_DATA.
!
SRC_INFO [S_POINTER] = INTMED_DATA;
SRC_INFO [S_LEN] = K_INTMED_DATA_LENGTH;
```

```
	! Call FIND_CVT_PATH to get information on the source and destination
	! (SRC_INFO and DST_INFO), and to determine the conversion path
	! (CVT_PATH).
	!
	STATUS = FIND_CVT_PATH (.SOURCE, .DESTINATION, SRC_INFO, DST_INFO, CVT_PATH);


	! If we got an error returned to us by FIND_CVT_PATH, it means that one of the
	! descriptors - SOURCE or DESTINATION - was invalid to this routine.
	! Errors are represented as negative values.  They are listed in the completion
	! status section of FIND_CVT_PATH.  Although we get a variety of errors,
	! from -1 to -7, overlapping can occur.
	!
	IF .STATUS LSS 0
	THEN
	    BEGIN
	    CASE .STATUS FROM K_INVNBDS TO K_UNSCLAROU OF
		SET
		[K_UNSDTYSTA, K_UNSDTYROU]:  $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  invalid dtype in descriptor')
		[K_UNSCLASTA, K_UNSCLAROU]:  $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  invalid class in descriptor')
		[K_UNSDESSTA, K_UNSDESROU]:  $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  invalid class-dtype combinati
		[K_INVNBDS]:                 $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  invalid numeric byte string d
		TES;
	    END;


	! Enable all arithmetic traps, and figure out the scale fator to be used by
	! the main CASE statement below. The scale factor in SCALE will be a decimal
	! scale factor. The scale factor in BIN_SCALE will be a binary scale factor.
	!
	BISPSW (%REF (K_SET_ARITHMETIC_TRAP));
	SCALE = (IF .SRC_INFO[S_BIN_SCALE] THEN 0 ELSE .SRC_INFO [S_SCALE]) -
		(IF .DST_INFO[D_BIN_SCALE] THEN 0 ELSE .DST_INFO [D_SCALE]);
	BIN_SCALE = (IF .SRC_INFO[S_BIN_SCALE] THEN .SRC_INFO [S_SCALE] ELSE 0) -
		    (IF .DST_INFO[D_BIN_SCALE] THEN .DST_INFO [D_SCALE] ELSE 0);


	! We now have SRC_INFO, DST_INFO, and CVT_PATH, and the source data
	! has been converted to an intermediate type.  Next step:  to go from
	! the intermediate form to a scaled version to the actual data type
	! called for by the destinaton descriptor.
	!
	! The following explains the objective of the conversions:
	!
	!		The objective is to convert from intermediate data type provided by
	!		FIND_CVT_PATH routine to the data type that the user has requested in
	!		the destination descriptor.
	!
	!		The intermediate data is in INTMED_DATA, except for when source is
	!		of data type T.  FIND_CVT_PATH does not convert or transform the T
	!		data types, so the intermediate data for this data type is described
	!		by the SOURCE descriptor itself.
	!
	!		The first step is to scale the intermediate data.  The scale is
	!		calculated as:    SCALE = (source scale) - (destination scale).
	!		Scaling cannot always be done on the intermediate data because there
```

```
; 2036        2162  3      !            may be under/over flow, so scaling is done on either the intermediate
; 2037        2163  3      !            or the higest data type of the category that the destination data type
; 2038        2164  3      !            falls in.  The data type with greater range is always selected.
; 2039        2165  3      !            Caution is taken not to select a scaling intermediate
; 2040        2166  3      !            data type that requires G, H, or O instructions, unless source or
; 2041        2167  3      !            destination is of these types.
; 2042        2168  3      !            At the beginning of each sub-case statement, there is a macro;
; 2043        2169  3      !            each macro is type specific, and scales the intermediate data type
; 2044        2170  3      !            involved in that sub-case.
; 2045        2171  3      !            Regardless of whether there is scaling involved or not the intermediate
; 2046        2172  3      !            data type is converted to scaling intermediate data type.
; 2047        2173  3      !            The scaled intermediate data will again end up in INTMED_DATA buffer.
; 2048        2174  3      !
; 2049        2175  3      !            Macros that do this scaling are called M_SCALE_x_y:  convert x to y, where
; 2050        2176  3      !            the result value in y is scaled according to the scale specified
; 2051        2177  3      !            in source and destination descriptors.
; 2052        2178  3      !
; 2053        2179  3      !            The next step is to convert the scaled intermediate data to destination
; 2054        2180  3      !            data type and move it to where the destination address points to.
; 2055        2181  3      !            This is done as close to a 'interrupt proof' manner as possible.
; 2056        2182  3      !            Since only NBDS can be of semantics other than fixed, only in case of
; 2057        2183  3      !            NBDS (or just text) is the destination copied via a RTL call (LIB$SCOPY_x).
; 2058        2184  3      !
; 2059        2185  3      !            PSW is masked such that IV, FU, DV bits are set.
; 2060        2186  3      !
; 2061        2187  3      CASE .CVT_PATH FROM K_SMLINT_SMLINT TO K_NBDS_NBDS OF
; 2062        2188  3          SET
; 2064          2189  3
; 2065          2190  3            [K_SMLINT_SMLINT]:
; 2066          2191  4                BEGIN
; 2067          2192  4                M_SCALE_L_L;
; 2068          2193  4                CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_V TO DSC$K_DTYPE_SVU OF
; 2069          2194  4                    SET
; 2070          2195  4
; 2071          2196  4                    [DSC$K_DTYPE_BU]:
; 2072          2197  5                        BEGIN
; 2073          2198  5                        IF (OUTPUT [BYTE_1] = .INTMED_DATA [LONG_1]) GTRU K_LRGST_BU
; 2074          2199  5                            THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
; 2075          2200  4                        END;
; 2076          2201  4
; 2077          2202  4                    [DSC$K_DTYPE_WU]:
; 2078          2203  5                        BEGIN
; 2079          2204  5                        IF (OUTPUT [WORD_1] = .INTMED_DATA [S_LONG_1]) GTRU K_LRGST_WU
; 2080          2205  5                            THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
; 2081          2206  4                        END;
; 2082          2207  4
; 2083          2208  4                    [DSC$K_DTYPE_B]:
; 2084          2209  4                        CVTLB (INTMED_DATA, .OUTPUT);
; 2085          2210  4
; 2086          2211  4                    [DSC$K_DTYPE_W]:
; 2087          2212  4                        CVTLW (INTMED_DATA, .OUTPUT);
; 2088          2213  4
; 2089          2214  4                    [DSC$K_DTYPE_L]:
; 2090          2215  4                        OUTPUT [LONG_1] = .INTMED_DATA [S_LONG_1];
; 2091          2216  4
; 2092          2217  4                    [DSC$K_DTYPE_V, DSC$K_DTYPE_SV, DSC$K_DTYPE_VU, DSC$K_DTYPE_SVU, DSC$K_DTYPE_TF]:
; 2093          2218  5                        BEGIN
; 2094          2219  5                        MAP
; 2095          2220  5                            OUTPUT:  REF BITVECTOR[K_OUTPUT_BUFFER_LENGTH * 8],
; 2096          2221  5                            INTMED_DATA:  BITVECTOR[K_INTMED_DATA_LENGTH * 8];
; 2097          2222  5
; 2098          2223  5                        INCR I FROM 0 TO .DST_INFO[D_LEN]-1 DO
; 2099          2224  6                            BEGIN
; 2100          2225  6                            OUTPUT[.I] = .INTMED_DATA[.I];
; 2101          2226  5                            END;
; 2102          2227  4                        END;
; 2103          2228  4
; 2104          2229  4                    [INRANGE, OUTRANGE]:
; 2105          2230  4                        $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlint smlint');
; 2106          2231  4                    TES;                                !For SMLINT_SMLINT
; 2107          2232  3                END;
```

```
[K_SMLINT_LRGINT, K_LRGINT_LRGINT]:
    BEGIN
    SELECTONE .CVT_PATH OF
        SET

        [K_SMLINT_LRGINT]:
            BEGIN
            M_SCALE_L_OU;
            END;

        [K_LRGINT_LRGINT]:
            BEGIN
            M_SCALE_OU_OU;
            END;
        TES;

    SELECTONE .DESTINATION [DSC$B_DTYPE] OF
        SET

        [DSC$K_DTYPE_LU]:
            BEGIN
            IF (.INTMED_DATA [LONG_2] OR .INTMED_DATA [LONG_3] OR .INTMED_DATA [LONG_4]) NEQ 0
                THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
            OUTPUT [LONG_1] = .INTMED_DATA [LONG_1];
            IF .SRC_INFO[S_SIGN]
            THEN
                OUTPUT[LONG_1] = -.OUTPUT[S_LONG_1];
            END;

        [DSC$K_DTYPE_Q, DSC$K_DTYPE_QU]:
            BEGIN
            IF (.INTMED_DATA [LONG_3] OR .INTMED_DATA [LONG_4]) NEQ 0
                THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
            IF .SRC_INFO [S_SIGN]
            THEN
                IF .INTMED_DATA [LONG_1] EQL 0
                THEN
                    BEGIN
                    IF .INTMED_DATA [LONG_2] NEQU %X'80000000'
                    THEN
                        BEGIN
                        INTMED_DATA [LONG_2] = .INTMED_DATA [LONG_2] XOR %X'FFFFFFFF';
                        INTMED_DATA [LONG_2] = .INTMED_DATA [LONG_2] + 1;
                        END;
                    END
                ELSE
                    BEGIN
                    INTMED_DATA [LONG_1] = .INTMED_DATA [LONG_1] XOR %X'FFFFFFFF';
                    INTMED_DATA [LONG_2] = .INTMED_DATA [LONG_2] XOR %X'FFFFFFFF';
                    INTMED_DATA [LONG_1] = .INTMED_DATA [LONG_1] + 1;
                    END;
            OUTPUT [LONG_1] = .INTMED_DATA [LONG_1];
            OUTPUT [LONG_2] = .INTMED_DATA [LONG_2];
            END;

        [DSC$K_DTYPE_O]:
```

```
5              BEGIN
5
5              ! The S_SIGN field is set if we need to negate the octaword.
5              !
5              IF .SRC_INFO[S_SIGN]
5              THEN
6                  BEGIN
6
6                  ! Check for %X'80000000000000000000000000000000'
6                  ! This should not go through the code below, but rather
6                  ! just be deposited.
6                  !
7                  IF NOT (.INTMED_DATA[LONG_1] EQL 0 AND
7                          .INTMED_DATA[LONG_2] EQL 0 AND
7                          .INTMED_DATA[LONG_3] EQL 0 AND
7                          .INTMED_DATA[LONG_4] EQL %X'80000000')
6                  THEN
7                      BEGIN
7                      MAP
7                          INTMED_DATA:  VECTOR[K_INTMED_DATA_LENGTH/4];
7
7                      ! Take the one's complement.
7                      !
7                      INCR NEXT_LONGWORD FROM 0 TO 3 DO
7                          INTMED_DATA[.NEXT_LONGWORD] =
7                              .INTMED_DATA[.NEXT_LONGWORD] XOR %X'FFFFFFFF';
7
7                      ! Add 1 to the result.
7                      !
7                      INCR NEXT_LONGWORD FROM 0 TO 3 DO
7                          IF .INTMED_DATA[.NEXT_LONGWORD] EQLU %X'FFFFFFFF'
7                          THEN
7                              INTMED_DATA[.NEXT_LONGWORD] = 0
7                          ELSE
8                              BEGIN
8                              INTMED_DATA[.NEXT_LONGWORD] =
8                                  .INTMED_DATA[.NEXT_LONGWORD] + 1;
8                              EXITLOOP;
7                              END;
6                      END;
5                  END;
5
5              CH$MOVE (16, INTMED_DATA, .OUTPUT);
4              END;
4
4          [OTHERWISE]:
4              SELECTONE .CVT_PATH OF
4                  SET
4                  [K_SMLINT_LRGINT]:
4                      $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlint_lrgint');
4
4                  [K_LRGINT_LRGINT]:
4                      $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgint_lrgint');
4                  TES;
4          TES;                                !For SMLINT_LRGINT, LRGINT_LRGINT.
3      END;
```

```
3
3        [K_SMLINT_SMLFLTCMPLX, K_LRGINT_SMLFLTCMPLX, K_SMLFLTCMPLX_SMLFLTCMPLX, K_DEC_SMLFLTCMPLX, K_NBDS_SM
4            BEGIN
4            SELECTONE .CVT_PATH OF
4                SET
4
4                [K_SMLINT_SMLFLTCMPLX]:
5                    BEGIN
5                    M_SCALE_L_D;
4                    END;
4
4                [K_LRGINT_SMLFLTCMPLX]:
5                    BEGIN
5                    M_SCALE_OU_D;
4                    END;
4
4                [K_SMLFLTCMPLX_SMLFLTCMPLX]:
5                    BEGIN
5                    M_SCALE_D_D;
4                    END;
4
4                [K_DEC_SMLFLTCMPLX]:
5                    BEGIN
5                    M_SCALE_P_D;
4                    END;
4
4                [K_NBDS_SMLFLTCMPLX]:
5                    BEGIN
5                    CLASS_S_DESC [DSC$W_LENGTH] = .SRC_INFO [S_LEN];
5                    CLASS_S_DESC [DSC$A_POINTER] = .SRC_INFO [S_POINTER];
5                    STATUS = OTS$CVT_T_D (CLASS_S_DESC, INTMED_DATA, 0, -.SCALE,
5                        (K_IGN_BLKS OR K_ENB_UNDERFLOW OR K_IGN_TABS OR K_ENB_SCALE));
5                    IF NOT .STATUS THEN SIGNAL (DBG$_INVNUMSTR, 1, .DBG$GL_OPCODE_NAME);
4                    END;
4                TES;
4
4            CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_F TO DSC$K_DTYPE_D OF
4                SET
4
4                [DSC$K_DTYPE_F]:
4                    CVTDF (INTMED_DATA, .OUTPUT);
4
4                [DSC$K_DTYPE_D]:
5                    BEGIN
5                    OUTPUT [LONG_1] = .INTMED_DATA [LONG_1];
5                    OUTPUT [LONG_2] = .INTMED_DATA [LONG_2];
4                    END;
4
4                [INRANGE, OUTRANGE]:
4                    CASE .DESTINATION[DSC$B_DTYPE] FROM DSC$K_DTYPE_FC TO DSC$K_DTYPE_DC OF
4                        SET
4
4                        [DSC$K_DTYPE_FC]:
5                            BEGIN
5                            CVTDF (INTMED_DATA, .OUTPUT);
5                            CVTDF (INTMED_DATA+8, .OUTPUT+4);
4                            END;
```

```
; 2280      2403 4
; 2281      2404 4                  [DSC$K_DTYPE_DC]:
; 2282      2405 4                      CH$MOVE (16, INTMED_DATA, .OUTPUT);
; 2283      2406 4
; 2284      2407 4                  [INRANGE, OUTRANGE]:
; 2285      2408 4                      SELECTONE .CVT_PATH OF
; 2286      2409 4                          SET
; 2287      2410 4                          [K_SMLINT_SMLFLTCMPLX]:
; 2288      2411 4                              $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlint_smlfltcmplx');
; 2289      2412 4                          [K_LRGINT_SMLFLTCMPLX]:
; 2290      2413 4                              $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgint_smlfltcmplx');
; 2291      2414 4                          [K_SMLFLTCMPLX_SMLFLTCMPLX]:
; 2292      2415 4                              $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlfltcmplx_smlfltcmplx');
; 2293      2416 4                          [K_DEC_SMLFLTCMPLX]:
; 2294      2417 4                              $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  dec_smlfltcmplx');
; 2295      2418 4                          [K_NBDS_SMLFLTCMPLX]:
; 2296      2419 4                              $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  nbds_smlfltcmplx');
; 2297      2420 4                          TES;
; 2298      2421 4                  TES;
; 2299      2422 4          TES;                            !For SMLINT_SMLFLTCMPLX, LRGINT_SMLFLTCMPLX, SMLFLTCMPLX_SML
; 2300      2423 4
; 2301      2424 4      IF .SRC_INFO [S_SIGN] THEN OUTPUT [0, 15, 1, 0] = 1;
; 2302      2425 3      END;
```

```
3
3        [K_SMLINT_LRGFLTCMPLX, K_LRGINT_LRGFLTCMPLX, K_SMLFLTCMPLX_LRGFLTCMPLX, K_LRGFLTCMPLX_LRGFLTCMPLX, K
4            BEGIN
4            SELECTONE .CVT_PATH OF
4                SET
4
4                [K_SMLINT_LRGFLTCMPLX]:
5                    BEGIN
5                    M_SCALE_L_H;
4                    END;
4
4                [K_LRGINT_LRGFLTCMPLX]:
5                    BEGIN
5                    M_SCALE_OU_H;
4                    END;
4
4                [K_SMLFLTCMPLX_LRGFLTCMPLX]:
5                    BEGIN
5                    M_SCALE_D_H;
4                    END;
4
4                [K_LRGFLTCMPLX_LRGFLTCMPLX]:
5                    BEGIN
5                    IF .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_G OR
5                       .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_GC
5                    THEN
6                        M_SCALE_G_H
5                    ELSE
5                        M_SCALE_H_H;
4                    END;
4
4                [K_DEC_LRGFLTCMPLX]:
5                    BEGIN
5                    M_SCALE_P_H;
4                    END;
4                TES;
4
4            CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_G TO DSC$K_DTYPE_H OF
4                SET
4
4                [DSC$K_DTYPE_G]:
4                    CVTHG (INTMED_DATA, .OUTPUT);
4
4                [DSC$K_DTYPE_H]:
4                    CH$MOVE (16, INTMED_DATA, .OUTPUT);
4
4                [INRANGE, OUTRANGE]:
4                    CASE .DESTINATION[DSC$B_DTYPE] FROM DSC$K_DTYPE_GC TO DSC$K_DTYPE_HC OF
4                        SET
4
4                        [DSC$K_DTYPE_GC]:
5                            BEGIN
5                            CVTHG (INTMED_DATA, .OUTPUT);
5                            CVTHG (INTMED_DATA+16, .OUTPUT+8);
4                            END;
4
4                        [DSC$K_DTYPE_HC]:
```

```
; 2361          2483  4                         CH$MOVE (32, INTMED_DATA, .OUTPUT);
; 2362          2484  4
; 2363          2485  4                     [INRANGE, OUTRANGE]:
; 2364          2486  4                         SELECTONE .CVT_PATH OF
; 2365          2487  4                             SET
; 2366          2488  4                             [K_SMLINT_LRGFLTCMPLX]:
; 2367          2489  4                                 $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlint_lrgfltcmplx');
; 2368          2490  4                             [K_LRGINT_LRGFLTCMPLX]:
; 2369          2491  4                                 $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgint_lrgfltcmplx');
; 2370          2492  4                             [K_SMLFLTCMPLX_LRGFLTCMPLX]:
; 2371          2493  4                                 $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlfltcmplx_lrgfltcmplx');
; 2372          2494  4                             [K_LRGFLTCMPLX_LRGFLTCMPLX]:
; 2373          2495  4                                 $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgfltcmplx_lrgfltcmplx');
; 2374          2496  4                             [K_DEC_LRGFLTCMPLX]:
; 2375          2497  4                                 $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  dec_lrgfltcmplx');
; 2376          2498  4                             TES;
; 2377          2499  4                     TES;
; 2378          2500  4             TES;            !For SMLINT_LRGFLTCMPLX, LRGINT_LRGFLTCMPLX, SMLFLTCMPLX_LRGFLTCMPLX, LRGFLT
; 2379          2501  4
; 2380          2502  4         IF .SRC_INFO [S_SIGN] THEN OUTPUT [0, 15, 1, 0] = 1;
; 2381          2503  3         END;
```

```

[K_SMLINT_DEC, K_DEC_DEC]:
    BEGIN
    SELECTONE .CVT_PATH OF
        SET

        [K_SMLINT_DEC]:
            BEGIN
            M_SCALE_L_P;
            END;

        [K_DEC_DEC]:
            BEGIN
            M_SCALE_P_P;
            END;
        TES;

    CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_NU TO DSC$K_DTYPE_P OF
        SET

        [DSC$K_DTYPE_NU]:
            BEGIN
            IF .SRC_INFO [S_SIGN] THEN SIGNAL (DBG$_CVTNEGUNS, 1, .DBG$GL_OPCODE_NAME);
            CVTPT (NO_DIGITS, INTMED_DATA, LIB$AB_CVTPT_U, DESTINATION [DSC$W_LENGTH], .OUTPUT);
            END;

        [DSC$K_DTYPE_NL]:
            CVTPS (NO_DIGITS, INTMED_DATA,
                %REF (
                    IF .DESTINATION [DSC$W_LENGTH] EQL 0 THEN 0 ELSE .DESTINATION [DSC$W_LENGTH] - 1
            , .OUTPUT);

        [DSC$K_DTYPE_NLO]:
            BEGIN
            CVTPT (NO_DIGITS, INTMED_DATA, LIB$AB_CVTPT_U, DESTINATION [DSC$W_LENGTH], TEMP_BUF1);
            TEMP_BUF1 [BYTE_1] = (IF .SRC_INFO [S_SIGN] THEN .(.TEMP_BUF1 [BYTE_1] + LIB$AB_CVT_U_O
                48 + 10) ELSE .(.TEMP_BUF1 [BYTE_1] + LIB$AB_CVT_U_O - 48));
            CH$MOVE (.DESTINATION [DSC$W_LENGTH], TEMP_BUF1, .OUTPUT);
            END;

        [DSC$K_DTYPE_NR]:
            BEGIN
            LOCAL
                DES_LEN;
            DES_LEN =
            BEGIN
            IF .DESTINATION [DSC$W_LENGTH] EQL 0 THEN 0 ELSE .DESTINATION [DSC$W_LENGTH] - 1
            END;
            CVTPS (NO_DIGITS, INTMED_DATA, DES_LEN, TEMP_BUF1);
            BLOCK [INTMED_DATA + .DES_LEN, 0, 0, 8, 0; , BYTE] = .TEMP_BUF1 [BYTE_1];
            CH$MOVE (.DES_LEN, TEMP_BUF1 + 1, INTMED_DATA);
            CH$MOVE (.DES_LEN + 1, INTMED_DATA, .OUTPUT);
            END;

        [DSC$K_DTYPE_NRO, DSC$K_DTYPE_NZ]:
            CVTPT (NO_DIGITS, INTMED_DATA,
                (IF .DESTINATION [DSC$B_DTYPE] EQL DSC$K_DTYPE_NRO THEN LIB$AB_CVTPT_O ELSE
                LIB$AB_CVTPT_Z), DESTINATION [DSC$W_LENGTH], .OUTPUT);

        [DSC$K_DTYPE_P]:
            BEGIN
!           CVTPS (NO_DIGITS, INTMED_DATA, DESTINATION [DSC$W_LENGTH], TEMP_BUF1);
!           CVTSP (DESTINATION [DSC$W_LENGTH], TEMP_BUF1, DESTINATION [DSC$W_LENGTH], .OUTPUT);
            CVTPS (NO_DIGITS, INTMED_DATA, NO_DIGITS, TEMP_BUF1);
            CVTSP (NO_DIGITS, TEMP_BUF1, DESTINATION [DSC$W_LENGTH], .OUTPUT);
            END;

        [INRANGE, OUTRANGE]:
            SELECTONE .CVT_PATH OF
                SET
                [K_SMLINT_DEC]:
                    $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlint_dec');
                [K_DEC_DEC]:
                    $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  dec_dec');
                TES;
        TES;                                    !For SMLINT_DEC, DEC_DEC
    END;
```

```
[K_LRGINT_SMLINT]:
    BEGIN
    M_SCALE_OU_OU;
    IF (.INTMED_DATA [LONG_2] OR .INTMED_DATA [LONG_3] OR .INTMED_DATA [LONG_4]) NEQ 0
    THEN
        SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
    CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_V TO DSC$K_DTYPE_SVU OF
        SET

        [DSC$K_DTYPE_BU]:
            BEGIN
            IF .INTMED_DATA [BYTE_2] OR .INTMED_DATA [WORD_2] NEQ 0
                THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
            OUTPUT [BYTE_1] = .INTMED_DATA [LONG_1];
            END;

        [DSC$K_DTYPE_WU]:
            BEGIN
            IF .INTMED_DATA [WORD_2] NEQ 0 THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
            OUTPUT [WORD_1] = .INTMED_DATA [LONG_1];
            END;

        [DSC$K_DTYPE_B]:
            BEGIN
            IF .INTMED_DATA [S_LONG_1] LSS 0 THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
            IF .SRC_INFO [S_SIGN] THEN INTMED_DATA [LONG_1] = -.INTMED_DATA [S_LONG_1];
            CVTLB (INTMED_DATA, .OUTPUT);
            END;

        [DSC$K_DTYPE_W]:
            BEGIN
            IF .INTMED_DATA [S_LONG_1] LSS 0 THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
            IF .SRC_INFO [S_SIGN] THEN INTMED_DATA [LONG_1] = -.INTMED_DATA [S_LONG_1];
            CVTLW (INTMED_DATA, .OUTPUT);
            END;

        [DSC$K_DTYPE_L]:
            BEGIN
            IF .INTMED_DATA [S_LONG_1] EQL K_LRGST_NEG_L AND .SRC_INFO [S_SIGN] EQL 1
            THEN
                OUTPUT [LONG_1] = .INTMED_DATA [S_LONG_1]
            ELSE
                BEGIN
                IF .INTMED_DATA [S_LONG_1] LSS 0 THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
                IF .SRC_INFO [S_SIGN] THEN INTMED_DATA [LONG_1] = -.INTMED_DATA [S_LONG_1];
                OUTPUT [LONG_1] = .INTMED_DATA [S_LONG_1];
                END;
            END;

        [DSC$K_DTYPE_V, DSC$K_DTYPE_SV, DSC$K_DTYPE_VU, DSC$K_DTYPE_SVU, DSC$K_DTYPE_TF]:
            BEGIN
            MAP
                OUTPUT:  REF BITVECTOR[K_OUTPUT_BUFFER_LENGTH * 8],
                INTMED_DATA:  BITVECTOR[K_INTMED_DATA_LENGTH * 8];

            INCR I FROM 0 TO .DST_INFO[D_LEN] - 1 DO
```

```
; 2518          2638  6                 BEGIN
; 2519          2639  6                 OUTPUT[.I] = .INTMED_DATA[.I];
; 2520          2640  5                 END;
; 2521          2641  4             END;
; 2522          2642  4
; 2523          2643  4         [INRANGE, OUTRANGE]:
; 2524          2644  4             $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgint smlint');
; 2525          2645  4         TES;                            !For LRGINT_SMLINT
; 2526          2646  3     END;
```

```
3         [K_LRGINT_DEC, K_SMLFLTCMPLX_DEC, K_LRGFLTCMPLX_DEC, K_NBDS_DEC]:
4             BEGIN
4             CLASS_S_DESC [DSC$W_LENGTH] = K_TEMP_BUF_LENGTH;
4             CLASS_S_DESC [DSC$A_POINTER] = TEMP_BUF2;
4             SELECTONE .CVT_PATH OF
4                 SET
4
4                 [K_LRGINT_DEC]:
5                     BEGIN
5                     CVTROUH (INTMED_DATA, TEMP_BUF1);
5                     IF .SRC_INFO [S_SIGN] THEN TEMP_BUF1<15, 1, 0> = 1;
5                     STATUS = FOR$CVT_H_TF (TEMP_BUF1, CLASS_S_DESC, 0, .SCALE, 0, 0, 1);
4                     END;
4
4                 [K_SMLFLTCMPLX_DEC]:
5                     BEGIN
5                     IF .INTMED_DATA<15, 1, 0> THEN SRC_INFO [S_SIGN] = 1;
5                     STATUS = FOR$CVT_D_TF (INTMED_DATA, CLASS_S_DESC, 0, .SCALE, 0, 0, 1);
4                     END;
4
4                 [K_LRGFLTCMPLX_DEC]:
5                     BEGIN
5                     IF .INTMED_DATA<15, 1, 0> THEN SRC_INFO [S_SIGN] = 1;
5                     IF .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_G OR
5                         .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_GC
5                     THEN
5                         STATUS = FOR$CVT_G_TF (INTMED_DATA, CLASS_S_DESC, 0, .SCALE, 0, 0, 1)
5                     ELSE
5                         STATUS = FOR$CVT_H_TF (INTMED_DATA, CLASS_S_DESC, 0, .SCALE, 0, 0, 1);
4                     END;
4
4                 [K_NBDS_DEC]:
5                     BEGIN
5                     CLASS_S_DESC [DSC$W_LENGTH] = .SRC_INFO [S_LEN];
5                     CLASS_S_DESC [DSC$A_POINTER] = .SRC_INFO [S_POINTER];
5                     STATUS = OTS$CVT_T_H (CLASS_S_DESC, TEMP_BUF1, 0, -.SCALE,
5                         (K_IGN_BLKS OR K_ENB_UNDERFLOW OR K_IGN_TABS OR K_ENB_SCALE));
5                     IF NOT .STATUS THEN SIGNAL (DBG$_INVNUMSTR, 1, .DBG$GL_OPCODE_NAME);
5                     IF .TEMP_BUF1<15, 1, 0> THEN SRC_INFO [S_SIGN] = 1;
5                     CLASS_S_DESC [DSC$W_LENGTH] = K_TEMP_BUF_LENGTH;
5                     CLASS_S_DESC [DSC$A_POINTER] = TEMP_BUF2;
5                     STATUS = FOR$CVT_H_TF (TEMP_BUF1, CLASS_S_DESC, 0, 0, 0, 0, 1);
4                     END;
4                 TES;
4
4             IF NOT .STATUS THEN SIGNAL (DBG$_DECOVF, 1, .DBG$GL_OPCODE_NAME);
4             BUF_OFFSET = CH$FIND_NOT_CH (K_TEMP_BUF_LENGTH, TEMP_BUF2, %C' ') - TEMP_BUF2;
4             NO_DIGITS = K_TEMP_BUF_LENGTH - .BUF_OFFSET - 2;
4
4             CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_NU TO DSC$K_DTYPE_P OF
4                 SET
4
4                 [DSC$K_DTYPE_NU]:
5                     BEGIN
5                     IF .SRC_INFO [S_SIGN] THEN SIGNAL (DBG$_CVTNEGUNS, 1, .DBG$GL_OPCODE_NAME);
5                     IF .NO_DIGITS GTR .DESTINATION [DSC$W_LENGTH] THEN SIGNAL (DBG$_DECOVF, 1, .DBG$GL_OPCOD
5                   CH$FILL (%X'30', .DESTINATION [DSC$W_LENGTH] - .NO_DIGITS, TEMP_BUF1);
5                   CH$MOVE (.NO_DIGITS, TEMP_BUF2 + .BUF_OFFSET + 1,
5                       TEMP_BUF1 + .DESTINATION [DSC$W_LENGTH] - .NO_DIGITS);
5                   CH$MOVE (.DESTINATION [DSC$W_LENGTH], TEMP_BUF1, .OUTPUT);
4                   END;
4
4               [DSC$K_DTYPE_NL]:
5                   BEGIN
5                   LOCAL
5                       DES_LEN;
5                   DES_LEN =
6                   BEGIN
6                   IF .DESTINATION [DSC$W_LENGTH] EQL 0 THEN 0 ELSE .DESTINATION [DSC$W_LENGTH] - 1
5                   END;
5                   IF .DES_LEN LSS .NO_DIGITS THEN SIGNAL (DBG$_DECOVF, 1, .DBG$GL_OPCODE_NAME);
5                   CVTSP (NO_DIGITS, TEMP_BUF2 + .BUF_OFFSET, DES_LEN, TEMP_BUF1);
5                   CVTPS (DES_LEN, TEMP_BUF1, DES_LEN, .OUTPUT);
4                   END;
4
4               [DSC$K_DTYPE_NLO]:
5                   BEGIN
5                   CH$FILL (%X'30', .BUF_OFFSET + 1, TEMP_BUF2);
5                   IF .NO_DIGITS GTR .DESTINATION [DSC$W_LENGTH] THEN SIGNAL (DBG$_DECOVF, 1, .DBG$GL_OPCOD
5                   BUF_OFFSET = K_TEMP_BUF_LENGTH - .DESTINATION [DSC$W_LENGTH] - 1;
7                   BLOCK [TEMP_BUF2 + .BUF_OFFSET, 0, 0, 8, 0;, BYTE] = (IF .SRC_INFO [S_SIGN] THEN .(.BLOC
7                       [TEMP_BUF2 + .BUF_OFFSET, 0, 0, 8, 0;, BYTE] + LIB$AB_CVT_U_O - 48 + 10) ELSE .(
5                       .BLOCK [TEMP_BUF2 + .BUF_OFFSET, 0, 0, 8, 0;, BYTE] + LIB$AB_CVT_U_O - 48));
5                   CH$MOVE (.DESTINATION [DSC$W_LENGTH], TEMP_BUF2 + .BUF_OFFSET, .OUTPUT);
4                   END;
4
4               [DSC$K_DTYPE_NR]:
5                   BEGIN
5                   LOCAL
5                       DES_LEN;
5                   DES_LEN =
6                   BEGIN
6                   IF .DESTINATION [DSC$W_LENGTH] EQL 0 THEN 0 ELSE .DESTINATION [DSC$W_LENGTH] - 1
5                   END;
5                   IF .NO_DIGITS GTR .DES_LEN THEN SIGNAL (DBG$_DECOVF, 1, .DBG$GL_OPCODE_NAME);
5                   CH$FILL (%X'30', .DES_LEN - .NO_DIGITS + 1, TEMP_BUF1);
5                   CH$MOVE (.NO_DIGITS, TEMP_BUF2 + .BUF_OFFSET + 1, TEMP_BUF1 + .DES_LEN - .NO_DIGITS);
5                   BLOCK [TEMP_BUF1 + .DES_LEN, 0, 0, 8, 0;, BYTE] = .BLOCK [TEMP_BUF2 + .BUF_OFFSET, 0,
5                       0, 8, 0;, BYTE];
5                   CH$MOVE (.DES_LEN + 1, TEMP_BUF1, .OUTPUT);
4                   END;
4
4               [DSC$K_DTYPE_NRO, DSC$K_DTYPE_NZ]:
5                   BEGIN
5                   IF .NO_DIGITS GTR .DESTINATION [DSC$W_LENGTH] THEN SIGNAL (DBG$_DECOVF, 1, .DBG$GL_OPCOD
5                   CVTSP (NO_DIGITS, TEMP_BUF2 + .BUF_OFFSET, DESTINATION [DSC$W_LENGTH], TEMP_BUF1);
5                   CVTPT (DESTINATION [DSC$W_LENGTH], TEMP_BUF1,
6                       (IF .DESTINATION [DSC$B_DTYPE] EQL DSC$K_DTYPE_NRO THEN LIB$AB_CVTPT_O ELSE
5                           LIB$AB_CVTPT_Z), DESTINATION [DSC$W_LENGTH], .OUTPUT);
4                   END;
4
4               [DSC$K_DTYPE_P]:
5                   BEGIN
```

```
                IF .NO_DIGITS GTR 31 THEN SIGNAL (DBG$_DECOVF, 1, .DBG$GL_OPCODE_NAME);
                CVTSP (NO_DIGITS, TEMP_BUF2 + .BUF_OFFSET, DESTINATION [DSC$W_LENGTH], .OUTPUT);
                END;

            [INRANGE, OUTRANGE]:
                SELECTONE .CVT_PATH OF
                    SET
                    [K_LRGINT_DEC]:
                        $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgint_dec');
                    [K_SMLFLTCMPLX_DEC]:
                        $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlfltcmplx_dec');
                    [K_LRGFLTCMPLX_DEC]:
                        $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgfltcmplx_dec');
                    [K_NBDS_DEC]:
                        $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  nbds_dec');
                    TES;
            TES;                              !For LRGINT_DEC, SMLFLTCMPLX_DEC, LRGFLTCMPLX_DEC, NBDS_DEC.
        END;
```

```

[K_SMLINT_NBDS, K_LRGINT_NBDS, K_DEC_NBDS]:
    SELECTONE .DESTINATION [DSC$B_DTYPE] OF
        SET

        [DSC$K_DTYPE_BU, DSC$K_DTYPE_T, DSC$K_DTYPE_VT, DSC$K_DTYPE_AC, DSC$K_DTYPE_AZ]:
            BEGIN
            CLASS_S_DESC [DSC$W_LENGTH] = K_TEMP_BUF_LENGTH;
            CLASS_S_DESC [DSC$A_POINTER] = TEMP_BUF2;

            ! Compute 'DIGITS_IN_FRACT' based on scale.
            ! For negative scales, the number of digits in the fraction
            ! is just the absolute value of the scale. This seems
            ! to work for both binary and decimal scales. For example,
            ! (binary 101 with scale factor -2) = binary 1.01 =
            ! 1 + 0/2 + 1/4 = 1.25, which has 2 digits in the fraction.
            ! For non-negative scale, DIGITS_IN_FRACT is zero.
            ! First do a consistency check to ensure we do not have
            ! both decimal and binary scale factors - if we do,
            ! something is wrong.
            !
            DIGITS_IN_FRACT = 0;
            IF (.BIN_SCALE NEQ 0) AND (.SCALE NEQ 0)
            THEN
                $DBG_ERROR('DBGCVTDX\DBG$CVT_DX_DX inconsistent scale factors');
            IF .BIN_SCALE LSS 0
            THEN
                DIGITS_IN_FRACT = -.BIN_SCALE;
            IF .SCALE [SS 0
            THEN
                DIGITS_IN_FRACT = -.SCALE;

            SELECTONE .CVT_PATH OF
                SET

                [K_SMLINT_NBDS]:
                    BEGIN
                    CVTLD (INTMED_DATA, TEMP_BUF1);

                    ! Take care of binary scale factors by doing
                    ! the divide or multiply.
                    !
                    WHILE .BIN_SCALE LSS 0 DO
                        BEGIN
                        DIVD2(UPLIT (%D'2.0'), TEMP_BUF1);
                        BIN_SCALE = .BIN_SCALE + 1;
                        END;
                    WHILE .BIN_SCALE GTR 0 DO
                        BEGIN
                        MULD2(UPLIT (%D'2.0'), TEMP_BUF1);
                        BIN_SCALE = .BIN_SCALE - 1;
                        END;

                    STATUS = FOR$CVT_D_TF (TEMP_BUF1, CLASS_S_DESC, .DIGITS_IN_FRACT, .SCALE);
                    END;

                [K_LRGINT_NBDS]:
```

```
4        IF .SOURCE[ DSC$B_DTYPE ] NEQ DSC$K_DTYPE_O                      ! A004
4        THEN                                                             ! A004
5            BEGIN
5            CVTROUH (INTMED_DATA, TEMP_BUF1);
5            IF .SRC_INFO [S_SIGN] THEN TEMP_BUF1<15, 1, 0> = 1;
5
5            ! Take care of binary scale factors by doing
5            ! the divide or multiply.
5            !
5            WHILE .BIN_SCALE LSS 0 DO
6                BEGIN
6                DIVH2(UPLIT (%H'2.0'), TEMP_BUF1);
6                BIN_SCALE = .BIN_SCALE + 1;
5                END;
5            WHILE .BIN_SCALE GTR 0 DO
6                BEGIN
6                MULH2(UPLIT (%H'2.0'), TEMP_BUF1);
6                BIN_SCALE = .BIN_SCALE - 1;
5                END;
5
5            STATUS = FOR$CVT_H_TF (TEMP_BUF1, CLASS_S_DESC, .DIGITS_IN_FRACT, .SCALE);
5            END
4        ELSE                                                             ! A004
5            BEGIN                                                        ! A004
5            LOCAL                                                        ! A004
5                Previous_Value : VECTOR[4];                              ! A004
5
5            MAP                                                          ! A004
5                INTMED_DATA : VECTOR[4];                                 ! A004
5
5            ! Don't support scale factor on octaword.
5            !
5            IF .BIN_SCALE NEQ 0
5            THEN
5                $DBG_ERROR('DBGCVTDX\DBG$CVT_DX_DX scale factor on octaword not supporte
5
5            CLASS_S_DESC[ DSC$W_LENGTH ] = 0;                            ! A004
5
5            !++
5            ! Init the Previous value
5            !--
5            CH$MOVE( 16,                                                 ! A004
5                    CH$PTR( INTMED_DATA),                                ! A004
5                    CH$PTR( Previous_value ) );                          ! A004
5
5            !++
5            ! By dividing the value by ten and multiplying it by
5            !     ten the original value and the new value may be
5            !     subtracted to obtain the value of the least
5            !     significant digit.
5            ! Repeating allows the building up of the string
5            !     from the back.
5            !--
5            DO                                                           ! A004
6                BEGIN                                                    ! A004
6                LOCAL                                                    ! A004
```

```
        Saved_Value : VECTOR[4];                                 ! A004

    !++
    ! Save the previous value
    !--
    CH$MOVE( 16,                                                 ! A004
             CH$PTR( INTMED_DATA),                               ! A004
             CH$PTR( Previous_value ) );                         ! A004

    !++
    ! Divide by ten
    !--
    DBG$CVT_SCALE_OU_DOWN_BY_10_R1( INTMED_DATA );               ! A004

    !++
    ! Save the divided value for the next time
    !--
    CH$MOVE( 16,                                                 ! A004
             CH$PTR( INTMED_DATA),                               ! A004
             CH$PTR( Saved_value ) );                            ! A004

    !++
    ! Multiply by ten to remove for the subtraction
    !--
    DBG$CVT_SCALE_OU_UP_BY_10_R1( INTMED_DATA );                 ! A004

    !++
    ! Move the previous digits down
    !--
    DECR Current_position FROM .CLASS_S_DESC[DSC$W_LENGTH] - 1
                          TO 0 DO
        CH$WCHAR( CH$RCHAR( CH$PTR( .CLASS_S_DESC[ DSC$A_POINTER ] + .Curren
                  CH$PTR( .CLASS_S_DESC[ DSC$A_POINTER ] + .Current_position

    !++
    ! Subtract and put the new digit in the string
    !--
    CH$WCHAR(.Previous_value[0]-.INTMED_DATA[0] + %C'0',   ! A004
                CH$PTR( .CLASS_S_DESC[ DSC$A_POINTER] ) );! A004

    !++
    ! Increment the length
    !--
    CLASS_S_DESC[ DSC$W_LENGTH ] =                               ! A004
            .CLASS_S_DESC[ DSC$W_LENGTH ] + 1;                   ! A004

    !++
    ! Saved value becomes the previous value
    !--
    CH$MOVE( 16,                                                 ! A004
             CH$PTR( Saved_value),                               ! A004
             CH$PTR( INTMED_DATA ) );                            ! A004

    END                                                          ! A004
WHILE (.INTMED_DATA[ 3 ] NEQ 0)  OR                              ! A004
      (.INTMED_DATA[ 2 ] NEQ 0)  OR                              ! A004
      (.INTMED_DATA[ 1 ] NEQ 0)  OR                              ! A004
```

```
5                   (.INTMED_DATA[ 0 ] NEQ 0);                                ! A004
5                                                                             ! A004
5               !++
5               ! Load in a '-' if there is one
5               !--
5               IF .SRC_INFO[ S_SIGN ]
5               THEN
6                   BEGIN
6                   DECR Current_position FROM .CLASS_S_DESC[DSC$W_LENGTH] - 1
6                                         TO 0 DO
6                       CH$WCHAR( CH$RCHAR( CH$PTR( .CLASS_S_DESC[ DSC$A_POINTER ] + .Curren
6                                 CH$PTR( .CLASS_S_DESC[ DSC$A_POINTER ] + .Current_position
6                   CH$WCHAR( %C'-',
6                             CH$PTR( .CLASS_S_DESC[ DSC$A_POINTER] ) );
6                   CLASS_S_DESC[ DSC$W_LENGTH ] = .CLASS_S_DESC[ DSC$W_LENGTH ] + 1;
5                   END;
5
5               !++
5               ! Put a '.' on the end just like CVTROUH
5               !--
5               CH$WCHAR(%C'.', CH$PTR( .CLASS_S_DESC[ DSC$A_POINTER] + ! A004
5                                       .CLASS_S_DESC[ DSC$W_LENGTH ]));! A004
5
5               STATUS = SS$_NORMAL;                                          ! A004
4               END;                                                          ! A004
4
4       [K_DEC_NBDS]:
5           BEGIN
5
5           ! Don't support binary scale factor on packed.
5           !
5           IF .BIN_SCALE NEQ 0
5           THEN
5               $DBG_ERROR('DBGCVTDX\DBG$CVT_DX_DX binary scale factor on packed not support
5
5           NO_DIGITS = .SRC_INFO [S_LEN];
5           CVTPS (NO_DIGITS, INTMED_DATA, NO_DIGITS, TEMP_BUF2);
5           CLASS_S_DESC [DSC$W_LENGTH] = .NO_DIGITS + 1;
5           OTS$CVT_T_H (CLASS_S_DESC, TEMP_BUF1, 0, 0,
5               (K_IGN_BLKS OR K_ENB_UNDERFLOW OR K_IGN_TABS ));
5           STATUS = FOR$CVT_H_TF (TEMP_BUF1, CLASS_S_DESC, .DIGITS_IN_FRACT, .SCALE);
4           END;
4       TES;
4
4   BUF_OFFSET = CH$FIND_NOT_CH (K_TEMP_BUF_LENGTH, TEMP_BUF2, %C' ') - TEMP_BUF2;
4   NEXT_BLANK = CH$FIND_CH (K_TEMP_BUF_LENGTH-.BUF_OFFSET, TEMP_BUF2+.BUF_OFFSET, %C' ');
4   IF .NEXT_BLANK EQL 0
4   THEN
4       FINAL_LEN = K_TEMP_BUF_LENGTH - .BUF_OFFSET
4   ELSE
4       FINAL_LEN = .NEXT_BLANK - .BUF_OFFSET - TEMP_BUF2;
4   IF .DIGITS_IN_FRACT EQL 0
4   THEN
4       FINAL_LEN = .FINAL_LEN - 1;
4
4   IF NOT .STATUS
4   THEN
```

```
5               BEGIN
5               CLASS_S_DESC [DSC$W_LENGTH] = K_TEMP_BUF_LENGTH;
5               IF .CVT_PATH EQL K_DEC_NBDS
5               THEN
5                   DIGITS_IN_FRACT = 31
5               ELSE
5                   IF .DST_INFO [D_LEN] - 9 LEQ 0
5                   THEN
5                       DIGITS_IN_FRACT = 33
5                   ELSE
5                       DIGITS_IN_FRACT = MIN (33, .DST_INFO [D_LEN] - 9);
5               STATUS = FOR$CVT_H_TE (TEMP_BUF1, CLASS_S_DESC, .DIGITS_IN_FRACT, .SCALE, 0, 4);
5               IF NOT .STATUS THEN $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  error in h-to-te conversio
5               BUF_OFFSET = CH$FIND_NOT_CH (K_TEMP_BUF_LENGTH, TEMP_BUF2, %C' ') - TEMP_BUF2;
5               FINAL_LEN = K_TEMP_BUF_LENGTH - .BUF_OFFSET;
4               END;
4
4           OUTPUT_STR_LEN = .FINAL_LEN;
4           SELECTONE .DESTINATION[DSC$B_DTYPE] OF
4               SET
4               [DSC$K_DTYPE_AC]:
5                   BEGIN
5                   MAP
5                       OUTPUT:  REF VECTOR[, BYTE];
5                   CLASS_S_DESC[DSC$W_LENGTH] = .FINAL_LEN;
5                   CLASS_S_DESC[DSC$A_POINTER] = OUTPUT[1];
5                   STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, CLASS_S_DESC);
5                   IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, T, .DBG$GL_OPCODE_NAME);
5                   IF NOT .STATUS THEN SIGNAL (.STATUS);
5                   OUTPUT[0] = .FINAL_LEN;
4                   END;
4
4               [DSC$K_DTYPE_AZ]:
5                   BEGIN
5                   MAP
5                       OUTPUT:  REF VECTOR[, BYTE];
5                   CLASS_S_DESC[DSC$W_LENGTH] = .FINAL_LEN;
5                   CLASS_S_DESC[DSC$A_POINTER] = OUTPUT[0];
5                   STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, CLASS_S_DESC);
5                   IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, T, .DBG$GL_OPCODE_NAME);
5                   IF NOT .STATUS THEN SIGNAL (.STATUS);
5                   OUTPUT[.FINAL_LEN + 1] = 0;
4                   END;
4
4               [OTHERWISE]:
5                   BEGIN
5                   STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, .DESTINATION);
5                   IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, T, .DBG$GL_OPCODE_NAME);
5                   IF NOT .STATUS THEN SIGNAL (.STATUS);
4                   END;
4               TES;
3           END;
3
3       [OTHERWISE]:
3           SELECTONE .CVT_PATH OF
3               SET
3               [K_SMLINT_NBDS]:
```

```
; 2946      3064  3                     $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlint_nbds');
; 2947      3065  3                 [K_LRGINT_NBDS]:
; 2948      3066  3                     $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgint_nbds');
; 2949      3067  3                 [K_DEC_NBDS]:
; 2950      3068  3                     $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  dec_nbds');
; 2951      3069  3                 TES;
; 2952      3070  3         TES;                                    !For SMLINT_NBDS, LRGINT_NBDS, DEC_NBDS
; 2953      3071  3
```

```

        [K_SMLFLTCMPLX_SMLINT]:
            BEGIN
            M_SCALE_D_D;
            IF .CVT_ROUND_FLAG
            THEN
                CVTRDL (INTMED_DATA, TEMP_BUF1)
            ELSE
                CVTDL  (INTMED_DATA, TEMP_BUF1);

            CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_V TO DSC$K_DTYPE_SVU OF
                SET

                [DSC$K_DTYPE_BU]:
                    BEGIN
                    IF .TEMP_BUF1 [LONG_1] GTRU K_LRGST_BU THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME
                    OUTPUT [BYTE_1] = .TEMP_BUF1 [BYTE_1];
                    END;

                [DSC$K_DTYPE_WU]:
                    BEGIN
                    IF .TEMP_BUF1 [LONG_1] GTRU K_LRGST_WU THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME
                    OUTPUT [WORD_1] = .TEMP_BUF1 [WORD_1];
                    END;

                [DSC$K_DTYPE_B]:
                    BEGIN
                    CVTLB (TEMP_BUF1, .OUTPUT);
                    END;

                [DSC$K_DTYPE_W]:
                    BEGIN
                    CVTLW (TEMP_BUF1, .OUTPUT);
                    END;

                [DSC$K_DTYPE_L]:
                    OUTPUT [LONG_1] = .TEMP_BUF1 [S_LONG_1];

                [DSC$K_DTYPE_V, DSC$K_DTYPE_SV, DSC$K_DTYPE_VU, DSC$K_DTYPE_SVU, DSC$K_DTYPE_TF]:
                    BEGIN
                    MAP
                        OUTPUT:  REF BITVECTOR[K_OUTPUT_BUFFER_LENGTH * 8],
                        INTMED_DATA:  BITVECTOR[K_INTMED_DATA_LENGTH * 8];

                    INCR I FROM 0 TO .DST_INFO[D_LEN] - 1 DO
                        BEGIN
                        OUTPUT[.I] = .INTMED_DATA[.I];
                        END;
                    END;

                [INRANGE, OUTRANGE]:
                    $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlfltcmplx_smlint');
                TES;                                !For SMLFLTCMPLX_SMLINT
            END;
```

```
3
3     [K_SMLFLTCMPLX_LRGINT]:
4         BEGIN
4         M_SCALE_D_D;
4         CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_LU TO DSC$K_DTYPE_O OF
4             SET
4
4             [DSC$K_DTYPE_LU]:
5                 BEGIN
5                 IF CMPD (INTMED_DATA, .LRGST_D_LU) GTR 0 THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NA
5                 BICPSW (%REF (K_SET_ARITHMETIC_TRAP));
5                 IF .CVT_ROUND_FLAG
5                 THEN
5                     CVTRDL (INTMED_DATA, .OUTPUT)
5                 ELSE
5                     CVTDL  (INTMED_DATA, .OUTPUT);
5
5                 BISPSW (%REF (K_SET_ARITHMETIC_TRAP));
4                 END;
4
4             [DSC$K_DTYPE_Q, DSC$K_DTYPE_QU]:
4                 CVTRDQ (INTMED_DATA, .OUTPUT);
4
4             [DSC$K_DTYPE_O]:
5                 BEGIN
5                 CVTDH (INTMED_DATA, TEMP_BUF1);
5                 CVTRHO (TEMP_BUF1, .OUTPUT);
4                 END;
4
4             [INRANGE, OUTRANGE]:
4                 $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlfltcmplx lrgint');
4             TES;                            !For SMLFLTCMPLX_LRGINT
3         END;
```

```

[K_SMLFLTCMPLX_NBDS]:
    SELECTONE .DESTINATION [DSC$B_DTYPE] OF
        SET

        [DSC$K_DTYPE_BU, DSC$K_DTYPE_T, DSC$K_DTYPE_VT, DSC$K_DTYPE_AC, DSC$K_DTYPE_AZ]:
            BEGIN
            CLASS_S_DESC [DSC$W_LENGTH] = K_TEMP_BUF_LENGTH;
            CLASS_S_DESC [DSC$A_POINTER] = TEMP_BUF2;
            DIGITS_IN_FRACT =
            BEGIN
            CASE .SOURCE [DSC$B_DTYPE] FROM DSC$K_DTYPE_F TO DSC$K_DTYPE_D OF
                SET

                [DSC$K_DTYPE_F]:
                    7;

                [DSC$K_DTYPE_D]:
                    16;
                TES
            END;
            IF .DST_INFO [D_LEN] - 7 GTR 0
            THEN
                DIGITS_IN_FRACT = MIN (.DIGITS_IN_FRACT,
                    .DST_INFO [D_LEN] - 7);
            STATUS = FOR$CVT_D_TE (INTMED_DATA, CLASS_S_DESC, .DIGITS_IN_FRACT, .SCALE, 0);
            IF NOT .STATUS THEN $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  error in d-to-te conversion');
            BUF_OFFSET = CH$FIND_NOT_CH (K_TEMP_BUF_LENGTH, TEMP_BUF2, %C' ') - TEMP_BUF2;
            FINAL_LEN = K_TEMP_BUF_LENGTH - .BUF_OFFSET;
            OUTPUT_STR_LEN = .FINAL_LEN;

            SELECTONE .DESTINATION[DSC$B_DTYPE] OF
                SET
                [DSC$K_DTYPE_AC]:
                    BEGIN
                    MAP
                        OUTPUT:  REF VECTOR[, BYTE];
                    CLASS_S_DESC[DSC$W_LENGTH] = .FINAL_LEN;
                    CLASS_S_DESC[DSC$A_POINTER] = OUTPUT[1];
                    STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, CLASS_S_DESC);
                    IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, T,.DBG$GL_OPCODE_NAME);
                    IF NOT .STATUS THEN SIGNAL (.STATUS);
                    OUTPUT[0] = .FINAL_LEN;
                    END;

                [DSC$K_DTYPE_AZ]:
                    BEGIN
                    MAP
                        OUTPUT:  REF VECTOR[, BYTE];
                    CLASS_S_DESC[DSC$W_LENGTH] = .FINAL_LEN;
                    CLASS_S_DESC[DSC$A_POINTER] = OUTPUT[0];
                    STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, CLASS_S_DESC);
                    IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, T, .DBG$GL_OPCODE_NAME);
                    IF NOT .STATUS THEN SIGNAL (.STATUS);
                    OUTPUT[.FINAL_LEN + 1] = 0;
                    END;

```

```
; 3101          3216  4                  [OTHERWISE]:
; 3102          3217  5                      BEGIN
; 3103          3218  5                      STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, .DESTINATION);
; 3104          3219  5                      IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, 1, .DBG$GL_OPCODE_NAME);
; 3105          3220  5                      IF NOT .STATUS THEN SIGNAL (.STATUS);
; 3106          3221  4                      END;
; 3107          3222  4                  TES;
; 3108          3223  3              END;
; 3109          3224  3
; 3110          3225  3          [OTHERWISE]:
; 3111          3226  3              $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  smlfltcmplx_nbds');
; 3112          3227  3          TES;                        !For SMLFLTCMPLX_NBDS
```

```
[K_LRGFLTCMPLX_SMLINT]:
    BEGIN
    IF .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_G OR
       .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_GC
    THEN
        M_SCALE_G_H
    ELSE
        M_SCALE_H_H;
    IF .CVT_ROUND_FLAG
    THEN
        CVTRHL (INTMED_DATA, TEMP_BUF1)
    ELSE
        CVTHL  (INTMED_DATA, TEMP_BUF1);
    CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_V TO DSC$K_DTYPE_SVU OF
        SET

        [DSC$K_DTYPE_BU]:
            BEGIN
            IF .TEMP_BUF1 [LONG_1] GTRU K_LRGST_BU THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME
            OUTPUT [BYTE_1] = .TEMP_BUF1 [BYTE_T];
            END;

        [DSC$K_DTYPE_WU]:
            BEGIN
            IF .TEMP_BUF1 [LONG_1] GTRU K_LRGST_WU THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME
            OUTPUT [WORD_1] = .TEMP_BUF1 [WORD_T];
            END;

        [DSC$K_DTYPE_B]:
            BEGIN
            CVTLB (TEMP_BUF1, .OUTPUT);
            END;

        [DSC$K_DTYPE_W]:
            BEGIN
            CVTLW (TEMP_BUF1, .OUTPUT);
            END;

        [DSC$K_DTYPE_L]:
            OUTPUT [LONG_1] = .TEMP_BUF1 [S_LONG_1];

        [DSC$K_DTYPE_V, DSC$K_DTYPE_SV, DSC$K_DTYPE_VU, DSC$K_DTYPE_SVU, DSC$K_DTYPE_TF]:
            BEGIN
            MAP
                OUTPUT:  REF BITVECTOR[K_OUTPUT_BUFFER_LENGTH * 8],
                INTMED_DATA:  BITVECTOR[K_INTMED_DATA_LENGTH * 8];

            INCR I FROM 0 TO .DST_INFO[D_LEN] - 1 DO
                BEGIN
                OUTPUT[.I] = .INTMED_DATA[.I];
                END;
            END;

        [INRANGE, OUTRANGE]:
            $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgfltcmplx_smlint');
        TES;                                    !For LRGFLTCMPLX_SMLINT
```

```
; 3171          3285  3             END;
```

```
3
3       [K_LRGFLTCMPLX_LRGINT]:
4           BEGIN
4           IF .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_G OR
4               .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_GC
4           THEN
5               M_SCALE_G_H
4           ELSE
4               M_SCALE_H_H;
4           CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_LU TO DSC$K_DTYPE_O OF
4               SET
4
4               [DSC$K_DTYPE_LU]:
5                   BEGIN
5                   IF CMPH (INTMED_DATA, .LRGST_H_LU) GTR 0 THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NA
5                   BICPSW (%REF (K_SET_ARITHMETIC_TRAP));
5                   IF .CVT_ROUND_FLAG
5                   THEN
5                       CVTRHL (INTMED_DATA, .OUTPUT)
5                   ELSE
5                       CVTHL  (INTMED_DATA, .OUTPUT);
5                   BISPSW (%REF (K_SET_ARITHMETIC_TRAP));
4                   END;
4
4               [DSC$K_DTYPE_Q, DSC$K_DTYPE_QU]:
4                   CVTRHQ (INTMED_DATA, .OUTPUT);
4
4               [DSC$K_DTYPE_O]:
4                   CVTRHO (INTMED_DATA, .OUTPUT);
4
4               [INRANGE, OUTRANGE]:
4                   $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgfltcmplx_lrgint');
4               TES;                                !For LRGFLTCMPLX_LRGINT
3           END;
```

```
3
3        [K_LRGFLTCMPLX_SMLFLTCMPLX]:
4            BEGIN
4            IF .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_G OR
4               .SOURCE[DSC$B_DTYPE] EQL DSC$K_DTYPE_GC
4            THEN
5                M_SCALE_G_H
4            ELSE
4                M_SCALE_H_H;
4            CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_F TO DSC$K_DTYPE_D OF
4                SET
4
4                [DSC$K_DTYPE_F]:
4                    CVTHF (INTMED_DATA, .OUTPUT);
4
4                [DSC$K_DTYPE_D]:
4                    CVTHD (INTMED_DATA, .OUTPUT);
4
4                [INRANGE, OUTRANGE]:
4                    CASE .DESTINATION[DSC$B_DTYPE] FROM DSC$K_DTYPE_FC TO DSC$K_DTYPE_DC OF
4                        SET
4
4                        [DSC$K_DTYPE_FC]:
5                            BEGIN
5                            CVTHF (INTMED_DATA, .OUTPUT);
5                            CVTHF (INTMED_DATA+16, .OUTPUT+4);
4                            END;
4
4                        [DSC$K_DTYPE_DC]:
5                            BEGIN
5                            CVTHD (INTMED_DATA, .OUTPUT);
5                            CVTHD (INTMED_DATA+16, .OUTPUT+8);
4                            END;
4
4                        [INRANGE, OUTRANGE]:
4                            $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgfltcmplx_smlfltcmplx');
4                        TES;
4                TES;                                  !For LRGFLTCMPLX_SMLFLTCMPLX
3            END;
```

```
        [K_LRGFLTCMPLX_NBDS]:
            SELECTONE .DESTINATION [DSC$B_DTYPE] OF
                SET

                [DSC$K_DTYPE_BU, DSC$K_DTYPE_T, DSC$K_DTYPE_VT, DSC$K_DTYPE_AC, DSC$K_DTYPE_AZ]:
                    BEGIN
                    LOCAL
                        DIGITS_IN_EXP,
                        NOT_DIGITS;

                    CLASS_S_DESC [DSC$W_LENGTH] = K_TEMP_BUF_LENGTH;
                    CLASS_S_DESC [DSC$A_POINTER] = TEMP_BUF2;
                    CASE .SOURCE [DSC$B_DTYPE] FROM DSC$K_DTYPE_G TO DSC$K_DTYPE_H OF
                        SET
                        [DSC$K_DTYPE_G]:
                            BEGIN
                            DIGITS_IN_FRACT = 15;
                            DIGITS_IN_EXP = 3;
                            NOT_DIGITS = 7;
                            IF .DST_INFO [D_LEN] - .NOT_DIGITS GTR 0
                            THEN
                                DIGITS_IN_FRACT = MIN (.DIGITS_IN_FRACT, .DST_INFO [D_LEN] - .NOT_DIGITS);
                            STATUS = FOR$CVT_G_TE (INTMED_DATA, CLASS_S_DESC, .DIGITS_IN_FRACT, .SCALE, 0, .
                            IF NOT .STATUS THEN $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  error in g-to-te conve
                            END;

                        [DSC$K_DTYPE_H]:
                            BEGIN
                            DIGITS_IN_FRACT = 33;
                            DIGITS_IN_EXP = 4;
                            NOT_DIGITS = 8;
                            IF .DST_INFO [D_LEN] - .NOT_DIGITS GTR 0
                            THEN
                                DIGITS_IN_FRACT = MIN (.DIGITS_IN_FRACT, .DST_INFO [D_LEN] - .NOT_DIGITS);
                            STATUS = FOR$CVT_H_TE (INTMED_DATA, CLASS_S_DESC, .DIGITS_IN_FRACT, .SCALE, 0, .
                            IF NOT .STATUS THEN $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  error in h-to-te conve
                            END;
                        TES;

                    BUF_OFFSET = CH$FIND_NOT_CH (K_TEMP_BUF_LENGTH, TEMP_BUF2, %C' ') - TEMP_BUF2;
                    FINAL_LEN = K_TEMP_BUF_LENGTH - .BUF_OFFSET;
                    OUTPUT_STR_LEN = .FINAL_LEN;

                    SELECTONE .DESTINATION[DSC$B_DTYPE] OF
                        SET
                        [DSC$K_DTYPE_AC]:
                            BEGIN
                            MAP
                                OUTPUT:  REF VECTOR[, BYTE];
                            CLASS_S_DESC[DSC$W_LENGTH] = .FINAL_LEN;
                            CLASS_S_DESC[DSC$A_POINTER] = OUTPUT[1];
                            STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, CLASS_S_DESC);
                            IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, 1, .DBG$GL_OPCODE_NAME);
                            IF NOT .STATUS THEN SIGNAL (.STATUS);
                            OUTPUT[0] = .FINAL_LEN;
                            END;
```

```
 4
 4                  [DSC$K_DTYPE_AZ]:
 5                      BEGIN
 5                      MAP
 5                          OUTPUT:  REF VECTOR[, BYTE];
 5                      CLASS_S_DESC[DSC$W_LENGTH] = .FINAL_LEN;
 5                      CLASS_S_DESC[DSC$A_POINTER] = OUTPUT[0];
 5                      STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, CLASS_S_DESC);
 5                      IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, T, .DBG$GL_OPCODE_NAME);
 5                      IF NOT .STATUS THEN SIGNAL (.STATUS);
 5                      OUTPUT[.FINAL_LEN + 1] = 0;
 4                      END;
 4
 4                  [OTHERWISE]:
 5                      BEGIN
 5                      STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, .DESTINATION);
 5                      IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, T, .DBG$GL_OPCODE_NAME);
 5                      IF NOT .STATUS THEN SIGNAL (.STATUS);
 4                      END;
 4                  TES;
 3              END;
 3
 3          [OTHERWISE]:
 3              $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  lrgfltcmplx_nbds');
 3          TES;                                !For LRGFLTCMPLX_NBDS
```

```
        [K_DEC_SMLINT]:
            BEGIN

            IF .DESTINATION [DSC$V_FL_BINSCALE]
            THEN
                BEGIN
                ! This is a HACK for scaled binary.  The Idea is to run the
                ! scaled packed decimal up to H_Float and then back down to
                ! the particular dtype below.  The algorithm is as follows:
                !
                ! The destination is a binary scale type so the conversion is
                ! done by hand.
                ! 1) Get the sign.
                ! 2) Get the scale of the H_Float.
                ! 3) Check if an overflow will occur.  An underflow is
                !          acceptable and will be truncated automatically.
                ! 4) Move the most significant H_Float fractional bits
                !          into the temporary destination.
                !          (Note: this includes the redundant most significant
                !          fraction bit.
                ! 5) Alter the destination to the correct scale.
                ! 6) This is an absolute value so correct for the sign.
                ! 7) Move the result into the final destination.
                !
                ! ****************** HACK - BAB Dec. 1983 *********************
                !
                M_SCALE_P_H;
                END
            ELSE
                BEGIN
                M_SCALE_P_P;
                CVTPL (NO_DIGITS, INTMED_DATA, TEMP_BUF1);
                END;

            CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_V TO DSC$K_DTYPE_SVU OF
                SET

                [DSC$K_DTYPE_BU]:
                    BEGIN

                    ! If the target is not a binary scale, then just move the
                    ! converted value in.
                    !
                    IF NOT .DESTINATION [DSC$V_FL_BINSCALE]
                    THEN
                        BEGIN
                        IF .TEMP_BUF1 [LONG_1] GTRU K_LRGST_BU
                        THEN
                            SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
                        OUTPUT [BYTE_1] = .TEMP_BUF1 [BYTE_1];
                        END
                    ELSE

                        ! If the sign and the scale of the H_Float are zero,
                        ! then the value is zero.
                        !
                IF .INTMED_DATA[WORD_1] EQL 0
                THEN
                    OUTPUT[BYTE_1] = 0
                ELSE
                    BEGIN
                    TEMP_BUF1 = 0;
                    SIGN = .INTMED_DATA<15, 1, 0>;
                    INTMED_DATA<15, 1, 0> = 0;
                    FLOAT_SCALE = .INTMED_DATA[WORD_1] - 16384;
                    IF .FLOAT_SCALE GTR (7 + .DESTINATION[DSC$B_SCALE])
                    THEN
                        SIGNAL(DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME)
                    ELSE
                        BEGIN
                        TEMP_BUF1<6, 1, 0> = 1;
                        TEMP_BUF1<0, 6, 0> = .INTMED_DATA<26, 6, 0>;
                        FLOAT_SCALE = 7 + .DESTINATION[DSC$B_SCALE] - .FLOAT_SCALE;
                        WHILE .FLOAT_SCALE GTR 0 DO
                            BEGIN
                            TEMP_BUF1[LONG_1] = .TEMP_BUF1[S_LONG_1] / 2;
                            FLOAT_SCALE = .FLOAT_SCALE - 1;
                            END;
                        IF .SIGN THEN TEMP_BUF1 = 0 - .TEMP_BUF1;
                        OUTPUT [BYTE_1] = .TEMP_BUF1 [S_BYTE_1];
                        END;
                    END;
            END;

        [DSC$K_DTYPE_WU]:
            BEGIN

            ! If the target is not a binary scale, then just move the
            ! converted value in.
            !
            IF NOT .DESTINATION [DSC$V_FL_BINSCALE]
            THEN
                BEGIN
                IF .TEMP_BUF1 [LONG_1] GTRU K_LRGST_WU
                THEN
                    SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
                OUTPUT [WORD_1] = .TEMP_BUF1 [WORD_1];
                END
            ELSE

                ! If the sign and the scale of the H_Float are zero,
                ! then the value is zero.
                !
                IF .INTMED_DATA[WORD_1] EQL 0
                THEN
                    OUTPUT[WORD_1] = 0
                ELSE
                    BEGIN
                    TEMP_BUF1 = 0;
                    SIGN = .INTMED_DATA<15, 1, 0>;
                    INTMED_DATA<15, 1, 0> = 0;
                    FLOAT_SCALE = .INTMED_DATA[WORD_1] - 16384;
                    IF .FLOAT_SCALE GTR (15 + .DESTINATION[DSC$B_SCALE])
            THEN
                SIGNAL(DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME)
            ELSE
                BEGIN
                TEMP_BUF1<14, 1, 0> = 1;
                TEMP_BUF1<0, 14, 0> = .INTMED_DATA<18, 14, 0>;
                FLOAT_SCALE = 15 + .DESTINATION[DSC$B_SCALE] - .FLOAT_SCALE;
                WHILE .FLOAT_SCALE GTR 0 DO
                    BEGIN
                    TEMP_BUF1[LONG_1] = .TEMP_BUF1[S_LONG_1] / 2;
                    FLOAT_SCALE = .FLOAT_SCALE - 1;
                    END;
                IF .SIGN THEN TEMP_BUF1 = 0 - .TEMP_BUF1;
                OUTPUT [WORD_1] = .TEMP_BUF1 [S_WORD_1];
                END;
            END;
    END;

[DSC$K_DTYPE_B]:
    BEGIN

    ! If the target is not a binary scale, then just move the
    ! converted value in.
    !
    IF NOT .DESTINATION [DSC$V_FL_BINSCALE]
    THEN
        CVTLB (TEMP_BUF1, .OUTPUT)
    ELSE

        ! If the sign and the scale of the H_Float are zero,
        ! then the value is zero.
        !
        IF .INTMED_DATA[WORD_1] EQL 0
        THEN
            OUTPUT[BYTE_1] = 0
        ELSE
            BEGIN
            TEMP_BUF1 = 0;
            SIGN = .INTMED_DATA<15, 1, 0>;
            INTMED_DATA<15, 1, 0> = 0;
            FLOAT_SCALE = .INTMED_DATA[WORD_1] - 16384;
            IF .FLOAT_SCALE GTR (7 + .DESTINATION[DSC$B_SCALE])
            THEN
                SIGNAL(DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME)
            ELSE
                BEGIN
                TEMP_BUF1<6, 1, 0> = 1;
                TEMP_BUF1<0, 6, 0> = .INTMED_DATA<26, 6, 0>;
                FLOAT_SCALE = 7 + .DESTINATION[DSC$B_SCALE] - .FLOAT_SCALE;
                WHILE .FLOAT_SCALE GTR 0 DO
                    BEGIN
                    TEMP_BUF1[LONG_1] = .TEMP_BUF1[S_LONG_1] / 2;
                    FLOAT_SCALE = .FLOAT_SCALE - 1;
                    END;
                IF .SIGN THEN TEMP_BUF1 = 0 - .TEMP_BUF1;
                OUTPUT [BYTE_1] = .TEMP_BUF1 [S_BYTE_1];
                END;
```

```
5                       END;
4               END;
4
4           [DSC$K_DTYPE_W]:
5               BEGIN
5
5               ! If the target is not a binary scale, then just move the
5               ! converted value in.
5               !
5               IF NOT .DESTINATION [DSC$V_FL_BINSCALE]
5               THEN
5                   CVTLW (TEMP_BUF1, .OUTPUT)
5               ELSE
5
5                   ! If the sign and the scale of the H_Float are zero,
5                   ! then the value is zero.
5                   !
5                   IF .INTMED_DATA[WORD_1] EQL 0
5                   THEN
5                       OUTPUT[WORD_1] = 0
5                   ELSE
6                       BEGIN
6                       TEMP_BUF1 = 0;
6                       SIGN = .INTMED_DATA<15, 1, 0>;
6                       INTMED_DATA<15, 1, 0> = 0;
6                       FLOAT_SCALE = .INTMED_DATA[WORD_1] - 16384;
7                       IF .FLOAT_SCALE GTR (15 + .DESTINATION[DSC$B_SCALE])
6                       THEN
6                           SIGNAL(DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME)
6                       ELSE
7                           BEGIN
7                           TEMP_BUF1<14, 1, 0> = 1;
7                           TEMP_BUF1<0, 14, 0> = .INTMED_DATA<18, 14, 0>;
7                           FLOAT_SCALE = 15 + .DESTINATION[DSC$B_SCALE] - .FLOAT_SCALE;
7                           WHILE .FLOAT_SCALE GTR 0 DO
8                               BEGIN
8                               TEMP_BUF1[LONG_1] = .TEMP_BUF1[S_LONG_1] / 2;
8                               FLOAT_SCALE = .FLOAT_SCALE - 1;
7                               END;
7                           IF .SIGN THEN TEMP_BUF1 = 0 - .TEMP_BUF1;
7                           OUTPUT [WORD_1] = .TEMP_BUF1 [S_WORD_1];
6                           END;
5                       END;
4               END;
4
4           [DSC$K_DTYPE_L]:
5               BEGIN
5
5               ! If the target is not a binary scale, then just move the
5               ! converted value in.
5               !
5               IF NOT .DESTINATION [DSC$V_FL_BINSCALE]
5               THEN
5                   OUTPUT [LONG_1] = .TEMP_BUF1 [S_LONG_1]
5               ELSE
5
5                   ! If the sign and the scale of the H_Float are zero,
5                     ! then the value is zero.
5                     !
5                     IF .INTMED_DATA[WORD_1] EQL 0
5                     THEN
5                        OUTPUT[LONG_1] = 0
5                     ELSE
6                        BEGIN
6                        TEMP_BUF1 = 0;
6                        SIGN = .INTMED_DATA<15, 1, 0>;
6                        INTMED_DATA<15, 1, 0> = 0;
6                        FLOAT_SCALE = .INTMED_DATA[WORD_1] - 16384;
7                        IF .FLOAT_SCALE GTR (31 + .DESTINATION[DSC$B_SCALE])
6                        THEN
6                           SIGNAL(DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME)
6                        ELSE
7                           BEGIN
7                           TEMP_BUF1<30, 1, 0> = 1;
7                           TEMP_BUF1<14, 16, 0> = .INTMED_DATA<16, 16, 0>;
7                           TEMP_BUF1<0, 14, 0> = .(INTMED_DATA+4)<18, 14, 0>;
7                           FLOAT_SCALE = 31 + .DESTINATION[DSC$B_SCALE] - .FLOAT_SCALE;
7                           WHILE .FLOAT_SCALE GTR 0 DO
8                              BEGIN
8                              TEMP_BUF1[LONG_1] = .TEMP_BUF1[S_LONG_1] / 2;
8                              FLOAT_SCALE = .FLOAT_SCALE - 1;
7                              END;
7                           IF .SIGN THEN TEMP_BUF1 = 0 - .TEMP_BUF1;
7                           OUTPUT [LONG_1] = .TEMP_BUF1 [S_LONG_1];
6                           END;
5                        END;
4                  END;
4
4               [DSC$K_DTYPE_V, DSC$K_DTYPE_SV, DSC$K_DTYPE_VU, DSC$K_DTYPE_SVU, DSC$K_DTYPE_TF]:
5                  BEGIN
5                  MAP
5                     OUTPUT:  REF BITVECTOR[K_OUTPUT_BUFFER_LENGTH * 8],
5                     INTMED_DATA:  BITVECTOR[K_INTMED_DATA_LENGTH * 8];
5
5                  INCR I FROM 0 TO .DST_INFO[D_LEN] - 1 DO
6                     BEGIN
6                     OUTPUT[.I] = .INTMED_DATA[.I];
5                     END;
4                  END;
4
4               [INRANGE, OUTRANGE]:
4                  $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  dec_smlint');
4               TES;                                    !For DEC_SMLINT
3            END;
```

```
    [K_DEC_LRGINT]:
        BEGIN
        M_SCALE_P_P;

        CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_LU TO DSC$K_DTYPE_O OF
            SET

            [DSC$K_DTYPE_LU]:
                BEGIN
                IF (CMPP (NO_DIGITS, INTMED_DATA, %REF (K_PACK_LU_LEN), .LRGST_P_LU) GEQ 0)
                THEN
                    SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
                BICPSW (%REF (K_SET_ARITHMETIC_TRAP));
                CVTPL (NO_DIGITS, INTMED_DATA, .OUTPUT);
                BISPSW (%REF (K_SET_ARITHMETIC_TRAP));
                END;

            [DSC$K_DTYPE_Q, DSC$K_DTYPE_QU, DSC$K_DTYPE_O]:
                BEGIN
                CVTPS (NO_DIGITS, INTMED_DATA, NO_DIGITS, TEMP_BUF2);
                CLASS_S_DESC [DSC$W_LENGTH] = .NO_DIGITS + 1;
                CLASS_S_DESC [DSC$A_POINTER] = TEMP_BUF2;
                OTS$CVT_T_H (CLASS_S_DESC, TEMP_BUF1);
                IF .DESTINATION[DSC$B_DTYPE] EQL DSC$K_DTYPE_Q OR
                    .DESTINATION[DSC$B_DTYPE] EQL DSC$K_DTYPE_QU
                THEN
                    CVTRHQ (TEMP_BUF1, .OUTPUT)
                ELSE
                    CVTRHO (TEMP_BUF1, OUTPUT);
                END;

            [INRANGE, OUTRANGE]:
                $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  dec lrgint');
            TES;                                !For DEC_LRGINT
        END;
```

```
[K_NBDS_SMLINT]:
    BEGIN
    CLASS_S_DESC [DSC$W_LENGTH] = .SRC_INFO [S_LEN];
    CLASS_S_DESC [DSC$A_POINTER] = .SRC_INFO [S_POINTER];
    STATUS = OTS$CVT_T_H (CLASS_S_DESC, TEMP_BUF1, 0, -.SCALE,
        (K_IGN_BLKS OR K_ENB_UNDERFLOW OR K_IGN_TABS OR K_ENB_SCALE));
    IF NOT .STATUS THEN SIGNAL (DBG$_INVNUMSTR, 1, .DBG$GL_OPCODE_NAME);

    ! This is a HACK for scaled binary.  If the destination is Scaled
    ! Binary we will leave the value as a H_Float so that we can
    ! do the convert to Scaled Binary by hand.  The algorithm follows:
    !
    ! This is the algorithm for the code in the particular case below:
    ! 1) Get the sign.
    ! 2) Get the scale of the H_Float.
    ! 3) Check if an overflow will occur.  An underflow is
    !        acceptable and will be truncated automatically.
    ! 4) Move the most significant H_Float fractional bits
    !        into the temporary destination.
    !        (Note: this includes the redundant most significant
    !        fraction bit.
    ! 5) Alter the destination to the correct scale.
    ! 6) This is an absolute value so correct for the sign.
    ! 7) Move the result into the final destination.
    !
    ! ****************** HACK - BAB Dec. 1983 ********************
    !
    IF NOT .DESTINATION [DSC$V_FL_BINSCALE]
    THEN
        IF .CVT_ROUND_FLAG
        THEN
            CVTRHL (TEMP_BUF1, TEMP_BUF2)
        ELSE
            CVTHL  (TEMP_BUF1, TEMP_BUF2);

    CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_V TO DSC$K_DTYPE_SVU OF
        SET

        [DSC$K_DTYPE_BU]:
            BEGIN

            ! If the target is not a binary scale, then just move the
            ! converted value in.
            !
            IF NOT .DESTINATION [DSC$V_FL_BINSCALE]
            THEN
                BEGIN
                IF .TEMP_BUF2 [LONG_1] GTRU K_LRGST_BU
                THEN
                    SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
                OUTPUT [BYTE_1] = .TEMP_BUF2 [BYTE_1];
                END
            ELSE

                ! If the sign and the scale of the H_Float are zero,
                ! then the value is zero.
```

```
                    !
                    IF .INTMED_DATA[WORD_1] EQL 0
                    THEN
                        OUTPUT[BYTE_1] = 0
                    ELSE
                        BEGIN
                        TEMP_BUF1 = 0;
                        SIGN = .INTMED_DATA<15, 1, 0>;
                        INTMED_DATA<15, 1, 0> = 0;
                        FLOAT_SCALE = .INTMED_DATA[WORD_1] - 16384;
                        IF .FLOAT_SCALE GTR (7 + .DESTINATION[DSC$B_SCALE])
                        THEN
                            SIGNAL(DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME)
                        ELSE
                            BEGIN
                            TEMP_BUF1<6, 1, 0> = 1;
                            TEMP_BUF1<0, 6, 0> = .INTMED_DATA<26, 6, 0>;
                            FLOAT_SCALE = 7 + .DESTINATION[DSC$B_SCALE] - .FLOAT_SCALE;
                            WHILE .FLOAT_SCALE GTR 0 DO
                                BEGIN
                                TEMP_BUF1[LONG_1] = .TEMP_BUF1[S_LONG_1] / 2;
                                FLOAT_SCALE = .FLOAT_SCALE - 1;
                                END;
                            IF .SIGN THEN TEMP_BUF1 = 0 - .TEMP_BUF1;
                            OUTPUT [BYTE_1] = .TEMP_BUF1 [S_BYTE_1];
                            END;
                        END;
                END;

            [DSC$K_DTYPE_WU]:
                BEGIN

                ! If the target is not a binary scale, then just move the
                ! converted value in.
                !
                IF NOT .DESTINATION [DSC$V_FL_BINSCALE]
                THEN
                    BEGIN
                    IF .TEMP_BUF2 [LONG_1] GTRU K_LRGST_WU
                    THEN
                        SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
                    OUTPUT [WORD_1] = .TEMP_BUF2 [WORD_1];
                    END
                ELSE

                    ! If the sign and the scale of the H_Float are zero,
                    ! then the value is zero.
                    !
                    IF .INTMED_DATA[WORD_1] EQL 0
                    THEN
                        OUTPUT[WORD_1] = 0
                    ELSE
                        BEGIN
                        TEMP_BUF1 = 0;
                        SIGN = .INTMED_DATA<15, 1, 0>;
                        INTMED_DATA<15, 1, 0> = 0;
                        FLOAT_SCALE = .INTMED_DATA[WORD_1] - 16384;
            IF .FLOAT_SCALE GTR (15 + .DESTINATION[DSC$B_SCALE])
            THEN
                SIGNAL(DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME)
            ELSE
                BEGIN
                TEMP_BUF1<14, 1, 0> = 1;
                TEMP_BUF1<0, 14, 0> = .INTMED_DATA<18, 14, 0>;
                FLOAT_SCALE = 15 + .DESTINATION[DSC$B_SCALE] - .FLOAT_SCALE;
                WHILE .FLOAT_SCALE GTR 0 DO
                    BEGIN
                    TEMP_BUF1[LONG_1] = .TEMP_BUF1[S_LONG_1] / 2;
                    FLOAT_SCALE = .FLOAT_SCALE - 1;
                    END;
                IF .SIGN THEN TEMP_BUF1 = 0 - .TEMP_BUF1;
                OUTPUT [WORD_1] = .TEMP_BUF1 [S_WORD_1];
                END;
            END;
    END;

[DSC$K_DTYPE_B]:
    BEGIN

    ! If the target is not a binary scale, then just move the
    ! converted value in.
    !
    IF NOT .DESTINATION [DSC$V_FL_BINSCALE]
    THEN
        CVTLB (TEMP_BUF2, .OUTPUT)
    ELSE

        ! If the sign and the scale of the H_Float are zero,
        ! then the value is zero.
        !
        IF .INTMED_DATA[WORD_1] EQL 0
        THEN
            OUTPUT[BYTE_1] = 0
        ELSE
            BEGIN
            TEMP_BUF1 = 0;
            SIGN = .INTMED_DATA<15, 1, 0>;
            INTMED_DATA<15, 1, 0> = 0;
            FLOAT_SCALE = .INTMED_DATA[WORD_1] - 16384;
            IF .FLOAT_SCALE GTR (7 + .DESTINATION[DSC$B_SCALE])
            THEN
                SIGNAL(DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME)
            ELSE
                BEGIN
                TEMP_BUF1<6, 1, 0> = 1;
                TEMP_BUF1<0, 6, 0> = .INTMED_DATA<26, 6, 0>;
                FLOAT_SCALE = 7 + .DESTINATION[DSC$B_SCALE] - .FLOAT_SCALE;
                WHILE .FLOAT_SCALE GTR 0 DO
                    BEGIN
                    TEMP_BUF1[LONG_1] = .TEMP_BUF1[S_LONG_1] / 2;
                    FLOAT_SCALE = .FLOAT_SCALE - 1;
                    END;
                IF .SIGN THEN TEMP_BUF1 = 0 - .TEMP_BUF1;
                OUTPUT [BYTE_1] = .TEMP_BUF1 [S_BYTE_1];
```

```
6                                 END;
5                             END;
4                     END;
4
4           [DSC$K_DTYPE_W]:
5                     BEGIN
5
5                     ! If the target is not a binary scale, then just move the
5                     ! converted value in.
5                     !
5                     IF NOT .DESTINATION [DSC$V_FL_BINSCALE]
5                     THEN
5                         CVTLW (TEMP_BUF2, .OUTPUT)
5                     ELSE
5
5                         ! If the sign and the scale of the H_Float are zero,
5                         ! then the value is zero.
5                         !
5                         IF .INTMED_DATA[WORD_1] EQL 0
5                         THEN
5                             OUTPUT[WORD_1] = 0
5                         ELSE
6                             BEGIN
6                             TEMP_BUF1 = 0;
6                             SIGN = .INTMED_DATA<15, 1, 0>;
6                             INTMED_DATA<15, 1, 0> = 0;
6                             FLOAT_SCALE = .INTMED_DATA[WORD_1] - 16384;
7                             IF .FLOAT_SCALE GTR (15 + .DESTINATION[DSC$B_SCALE])
6                             THEN
6                                 SIGNAL(DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME)
6                             ELSE
7                                 BEGIN
7                                 TEMP_BUF1<14, 1, 0> = 1;
7                                 TEMP_BUF1<0, 14, 0> = .INTMED_DATA<18, 14, 0>;
7                                 FLOAT_SCALE = 15 + .DESTINATION[DSC$B_SCALE] - .FLOAT_SCALE;
7                                 WHILE .FLOAT_SCALE GTR 0 DO
8                                     BEGIN
8                                     TEMP_BUF1[LONG_1] = .TEMP_BUF1[S_LONG_1] / 2;
8                                     FLOAT_SCALE = .FLOAT_SCALE - 1;
7                                     END;
7                                 IF .SIGN THEN TEMP_BUF1 = 0 - .TEMP_BUF1;
7                                 OUTPUT [WORD_1] = .TEMP_BUF1 [S_WORD_1];
6                                 END;
5                             END;
4                     END;
4
4           [DSC$K_DTYPE_L]:
5                     BEGIN
5
5                     ! If the target is not a binary scale, then just move the
5                     ! converted value in.
5                     !
5                     IF NOT .DESTINATION [DSC$V_FL_BINSCALE]
5                     THEN
5                         OUTPUT [LONG_1] = .TEMP_BUF2 [S_LONG_1]
5                     ELSE
5
```

```
5                                ! If the sign and the scale of the D_Float are zero,
5                                ! then the value is zero.
5                                !
5                                IF .TEMP_BUF1[WORD_1] EQL 0
5                                THEN
5                                    OUTPUT[LONG_1] = 0
5                                ELSE
6                                    BEGIN
6                                    TEMP_BUF2 = 0;
6                                    SIGN = .TEMP_BUF1<15, 1, 0>;
6                                    TEMP_BUF1<15, 1, 0> = 0;
6                                    FLOAT_SCALE = .TEMP_BUF1[WORD_1] - 16384;
7                                    IF .FLOAT_SCALE GTR (31 + .DESTINATION[DSC$B_SCALE])
6                                    THEN
6                                        SIGNAL(DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME)
6                                    ELSE
7                                        BEGIN
7                                        TEMP_BUF2<30, 1, 0> = 1;
7                                        TEMP_BUF2<14, 16, 0> = .TEMP_BUF1<16, 16, 0>;
7                                        TEMP_BUF2<0, 14, 0> = .(TEMP_BUF1+4)<18, 14, 0>;
7                                        FLOAT_SCALE = 31 + .DESTINATION[DSC$B_SCALE] - .FLOAT_SCALE;
7                                        WHILE .FLOAT_SCALE GTR 0 DO
8                                            BEGIN
8                                            TEMP_BUF2[LONG_1] = .TEMP_BUF2[S_LONG_1] / 2;
8                                            FLOAT_SCALE = .FLOAT_SCALE - 1;
7                                            END;
7                                        IF .SIGN THEN TEMP_BUF2 = 0 - .TEMP_BUF2;
7                                        OUTPUT [LONG_1] = .TEMP_BUF2 [S_LONG_1];
6                                        END;
5                                    END;
4                        END;
4
4                    [DSC$K_DTYPE_V, DSC$K_DTYPE_SV, DSC$K_DTYPE_VU, DSC$K_DTYPE_SVU, DSC$K_DTYPE_TF]:
5                        BEGIN
5                        MAP
5                            OUTPUT:  REF BITVECTOR[K_OUTPUT_BUFFER_LENGTH * 8],
5                            INTMED_DATA:  BITVECTOR[K_INTMED_DATA_LENGTH * 8];
5
5                        INCR I FROM 0 TO .DST_INFO[D_LEN] - 1 DO
6                            BEGIN
6                            OUTPUT[.I] = .INTMED_DATA[.I];
5                            END;
4                        END;
4
4                    [INRANGE, OUTRANGE]:
4                        $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  nbds_smlint');
4                    TES;                                    !For NBDS_SMLINT
3                END;
```

```

[K_NBDS_LRGINT]:
    CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_LU TO DSC$K_DTYPE_O OF
        SET

        [DSC$K_DTYPE_LU]:
            BEGIN
            CLASS_S_DESC [DSC$W_LENGTH] = .SRC_INFO [S_LEN];
            CLASS_S_DESC [DSC$A_POINTER] = .SRC_INFO [S_POINTER];
            STATUS = OTS$CVT_T_D (CLASS_S_DESC, TEMP_BUF1, 0, -.SCALE,
                (K_IGN_BLKS OR K_ENB_UNDERFLOW OR K_IGN_TABS OR K_ENB_SCALE));
            IF NOT .STATUS THEN SIGNAL (DBG$_INVNUMSTR, 1 , .DBG$GL_OPCODE_NAME);
            IF .TEMP_BUF1<15, 1, 0> THEN SIGNAL (DBG$_CVTNEGUNS, 1, .DBG$GL_OPCODE_NAME);
            IF CMPD (TEMP_BUF1, .LRGST_D_LU) GTR 0 THEN SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME
            BICPSW (%REF (K_SET_ARITHMETIC_TRAP));
            IF .CVT_ROUND_FLAG
            THEN
                CVTRDL (TEMP_BUF1, .OUTPUT)
            ELSE
                CVTDL  (TEMP_BUF1, .OUTPUT);

            BISPSW (%REF (K_SET_ARITHMETIC_TRAP));
            END;

        [DSC$K_DTYPE_Q, DSC$K_DTYPE_QU]:                                        ! M003
            BEGIN
            CLASS_S_DESC [DSC$W_LENGTH] = .SRC_INFO [S_LEN];
            CLASS_S_DESC [DSC$A_POINTER] = .SRC_INFO [S_POINTER];
            STATUS = OTS$CVT_T_H (CLASS_S_DESC, TEMP_BUF1, 0, -.SCALE,
                (K_IGN_BLKS OR K_ENB_UNDERFLOW OR K_IGN_TABS OR K_ENB_SCALE));
            IF NOT .STATUS THEN SIGNAL (DBG$_INVNUMSTR, 1, .DBG$GL_OPCODE_NAME);
            CVTRHQ (TEMP_BUF1, .OUTPUT)
            END;

        [DSC$K_DTYPE_O]:                                                        ! A004
            BEGIN                                                               ! A004
            LOCAL                                                               ! A004
                Sign_flag : INITIAL( 0 ),                                       ! A004
                Current_character;                                              ! A004

            MAP OUTPUT : REF VECTOR[4];                                         ! A004

            !++                                                                 ! A004
            ! Init the octaword                                                 ! A004
            !--                                                                 ! A004
            OUTPUT[ 3 ] = 0;                                                    ! A004
            OUTPUT[ 2 ] = 0;                                                    ! A004
            OUTPUT[ 1 ] = 0;                                                    ! A004
            OUTPUT[ 0 ] = CH$RCHAR( .SRC_INFO[ S_POINTER ] ) - %C'0';           ! A004

            !++                                                                 ! A004
            ! Test for bad characters                                           ! A004
            !--                                                                 ! A004
            IF .OUTPUT[ 0 ] LSS 0  OR  .OUTPUT[ 0 ] GTR 9                       ! A004
            THEN                                                                ! A004
                IF .OUTPUT[ 0 ] EQL %C'-' - %C'0'                               ! A004
                THEN                                                            ! A004
```

```
5               BEGIN                                                ! A004
5               SRC_INFO[ S_POINTER ] = .SRC_INFO[ S_POINTER ] + 1;  ! A004
5               SRC_INFO[ S_LEN ] = .SRC_INFO[ S_LEN ] - 1;          ! A004
5               OUTPUT[ 0 ] = CH$RCHAR( .SRC_INFO[ S_POINTER ] ) -   ! A004
5                           %C'0';                                   ! A004
5               Sign_flag = 1;                                       ! A004
5               END                                                  ! A004
4           ELSE                                                     ! A004
4               SIGNAL( DBG$_INVDIGDEC, 2, 1, .SRC_INFO[S_POINTER]);! A004
4
4       !++                                                          ! A004
4       ! For each character                                         ! A004
4       !    multiply by 10                                          ! A004
4       !    add it to the low order long word                       ! A004
4       !--                                                          ! A004
4       INCR Current_char_num FROM 1 TO .SRC_INFO [S_LEN] - 1 DO     ! A004
5           BEGIN                                                    ! A004
5           DBG$CVT_SCALE_OU_UP_BY_10_R1( .OUTPUT );                 ! A004
5           Current_character = CH$RCHAR( .SRC_INFO[ S_POINTER ] +   ! A004
5                                         .Current_char_num ) -      ! A004
5                               %C'0';                               ! A004
5
5           !++                                                      ! A004
5           ! Test for bad characters                                ! A004
5           !--                                                      ! A004
5           IF (.Current_character LSS 0)  OR                        ! A004
6              (.Current_character GTR 9)                            ! A004
5           THEN                                                     ! A004
5               SIGNAL( DBG$_INVDIGDEC, 2, 1, .SRC_INFO[S_POINTER] +! A004
5                                           .Current_char_num );     ! A004
5
5           OUTPUT[ 0 ] = .OUTPUT[ 0 ] + .Current_character;         ! A004
4           END;                                                     ! A004
4
4           !++
4           ! When there was a negative we subtract from 0
4           !--
4           IF .Sign_flag                                            ! A004
4           THEN                                                     ! A004
5               BEGIN                                                ! A004
5               LOCAL                                                ! A004
5                   Octaword_zero : VECTOR[4];                       ! A004
5
5               Octaword_zero[ 3 ] = 0;                              ! A004
5               Octaword_zero[ 2 ] = 0;                              ! A004
5               Octaword_zero[ 1 ] = 0;                              ! A004
5               Octaword_zero[ 0 ] = 0;                              ! A004
5
5               SUBM( 4, .OUTPUT, Octaword_zero, .OUTPUT );          ! A004
5
4               END;                                                 ! A004
4
3       END;                                                         ! A004
3
3   [INRANGE, OUTRANGE]:
3       $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  nbds_lrgint');
3   TES;                            !For NBDS_LRGINT
```

```

[K_NBDS_LRGFLTCMPLX]:
    BEGIN
    CLASS_S_DESC [DSC$W_LENGTH] = .SRC_INFO [S_LEN];
    CLASS_S_DESC [DSC$A_POINTER] = .SRC_INFO [S_POINTER];
    CASE .DESTINATION [DSC$B_DTYPE] FROM DSC$K_DTYPE_G TO DSC$K_DTYPE_HC OF
        SET

        [DSC$K_DTYPE_G, DSC$K_DTYPE_GC]:
            BEGIN
            STATUS = OTS$CVT_T_G (CLASS_S_DESC, TEMP_BUF1, 0, -.SCALE,
                (K_IGN_BLKS OR K_ENB_UNDERFLOW OR K_IGN_TABS OR K_ENB_SCALE));
            IF NOT .STATUS THEN SIGNAL (DBG$_INVNUMSTR, 1, .DBG$GL_OPCODE_NAME);
            OUTPUT [LONG_1] = .TEMP_BUF1 [LONG_1];
            OUTPUT [LONG_2] = .TEMP_BUF1 [LONG_2];
            IF .DESTINATION[DSC$B_DTYPE] EQL DSC$K_DTYPE_GC
            THEN
                BEGIN


                ! Fill in imaginary part with 0;
                !
                OUTPUT[LONG_3] = 0;
                OUTPUT[LONG_4] = 0;
                END;
            END;

        [DSC$K_DTYPE_H, DSC$K_DTYPE_HC]:
            BEGIN
            STATUS = OTS$CVT_T_H (CLASS_S_DESC, TEMP_BUF1, 0, -.SCALE,
                (K_IGN_BLKS OR K_ENB_UNDERFLOW OR K_IGN_TABS OR K_ENB_SCALE));
            IF NOT .STATUS THEN SIGNAL (DBG$_INVNUMSTR, 1, .DBG$GL_OPCODE_NAME);
            CH$MOVE (16, TEMP_BUF1, .OUTPUT);
            IF .DESTINATION[DSC$B_DTYPE] EQL DSC$K_DTYPE_HC
            THEN


                ! Fill in imaginary part with 0.
                !
                CH$FILL (0, 16, .OUTPUT+16);
            END;

        [INRANGE, OUTRANGE]:
            $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  nbds_lrgfltcmplx');
        TES;                                !For NBDS_LRGFLTCMPLX
    END;
```

```
3
3   [K_NBDS_NBDS]:
3       SELECTONE .DESTINATION [DSC$B_DTYPE] OF
3           SET
3
3           [DSC$K_DTYPE_BU, DSC$K_DTYPE_T, DSC$K_DTYPE_VT, \SC$K_DTYPE_AC, DSC$K_DTYPE_AZ]:
4               BEGIN
4               IF .SCALE NEQ 0
4               THEN
5                   BEGIN
5                   CLASS_S_DESC [DSC$W_LENGTH] = .SRC_INFO [S_LEN];
5                   CLASS_S_DESC [DSC$A_POINTER] = .SRC_INFO [S_POINTER];
5                   STATUS = OTS$CVT_T_H (CLASS_S_DESC, TEMP_BUF1, 0, -.SCALE,
5                       (K_IGN_BLKS OR K_ENB_UNDERFLOW OR K_IGN_TABS OR K_ENB_SCALE));
5                   IF .STATUS
5                   THEN
6                       BEGIN
6                       CLASS_S_DESC [DSC$W_LENGTH] = K_TEMP_BUF_LENGTH;
6                       CLASS_S_DESC [DSC$A_POINTER] = TEMP_BUF2;
6                       IF .DST_INFO [D_LEN] - 9 LEQ 0
6                       THEN
6                           DIGITS_IN_FRACT = 33
6                       ELSE
6                           DIGITS_IN_FRACT = MIN (33, .DST_INFO [D_LEN] - 9);
6                       STATUS = FOR$CVT_H_TE (TEMP_BUF1, CLASS_S_DESC, .DIGITS_IN_FRACT, 0, 0, 4);
6                       IF NOT .STATUS THEN $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  error in h-to-te conve
6                       BUF_OFFSET = CH$FIND_NOT_CH (K_TEMP_BUF_LENGTH, TEMP_BUF2, %C' ') - TEMP_BUF2;
6                       FINAL_LEN = K_TEMP_BUF_LENGTH - .BUF_OFFSET;
6                       OUTPUT_STR_LEN = .FINAL_LEN;
6
6                       SELECTONE .DESTINATION[DSC$B_DTYPE] OF
6                           SET
6                           [DSC$K_DTYPE_AC]:
7                               BEGIN
7                               MAP
7                                   OUTPUT:  REF VECTOR[, BYTE];
7                               CLASS_S_DESC[DSC$W_LENGTH] = .FINAL_LEN;
7                               CLASS_S_DESC[DSC$A_POINTER] = OUTPUT[1];
7                               STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, CLASS_S_D
7                               IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, T, .DBG$GL_OPCODE_
7                               IF NOT .STATUS THEN SIGNAL (.STATUS);
7                               OUTPUT[0] = .FINAL_LEN;
6                               END;
6
6                           [DSC$K_DTYPE_AZ]:
7                               BEGIN
7                               MAP
7                                   OUTPUT:  REF VECTOR[, BYTE];
7                               CLASS_S_DESC[DSC$W_LENGTH] = .FINAL_LEN;
7                               CLASS_S_DESC[DSC$A_POINTER] = OUTPUT[0];
7                               STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, CLASS_S_D
7                               IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, T, .DBG$GL_OPCODE_
7                               IF NOT .STATUS THEN SIGNAL (.STATUS);
7                               OUTPUT[.FINAL_LEN + 1] = 0;
6                               END;
6
6                           [OTHERWISE]:
```

```
7                       BEGIN
7                       STATUS = LIB$SCOPY_R_DX6 (.FINAL_LEN, TEMP_BUF2 + .BUF_OFFSET, .DESTINAT
7                       IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, 1, .DBG$GL_OPCODE_
7                       IF NOT .STATUS THEN SIGNAL (.STATUS);
6                       END;
6                   TES;
6               END
5           ELSE
5               SIGNAL (DBG$_INVNUMSTR, 1, .DBG$GL_OPCODE_NAME);
5           END
4       ELSE
5           BEGIN
5           OUTPUT_STR_LEN = .SOURCE [DSC$W_LENGTH];
5           SELECTONE .DESTINATION[DSC$B_DTYPE] OF
5               SET
5               [DSC$K_DTYPE_AC]:
6                   BEGIN
6                   MAP
6                       OUTPUT:  REF VECTOR[, BYTE];
6                   CLASS_S_DESC[DSC$W_LENGTH] = .SOURCE[DSC$W_LENGTH];
6                   CLASS_S_DESC[DSC$A_POINTER] = OUTPUT[1];
6                   STATUS = LIB$SCOPY_DXDX6 (.SOURCE, CLASS_S_DESC);
6                   IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, 1, .DBG$GL_OPCODE_NAME
6                   IF NOT .STATUS THEN SIGNAL (.STATUS);
6                   OUTPUT[0] = .SOURCE[DSC$W_LENGTH];
5                   END;
5
5               [DSC$K_DTYPE_AZ]:
6                   BEGIN
6                   MAP
6                       OUTPUT:  REF VECTOR[, BYTE];
6                   CLASS_S_DESC[DSC$W_LENGTH] = .SOURCE[DSC$W_LENGTH];
6                   CLASS_S_DESC[DSC$A_POINTER] = OUTPUT[0];
6                   STATUS = LIB$SCOPY_DXDX6 (.SOURCE, CLASS_S_DESC);
6                   IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, 1, .DBG$GL_OPCODE_NAME
6                   IF NOT .STATUS THEN SIGNAL (.STATUS);
6                   OUTPUT[.SOURCE[DSC$W_LENGTH]] = 0;
5                   END;
5
5               [OTHERWISE]:
6                   BEGIN
6                   STATUS = LIB$SCOPY_DXDX6 (.SOURCE, .DESTINATION);
6                   IF .STATUS EQL LIB$_STRTRU THEN SIGNAL (DBG$_ISTRTRU, 1, .DBG$GL_OPCODE_NAME
6                   IF NOT .STATUS THEN SIGNAL (.STATUS);
5                   END;
5               TES;
4           END;
3       END;
3
3   [DSC$K_DTYPE_ZI]:
4       BEGIN
4       OWN
4           INPUT_STR:  VECTOR[100, BYTE],
4           OUTPUT_STR:  VECTOR[100, BYTE];
4       INPUT_STR[0] = .SRC_INFO[S_LEN];
4       CH$MOVE (.INPUT_STR[0], .SRC_INFO[S_POINTER], INPUT_STR[1]);
4       STATUS = DBG$INS_ENCODE (INPUT_STR, OUTPUT_STR, .DESTINATION[DSC$A_POINTER]);
```

```
                IF NOT .STATUS THEN SIGNAL (.STATUS);
                DESTINATION[DSC$W_LENGTH] = .OUTPUT_STR[0];
                CH$MOVE (.OUTPUT_STR[0], OUTPUT_STR[1], .DESTINATION[DSC$A_POINTER]);
                END;

            [OTHERWISE]:
                $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  nbds_nbds');
            TES;                                    !For NBDS_NBDS

    TES;                                            !End of the main CASE statement.

! If the destination class is unaligned, then the output will be in a temporary buffer.
! Copy from the temporary buffer to:  .(destination pointer + number of bits to be offset).
!
IF .DESTINATION[DSC$B_CLASS] EQL DSC$K_CLASS_UBS
THEN
    BEGIN
    SRC_POS = 0;
    DST_POS = .DESTINATION[DSC$L_POS];
    CASE .DESTINATION[DSC$B_DTYPE] FROM K_MIN_DTYPE_STA TO K_MAX_DTYPE_STA OF
        SET
        [DSC$K_DTYPE_V, DSC$K_DTYPE_SV, DSC$K_DTYPE_VU, DSC$K_DTYPE_SVU, DSC$K_DTYPE_TF]:
            BEGIN
            MAP
                DESTINATION_PTR:  REF BITVECTOR,
                OUTPUT:  REF BITVECTOR;

            INCR I FROM 1 TO .DESTINATION[DSC$W_LENGTH] DO
                BEGIN
                DESTINATION_PTR[.DST_POS] = .OUTPUT[.SRC_POS];
                DST_POS = .DST_POS + 1;
                SRC_POS = .SRC_POS + 1;
                END;
            END;

        [INRANGE]:
            BEGIN
            INCR I FROM 1 TO .DESTINATION[DSC$W_LENGTH] DO
                BEGIN
                (.DESTINATION_PTR)<.DST_POS, 8> = .(.OUTPUT)<.SRC_POS, 8>;
                DST_POS = .DST_POS + 8;
                SRC_POS = .SRC_POS + 8;
                END;
            END;

        [OUTRANGE]:
            $DBG_ERROR ('DBGCVTDX\DBG$CVT_DX_DX:  invalid dtype');
        TES;
    END;

END;                                            ! End the ELSE part of the Absolute Date Time IF

! If output string length is requested then supply it.
!
IF ACTUALCOUNT() GTR 2 THEN (.OUTLEN)<0, 16, 0> = .OUTPUT_STR_LEN;
```

```
; 4254          4359  1     END;                                         ! End of routine DBG$CVT_DX_DX.


                                                                        .PSECT  DBG$PLIT,NOWRT,  SHR,  PIC,0

                                                          00AD2         .BLKB   2
                           00  00  5C  29  67  49  29  04  00AD4 P.ADX: .ASCII  <4>\)Ig)\<92><0><0>                      ;
                                 0000FF00   FFFF507F       00ADC P.ADY: .LONG   ^XFFFF507F, ^X0000FF00                   ;
               00000000   00000000   0000FFFE   FFFF4020   00AE4 P.ADZ: .LONG   -                                        ;
                                                                                ^XFFFF4020, ^X0000FFFE, ^X00000000, ^X0000- ;
                                                                                0000
                                       00  00  00  0C     00AF4 P.AEA: .ASCII  <12><0><0><0>                           ;
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 34     00AF8 P.AEB: .ASCII  \4DBGCVTDX\<92>\DBG$CVT_DX_DX:  invalid \   ;
61 76 6E 69 20 20 3A 58 44 5F 58 44 5F 54 56     00B07                                                          ;
                                  20 64 69 6C     00B16                                                          ;
69 72 63 73 65 64 20 6E 69 20 65 70 79 74 64     00B1A        .ASCII  \dtype in descriptor\                     ;
                                  72 6F 74 70     00B29                                                          ;
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 34     00B2D P.AEC: .ASCII  \4DBGCVTDX\<92>\DBG$CVT_DX_DX:  invalid \   ;
61 76 6E 69 20 20 3A 58 44 5F 58 44 5F 54 56     00B3C                                                          ;
                                  20 64 69 6C     00B4B                                                          ;
69 72 63 73 65 64 20 6E 69 20 73 73 61 6C 63     00B4F        .ASCII  \class in descriptor\                     ;
                                  72 6F 74 70     00B5E                                                          ;
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 38     00B62 P.AED: .ASCII  \8DBGCVTDX\<92>\DBG$CVT_DX_DX:  invalid \   ;
61 76 6E 69 20 20 3A 58 44 5F 58 44 5F 54 56     00B71                                                          ;
                                  20 64 69 6C     00B80                                                          ;
6D 6F 63 20 65 70 79 74 64 2D 73 73 61 6C 63     00B84        .ASCII  \class-dtype combination\                 ;
                     6E 6F 69 74 61 6E 69 62     00B93                                                          ;
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 39     00B9B P.AEE: .ASCII  \9DBGCVTDX\<92>\DBG$CVT_DX_DX:  invalid \   ;
61 76 6E 69 20 20 3A 58 44 5F 58 44 5F 54 56     00BAA                                                          ;
                                  20 64 69 6C     00BB9                                                          ;
74 73 20 65 74 79 62 20 63 69 72 65 6D 75 6E     00BBD        .ASCII  \numeric byte string data\                ;
                     61 74 61 64 20 67 6E 69 72   00BCC                                                          ;
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 26     00BD5 P.AEF: .ASCII  \&DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlint_s\   ;
69 6C 6D 73 20 20 3A 58 44 5F 58 44 5F 54 56     00BE4                                                          ;
                                  73 5F 74 6E     00BF3                                                          ;
                               74 6E 69 6C 6D     00BF7        .ASCII  \mlint\                                   ;
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 26     00BFC P.AEG: .ASCII  \&DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlint_l\   ;
69 6C 6D 73 20 20 3A 58 44 5F 58 44 5F 54 56     00C0B                                                          ;
                                  6C 5F 74 6E     00C1A                                                          ;
                               74 6E 69 67 72     00C1E        .ASCII  \rgint\                                   ;
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 26     00C23 P.AEH: .ASCII  \&DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgint_l\   ;
69 67 72 6C 20 20 3A 58 44 5F 58 44 5F 54 56     00C32                                                          ;
                                  6C 5F 74 6E     00C41                                                          ;
                               74 6E 69 67 72     00C45        .ASCII  \rgint\                                   ;
                                                  00C4A        .BLKB   2
                        00000000   00004100       00C4C P.AEI: .LONG   ^X00004100, ^X00000000                   ;
                        00000000   00004100       00C54 P.AEJ: .LONG   ^X00004100, ^X00000000                   ;
                        00000000   00004220       00C5C P.AEK: .LONG   ^X00004220, ^X00000000                   ;
                        00000000   00004220       00C64 P.AEL: .LONG   ^X00004220, ^X00000000                   ;
                        00000000   00004100       00C6C P.AEM: .LONG   ^X00004100, ^X00000000                   ;
                        00000000   00004100       00C74 P.AEN: .LONG   ^X00004100, ^X00000000                   ;
                        00000000   00004220       00C7C P.AEO: .LONG   ^X00004220, ^X00000000                   ;
                        00000000   00004220       00C84 P.AEP: .LONG   ^X00004220, ^X00000000                   ;
                        00000000   00004100       00C8C P.AEQ: .LONG   ^X00004100, ^X00000000                   ;
                        00000000   00004100       00C94 P.AER: .LONG   ^X00004100, ^X00000000                   ;
                        00000000   00004100       00C9C P.AES: .LONG   ^X00004100, ^X00000000                   ;
```

```
                                        00000000  00004100   00CA4 P.AET:   .LONG    ^X00004100, ^X00000000
                                        00000000  00004220   00CAC P.AEU:   .LONG    ^X00004220, ^X00000000
                                        00000000  00004220   00CB4 P.AEV:   .LONG    ^X00004220, ^X00000000
                                        00000000  00004220   00CBC P.AEW:   .LONG    ^X00004220, ^X00000000
                                        00000000  00004220   00CC4 P.AEX:   .LONG    ^X00004220, ^X00000000
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  2B   00CCC P.AEY:   .ASCII   \+DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlint_s\
69  6C  6D  73  20  20  3A  58  44  5F  58  44  5F  54  56   00CDB
                                            73  5F  74  6E   00CEA
                        78  6C  70  6D  63  74  6C  66  6C  6D   00CEE          .ASCII   \mlfltcmplx\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  2B   00CF8 P.AEZ:   .ASCII   \+DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgint_s\
69  67  72  6C  20  20  3A  58  44  5F  58  44  5F  54  56   00D07
                                            73  5F  74  6E   00D16
                        78  6C  70  6D  63  74  6C  66  6C  6D   00D1A          .ASCII   \mlfltcmplx\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  30   00D24 P.AFA:   .ASCII   \0DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlfltcm\
66  6C  6D  73  20  20  3A  58  44  5F  58  44  5F  54  56   00D33
                                            6D  63  74  6C   00D42
78  6C  70  6D  63  74  6C  66  6C  6D  73  5F  78  6C  70   00D46          .ASCII   \plx_smlfltcmplx\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  28   00D55 P.AFB:   .ASCII   \(DBGCVTDX\<92>\DBG$CVT_DX_DX:  dec_smlf\
5F  63  65  64  20  20  3A  58  44  5F  58  44  5F  54  56   00D64
                                            66  6C  6D  73   00D73
                                78  6C  70  6D  63  74  6C   00D77          .ASCII   \ltcmplx\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  29   00D7E P.AFC:   .ASCII   \)DBGCVTDX\<92>\DBG$CVT_DX_DX:  nbds_sml\
73  64  62  6E  20  20  3A  58  44  5F  58  44  5F  54  56   00D8D
                                            6C  6D  73  5F   00D9C
                            78  6C  70  6D  63  74  6C  66   00DA0          .ASCII   \fltcmplx\
                    00000000  00000000  00000000  00004002   00DA8 P.AFD:   .LONG    -
                                                                                     ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                     0000
                    00000000  00000000  00000000  00004002   00DB8 P.AFE:   .LONG    -
                                                                                     ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                     0000
                    00000000  00000000  00000000  40004004   00DC8 P.AFF:   .LONG    -
                                                                                     ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                     0000
                    00000000  00000000  00000000  40004004   00DD8 P.AFG:   .LONG    -
                                                                                     ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                     0000
                    00000000  00000000  00000000  00004002   00DE8 P.AFH:   .LONG    -
                                                                                     ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                     0000
                    00000000  00000000  00000000  00004002   00DF8 P.AFI:   .LONG    -
                                                                                     ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                     0000
                    00000000  00000000  00000000  40004004   00E08 P.AFJ:   .LONG    -
                                                                                     ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                     0000
                    00000000  00000000  00000000  40004004   00E18 P.AFK:   .LONG    -
                                                                                     ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                     0000
                    00000000  00000000  00000000  00004002   00E28 P.AFL:   .LONG    -
                                                                                     ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                     0000
                    00000000  00000000  00000000  00004002   00E38 P.AFM:   .LONG    -
                                                                                     ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                     0000
                    00000000  00000000  00000000  00004002   00E48 P.AFN:   .LONG    -
                                                                                     ^X00004002, ^X00000000, ^X00000000, ^X0000-
```

```
                                                                  0000
00000000  00000000  00000000  00004002  00E58 P.AFO:   .LONG      -
                                                                  ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  40004004  00E68 P.AFP:   .LONG      -
                                                                  ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  40004004  00E78 P.AFQ:   .LONG      -
                                                                  ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  40004004  00E88 P.AFR:   .LONG      -
                                                                  ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  40004004  00E98 P.AFS:   .LONG      -
                                                                  ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  00004002  00EA8 P.AFT:   .LONG      -
                                                                  ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  00004002  00EB8 P.AFU:   .LONG      -
                                                                  ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  00004002  00EC8 P.AFV:   .LONG      -
                                                                  ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  00004002  00ED8 P.AFW:   .LONG      -
                                                                  ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  40004004  00EE8 P.AFX:   .LONG      -
                                                                  ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  40004004  00EF8 P.AFY:   .LONG      -
                                                                  ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  40004004  00F08 P.AFZ:   .LONG      -
                                                                  ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  40004004  00F18 P.AGA:   .LONG      -
                                                                  ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  00004002  00F28 P.AGB:   .LONG      -
                                                                  ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  00004002  00F38 P.AGC:   .LONG      -
                                                                  ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  00004002  00F48 P.AGD:   .LONG      -
                                                                  ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  00004002  00F58 P.AGE:   .LONG      -
                                                                  ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  40004004  00F68 P.AGF:   .LONG      -
                                                                  ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                  0000
00000000  00000000  00000000  40004004  00F78 P.AGG:   .LONG      -
                                                                  ^X40004004, ^X00000000, ^X00000000, ^X0000-
```

```
                                                                                      0000
                          00000000  00000000  00000000  40004004  00F88 P.AGH:  .LONG   -
                                                                                      ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                      0000
                          00000000  00000000  00000000  40004004  00F98 P.AGI:  .LONG   -
                                                                                      ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                      0000
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  2B  00FA8 P.AGJ:  .ASCII  \+DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlint_l\
69  6C  6D  73  20  20  3A  58  44  5F  58  44  5F  54  56  00FB7
                                            6C  5F  74  6E  00FC6
                    78  6C  70  6D  63  74  6C  66  67  72  00FCA         .ASCII  \rgfltcmplx\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  2B  00FD4 P.AGK:  .ASCII  \+DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgint_l\
69  67  72  6C  20  20  3A  58  44  5F  58  44  5F  54  56  00FE3
                                            6C  5F  74  6E  00FF2
                    78  6C  70  6D  63  74  6C  66  67  72  00FF6         .ASCII  \rgfltcmplx\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  30  01000 P.AGL:  .ASCII  \0DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlfltcm\
66  6C  6D  73  20  20  3A  58  44  5F  58  44  5F  54  56  0100F
                                            6D  63  74  6C  0101E
78  6C  70  6D  63  74  6C  66  67  72  6C  5F  78  6C  70  01022         .ASCII  \plx_lrgfltcmplx\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  30  01031 P.AGM:  .ASCII  \0DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgfltcm\
66  67  72  6C  20  20  3A  58  44  5F  58  44  5F  54  56  01040
                                            6D  63  74  6C  0104F
78  6C  70  6D  63  74  6C  66  67  72  6C  5F  78  6C  70  01053         .ASCII  \plx_lrgfltcmplx\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  28  01062 P.AGN:  .ASCII  \(DBGCVTDX\<92>\DBG$CVT_DX_DX:  dec_lrgf\
5F  63  65  64  20  20  3A  58  44  5F  58  44  5F  54  56  01071
                                            66  67  72  6C  01080
                            78  6C  70  6D  63  74  6C  01084         .ASCII  \ltcmplx\
                                                            0108B         .BLKB   1
                                            00  00  00  2C  0108C P.AGO:  .ASCII  \,\<0><0><0>
                                            00  00  00  2C  01090 P.AGP:  .ASCII  \,\<0><0><0>
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  23  01094 P.AGQ:  .ASCII  \#DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlint_d\
69  6C  6D  73  20  20  3A  58  44  5F  58  44  5F  54  56  010A3
                                            64  5F  74  6E  010B2
                                                    63  65  010B6         .ASCII  \ec\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  20  010B8 P.AGR:  .ASCII  \ DBGCVTDX\<92>\DBG$CVT_DX_DX:  dec_dec\
5F  63  65  64  20  20  3A  58  44  5F  58  44  5F  54  56  010C7
                                                63  65  64  010D6
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  26  010D9 P.AGS:  .ASCII  \&DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgint_s\
69  67  72  6C  20  20  3A  58  44  5F  58  44  5F  54  56  010E8
                                            73  5F  74  6E  010F7
                                        74  6E  69  6C  6D  010FB         .ASCII  \mlint\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  23  01100 P.AGT:  .ASCII  \#DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgint_d\
69  67  72  6C  20  20  3A  58  44  5F  58  44  5F  54  56  0110F
                                            64  5F  74  6E  0111E
                                                    63  65  01122         .ASCII  \ec\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  28  01124 P.AGU:  .ASCII  \(DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlfltcm\
66  6C  6D  73  20  20  3A  58  44  5F  58  44  5F  54  56  01133
                                            6D  63  74  6C  01142
                                63  65  64  5F  78  6C  70  01146         .ASCII  \plx_dec\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  28  0114D P.AGV:  .ASCII  \(DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgfltcm\
66  67  72  6C  20  20  3A  58  44  5F  58  44  5F  54  56  0115C
                                            6D  63  74  6C  0116B
                                63  65  64  5F  78  6C  70  0116F         .ASCII  \plx_dec\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  21  01176 P.AGW:  .ASCII  \!DBGCVTDX\<92>\DBG$CVT_DX_DX:  nbds_dec\
73  64  62  6E  20  20  3A  58  44  5F  58  44  5F  54  56  01185
                                            63  65  64  5F  01194
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  31  01198 P.AGX:  .ASCII  \1DBGCVTDX\<92>\DBG$CVT_DX_DX inconsiste\
73 6E 6F 63 6E 69 20 58 44 5F 58 44 5F 54 56  011A7
                                 65 74 73 69  011B6
72 6F 74 63 61 66 20 65 6C 61 63 73 20 74 6E  011BA             .ASCII  \nt scale factors\
                                          73  011C9
                                              011CA             .BLKB   2
                       00000000  00004100     011CC P.AGY:      .LONG   ^X00004100, ^X00000000
                       00000000  00004100     011D4 P.AGZ:      .LONG   ^X00004100, ^X00000000
     00000000  00000000  00000000  00004002   011DC P.AHA:      .LONG   -
                                                                        ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                        0000
     00000000  00000000  00000000  00004002   011EC P.AHB:      .LONG   -
                                                                        ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                        0000
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 3D  011FC P.AHC:      .ASCII  \=DBGCVTDX\<92>\DBG$CVT_DX_DX scale fact\
20 65 6C 61 63 73 20 58 44 5F 58 44 5F 54 56  0120B
                              74 63 61 66     0121A
20 64 72 6F 77 61 74 63 6F 20 6E 6F 20 72 6F  0121E             .ASCII  \or on octaword not supported\
      64 65 74 72 6F 70 70 75 73 20 74 6F 6E  0122D
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 42  0123A P.AHD:      .ASCII  \BDBGCVTDX\<92>\DBG$CVT_DX_DX binary sca\
79 72 61 6E 69 62 20 58 44 5F 58 44 5F 54 56  01249
                              61 63 73 20     01258
61 70 20 6E 6F 20 72 6F 74 63 61 66 20 65 6C  0125C             .ASCII  \le factor on packed not supported\
72 6F 70 70 75 73 20 74 6F 6E 20 64 65 6B 63  0126B
                                 64 65 74     0127A
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 34  0127D P.AHE:      .ASCII  \4DBGCVTDX\<92>\DBG$CVT_DX_DX:  error in\
6F 72 72 65 20 20 3A 58 44 5F 58 44 5F 54 56  0128C
                              6E 69 20 72     0129B
72 65 76 6E 6F 63 20 65 74 2D 6F 74 2D 68 20  0129F             .ASCII  \ h-to-te conversion\
                              6E 6F 69 73     012AE
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 24  012B2 P.AHF:      .ASCII  \$DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlint_n\
69 6C 6D 73 20 20 3A 58 44 5F 58 44 5F 54 56  012C1
                              6E 5F 74 6E     012D0
                                 73 64 62     012D4             .ASCII  \bds\
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 24  012D7 P.AHG:      .ASCII  \$DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgint_n\
69 67 72 6C 20 20 3A 58 44 5F 58 44 5F 54 56  012E6
                              6E 5F 74 6E     012F5
                                 73 64 62     012F9             .ASCII  \bds\
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 21  012FC P.AHH:      .ASCII  \!DBGCVTDX\<92>\DBG$CVT_DX_DX:  dec_nbds\
5F 63 65 64 20 20 3A 58 44 5F 58 44 5F 54 56  0130B
                              73 64 62 6E     0131A
                                              0131E             .BLKB   2
                       00000000  00004100     01320 P.AHI:      .LONG   ^X00004100, ^X00000000
                       00000000  00004100     01328 P.AHJ:      .LONG   ^X00004100, ^X00000000
                       00000000  00004100     01330 P.AHK:      .LONG   ^X00004100, ^X00000000
                       00000000  00004100     01338 P.AHL:      .LONG   ^X00004100, ^X00000000
                       00000000  00004220     01340 P.AHM:      .LONG   ^X00004220, ^X00000000
                       00000000  00004220     01348 P.AHN:      .LONG   ^X00004220, ^X00000000
                       00000000  00004220     01350 P.AHO:      .LONG   ^X00004220, ^X00000000
                       00000000  00004220     01358 P.AHP:      .LONG   ^X00004220, ^X00000000
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 2B  01360 P.AHQ:      .ASCII  \+DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlfltcm\
66 6C 6D 73 20 20 3A 58 44 5F 58 44 5F 54 56  0136F
                              6D 63 74 6C     0137E
               74 6E 69 6C 6D 73 5F 78 6C 70  01382             .ASCII  \plx_smlint\
                       00000000  00004100     0138C P.AHR:      .LONG   ^X00004100, ^X00000000
                       00000000  00004100     01394 P.AHS:      .LONG   ^X00004100, ^X00000000
                       00000000  00004100     0139C P.AHT:      .LONG   ^X00004100, ^X00000000
                       00000000  00004100     013A4 P.AHU:      .LONG   ^X00004100, ^X00000000
```

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                                        00000000  00004220  013AC P.AHV:   .LONG    ^X00004220, ^X00000000
                                        00000000  00004220  013B4 P.AHW:   .LONG    ^X00004220, ^X00000000
                                        00000000  00004220  013BC P.AHX:   .LONG    ^X00004220, ^X00000000
                                        00000000  00004220  013C4 P.AHY:   .LONG    ^X00004220, ^X00000000
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  2B  013CC P.AHZ:   .ASCII   \+DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlfltcm\
66  6C  6D  73  20  20  3A  58  44  5F  58  44  5F  54  56  013DB
                                            6D  63  74  6C  013EA
                    74  6E  69  67  72  6C  5F  78  6C  70  013EE          .ASCII   \plx_lrgint\
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  34  013F8 P.AIA:   .ASCII   \4DBGCVTDX\<92>\DBG$CVT_DX_DX:  error in\
6F  72  72  65  20  20  3A  58  44  5F  58  44  5F  54  56  01407
                                            6E  69  20  72  01416
72  65  76  6E  6F  63  20  65  74  2D  6F  74  2D  64  20  0141A          .ASCII   \ d-to-te conversion\
                                            6E  6F  69  73  01429
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  29  0142D P.AIB:   .ASCII   \)DBGCVTDX\<92>\DBG$CVT_DX_DX:  smlfltcm\
66  6C  6D  73  20  20  3A  58  44  5F  58  44  5F  54  56  0143C
                                            6D  63  74  6C  0144B
                            73  64  62  6E  5F  78  6C  70  0144F          .ASCII   \plx_nbds\
                                                            01457          .BLKB    1
                  00000000  00000000  00000000  00004002  01458 P.AIC:   .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  00004002  01468 P.AID:   .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  00004002  01478 P.AIE:   .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  00004002  01488 P.AIF:   .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  40004004  01498 P.AIG:   .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  40004004  014A8 P.AIH:   .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  40004004  014B8 P.AII:   .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  40004004  014C8 P.AIJ:   .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  00004002  014D8 P.AIK:   .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  00004002  014E8 P.AIL:   .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  00004002  014F8 P.AIM:   .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  00004002  01508 P.AIN:   .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                  00000000  00000000  00000000  40004004  01518 P.AIO:   .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                    00000000  00000000  00000000  40004004  01528 P.AIP:  .LONG   -
                                                                                   ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  40004004  01538 P.AIQ:  .LONG   -
                                                                                   ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  40004004  01548 P.AIR:  .LONG   -
                                                                                   ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
43  24  47  42  44  5C  58  44  54  56  43  47  42  44  2B  01558 P.AIS:  .ASCII  \+DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgfltcm\
66  67  72  6C  20  20  3A  58  44  5F  58  44  5F  54  56  01567
                                        6D  63  74  6C  01576
                    74  6E  69  6C  6D  73  5F  78  6C  70  0157A         .ASCII  \plx_smlint\
                    00000000  00000000  00000000  00004002  01584 P.AIT:  .LONG   -
                                                                                   ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  00004002  01594 P.AIU:  .LONG   -
                                                                                   ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  00004002  015A4 P.AIV:  .LONG   -
                                                                                   ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  00004002  015B4 P.AIW:  .LONG   -
                                                                                   ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  40004004  015C4 P.AIX:  .LONG   -
                                                                                   ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  40004004  015D4 P.AIY:  .LONG   -
                                                                                   ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  40004004  015E4 P.AIZ:  .LONG   -
                                                                                   ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  40004004  015F4 P.AJA:  .LONG   -
                                                                                   ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  00004002  01604 P.AJB:  .LONG   -
                                                                                   ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  00004002  01614 P.AJC:  .LONG   -
                                                                                   ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  00004002  01624 P.AJD:  .LONG   -
                                                                                   ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  00004002  01634 P.AJE:  .LONG   -
                                                                                   ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  40004004  01644 P.AJF:  .LONG   -
                                                                                   ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  40004004  01654 P.AJG:  .LONG   -
                                                                                   ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                   0000
                    00000000  00000000  00000000  40004004  01664 P.AJH:  .LONG   -
                                                                                   ^X40004004, ^X00000000, ^X00000000, ^X0000-
```

```
                                                                                    0000
                     00000000  00000000  00000000  40004004  01674 P.AJI:  .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 2B  01684 P.AJJ:  .ASCII   \+DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgfltcm\
66 67 72 6C 20 20 3A 58 44 5F 58 44 5F 54 56  01693
                                    6D 63 74 6C  016A2
                     74 6E 69 67 72 6C 5F 78 6C 70  016A6         .ASCII   \plx_lrgint\
                     00000000  00000000  00000000  00004002  016B0 P.AJK:  .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  00004002  016C0 P.AJL:  .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  00004002  016D0 P.AJM:  .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  00004002  016E0 P.AJN:  .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  40004004  016F0 P.AJO:  .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  40004004  01700 P.AJP:  .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  40004004  01710 P.AJQ:  .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  40004004  01720 P.AJR:  .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  00004002  01730 P.AJS:  .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  00004002  01740 P.AJT:  .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  00004002  01750 P.AJU:  .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  00004002  01760 P.AJV:  .LONG    -
                                                                                    ^X00004002, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  40004004  01770 P.AJW:  .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  40004004  01780 P.AJX:  .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  40004004  01790 P.AJY:  .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
                     00000000  00000000  00000000  40004004  017A0 P.AJZ:  .LONG    -
                                                                                    ^X40004004, ^X00000000, ^X00000000, ^X0000-
                                                                                    0000
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 30  017B0 P.AKA:  .ASCII   \0DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgfltcm\
66 67 72 6C 20 20 3A 58 44 5F 58 44 5F 54 56 017BF
                                 6D 63 74 6C 017CE
78 6C 70 6D 63 74 6C 66 6C 6D 73 5F 78 6C 70 017D2         .ASCII  \plx_smlfltcmplx\
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 34 017E1 P.AKB:  .ASCII  \4DBGCVTDX\<92>\DBG$CVT_DX_DX:  error in\
6F 72 72 65 20 20 3A 58 44 5F 58 44 5F 54 56 017F0
                                 6E 69 20 72 017FF
72 65 76 6E 6F 63 20 65 74 2D 6F 74 2D 67 20 01803         .ASCII  \ g-to-te conversion\
                                 6E 6F 69 73 01812
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 34 01816 P.AKC:  .ASCII  \4DBGCVTDX\<92>\DBG$CVT_DX_DX:  error in\
6F 72 72 65 20 20 3A 58 44 5F 58 44 5F 54 56 01825
                                 6E 69 20 72 01834
72 65 76 6E 6F 63 20 65 74 2D 6F 74 2D 68 20 01838         .ASCII  \ h-to-te conversion\
                                 6E 6F 69 73 01847
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 29 0184B P.AKD:  .ASCII  \)DBGCVTDX\<92>\DBG$CVT_DX_DX:  lrgfltcm\
66 67 72 6C 20 20 3A 58 44 5F 58 44 5F 54 56 0185A
                                 6D 63 74 6C 01869
                     73 64 62 6E 5F 78 6C 70 0186D         .ASCII  \plx_nbds\
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 23 01875 P.AKE:  .ASCII  \#DBGCVTDX\<92>\DBG$CVT_DX_DX:  dec_smli\
5F 63 65 64 20 20 3A 58 44 5F 58 44 5F 54 56 01884
                                 69 6C 6D 73 01893
                                       74 6E 01897         .ASCII  \nt\
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 23 01899 P.AKF:  .ASCII  \#DBGCVTDX\<92>\DBG$CVT_DX_DX:  dec_lrgi\
5F 63 65 64 20 20 3A 58 44 5F 58 44 5F 54 56 018A8
                                 69 67 72 6C 018B7
                                       74 6E 018BB         .ASCII  \nt\
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 24 018BD P.AKG:  .ASCII  \$DBGCVTDX\<92>\DBG$CVT_DX_DX:  nbds_sml\
73 64 62 6E 20 20 3A 58 44 5F 58 44 5F 54 56 018CC
                                 6C 6D 73 5F 018DB
                                    74 6E 69 018DF         .ASCII  \int\
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 24 018E2 P.AKH:  .ASCII  \$DBGCVTDX\<92>\DBG$CVT_DX_DX:  nbds_lrg\
73 64 62 6E 20 20 3A 58 44 5F 58 44 5F 54 56 018F1
                                 67 72 6C 5F 01900
                                    74 6E 69 01904         .ASCII  \int\
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 29 01907 P.AKI:  .ASCII  \)DBGCVTDX\<92>\DBG$CVT_DX_DX:  nbds_lrg\
73 64 62 6E 20 20 3A 58 44 5F 58 44 5F 54 56 01916
                                 67 72 6C 5F 01925
                     78 6C 70 6D 63 74 6C 66 01929         .ASCII  \fltcmplx\
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 34 01931 P.AKJ:  .ASCII  \4DBGCVTDX\<92>\DBG$CVT_DX_DX:  error in\
6F 72 72 65 20 20 3A 58 44 5F 58 44 5F 54 56 01940
                                 6E 69 20 72 0194F
72 65 76 6E 6F 63 20 65 74 2D 6F 74 2D 68 20 01953         .ASCII  \ h-to-te conversion\
                                 6E 6F 69 73 01962
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 22 01966 P.AKK:  .ASCII  \"DBGCVTDX\<92>\DBG$CVT_DX_DX:  nbds_nbd\
73 64 62 6E 20 20 3A 58 44 5F 58 44 5F 54 56 01975
                                    64 62 6E 5F 01984
                                          73 01988         .ASCII  \s\
43 24 47 42 44 5C 58 44 54 56 43 47 42 44 26 01989 P.AKL:  .ASCII  \&DBGCVTDX\<92>\DBG$CVT_DX_DX:  invalid \
61 76 6E 69 20 20 3A 58 44 5F 58 44 5F 54 56 01998
                                 20 64 69 6C 019A7
                              65 70 79 74 64 019AB         .ASCII  \dtype\

                                                           .PSECT  DBG$OWN,NOEXE,  PIC,2

                                                     00008 INPUT_STR:
                                                           .BLKB   100
                                                     0006C OUTPUT_STR:
                                                           .BLKB   100
```

```
                                                 .PSECT  DBG$CODE,NOWRT,  SHR,  PIC,0

                               0FFC 00000        .ENTRY  DBG$CVT_DX_DX, Save R2,R3,R4,R5,R6,R7,R8,-      ; 1763
                                                         R9,R10,R11                                       ;
               5E     FEE8  CE   9E 00002        MOVAB   -280(SP), SP                                     ;
               6D     3091  CF   DE 00007        MOVAL   661$, (FP)                                       ; 1930
               59       08  AC   D0 0000C        MOVL    DESTINATION, R9                                  ; 1993
               5B       02  A9   9E 00010        MOVAB   2(R9), R11                                       ;
                            51   D4 00014        CLRL    R1                                               ;
               23           6B   91 00016        CMPB    (R11), #35                                       ;
                            04   12 00019        BNEQ    1$                                               ;
                            51   D6 0001B        INCL    R1                                               ;
                            0D   11 0001D        BRB     2$                                               ;
               50       04  AC   D0 0001F  1$:   MOVL    SOURCE, R0                                       ; 1994
               23       02  A0   91 00023        CMPB    2(R0), #35                                       ;
                            03   13 00027        BEQL    2$                                               ;
                          0091   31 00029        BRW     8$                                               ;
               0E           6B   91 0002C  2$:   CMPB    (R11), #14                                       ; 1996
                            44   12 0002F        BNEQ    4$                                               ;
               50       04  AC   D0 00031        MOVL    SOURCE, R0                                       ; 1997
               23       02  A0   91 00035        CMPB    2(R0), #35                                       ;
                            3A   12 00039        BNEQ    4$                                               ;
       58      AE 010E0017  8F   D0 0003B        MOVL    #17694743, CLASS_S_DESC                          ; 2004
       5C      AE       04  A9   D0 00043        MOVL    4(R9), CLASS_S_DESC+4                            ; 2005
                            7E   D4 00048        CLRL    -(SP)                                            ; 2006
               50       04  AC   D0 0004A        MOVL    SOURCE, R0                                       ;
                        04  A0   DD 0004E        PUSHL   4(R0)                                            ;
                        60  AE   9F 00051        PUSHAB  CLASS_S_DESC                                     ;
                        30  AE   9F 00054        PUSHAB  TEMP                                             ;
  00000000G    00           04   FB 00057        CALLS   #4, SYS$ASCTIM                                   ;
               0D           50   E8 0005E        BLBS    R0, 3$                                           ;
                  000282A0  8F   DD 00061        PUSHL   #164512                                          ; 2008
  00000000G    00           01   FB 00067        CALLS   #1, LIB$SIGNAL                                   ;
       14      AE       24  AE   D0 0006E  3$:   MOVL    TEMP, OUTPUT_STR_LEN                             ; 2009
                            45   11 00073        BRB     7$                                               ; 1996
               35           51   E9 00075  4$:   BLBC    R1, 5$                                           ; 2012
               50       04  AC   D0 00078        MOVL    SOURCE, R0                                       ; 2013
               0E       02  A0   91 0007C        CMPB    2(R0), #14                                       ;
                            2B   12 00080        BNEQ    5$                                               ;
       5A      AE     010E  8F   B0 00082        MOVW    #270, CLASS_S_DESC+2                             ; 2017
               50       04  AC   D0 00088        MOVL    SOURCE, R0                                       ; 2018
       58      AE           60   B0 0008C        MOVW    (R0), CLASS_S_DESC                               ;
       5C      AE       04  A0   D0 00090        MOVL    4(R0), CLASS_S_DESC+4                            ; 2019
                        04  A9   DD 00095        PUSHL   4(R9)                                            ; 2020
                        5C  AE   9F 00098        PUSHAB  CLASS_S_DESC                                     ;
  00000000G    00           02   FB 0009B        CALLS   #2, SYS$BINTIM                                   ;
               15           50   E8 000A2        BLBS    R0, 7$                                           ;
                  00028F88  8F   DD 000A5        PUSHL   #167816                                          ; 2022
                            06   11 000AB        BRB     6$                                               ;
                  000287D8  8F   DD 000AD  5$:   PUSHL   #165848                                          ; 2025
  00000000G    00           01   FB 000B3  6$:   CALLS   #1, LIB$SIGNAL                                   ;
                          2FD4   31 000BA  7$:   BRW     659$                                             ; 1996
               03           6C   91 000BD  8$:   CMPB    (AP), #3                                         ; 2030
                            07   1B 000C0        BLEQU   9$                                               ;
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                   0C    AE      10   AC  D0 000C2        MOVL    16(AP), CVT_ROUND_FLAG                    ; 2032
                                      03  11 000C7        BRB     10$                                       ;
                                 0C   AE  D4 000C9  9$:   CLRL    CVT_ROUND_FLAG                            ; 2034
                         50      04   AC  D0 000CC  10$:  MOVL    SOURCE, R0                                ; 2039
                         15      02   A0  91 000D0        CMPB    2(R0), #21                                ;
                                      12  12 000D4        BNEQ    11$                                       ;
                         0E           6B  91 000D6        CMPB    (R11), #14                                ; 2040
                                      0D  13 000D9        BEQL    11$                                       ;
                                      50  DD 000DB        PUSHL   R0                                        ; 2042
            00000000G    00           01  FB 000DD        CALLS   #1, DBG$STRIP_ZEROES                      ;
                   04    AC           50  D0 000E4        MOVL    R0, SOURCE                                ;
                         5A      04   AC  D0 000E8  11$:  MOVL    SOURCE, R10                               ; 2052
                   04    AE      02   AA  9E 000EC        MOVAB   2(R10), 4(SP)                             ;
                                      51  D4 000F1        CLRL    R1                                        ;
                         0F      04   BE  91 000F3        CMPB    @4(SP), #15                               ;
                                      02  1F 000F7        BLSSU   12$                                       ;
                                      51  D6 000F9        INCL    R1                                        ;
                                      50  D4 000FB  12$:  CLRL    R0                                        ; 2053
                         15      04   BE  91 000FD        CMPB    @4(SP), #21                               ;
                                      02  1A 00101        BGTRU   13$                                       ;
                                      50  D6 00103        INCL    R0                                        ;
                         52           51  D2 00105  13$:  MCOML   R1, R2                                    ;
      00000000'    EF    50           52  CB 00108        BICL3   R2, R0, DECIMAL_CONVERT                   ;
                         0D      03   A9  91 00110        CMPB    3(R9), #13                                ; 2061
                                      0C  12 00114        BNEQ    14$                                       ;
                   34    AE      D0   AD  9E 00116        MOVAB   OUTPUT_BUFFER, OUTPUT                     ; 2064
                   20    AE      04   A9  D0 0011B        MOVL    4(R9), DESTINATION_PTR                    ; 2065
                                      05  11 00120        BRB     15$                                       ; 2061
                   34    AE      04   A9  D0 00122  14$:  MOVL    4(R9), OUTPUT                             ; 2068
  08           00        6E           00  2C 00127  15$:  MOVC5   #0, (SP), #0, #8, SRC_INFO                ; 2073
                                 F8   AD     0012C                                                          ;
  08           00        6E           00  2C 0012E        MOVC5   #0, (SP), #0, #8, DST_INFO                ; 2074
                                 F0   AD     00133                                                          ;
  20           00        6E           00  2C 00135        MOVC5   #0, (SP), #0, #32, INTMED_DATA            ; 2075
                                 B0   AD     0013A                                                          ;
  32           20        6E           00  2C 0013C        MOVC5   #0, (SP), #32, #50, TEMP_BUF1             ; 2076
                               FF7C   CD     00141                                                          ;
  32           20        6E           00  2C 00144        MOVC5   #0, (SP), #32, #50, TEMP_BUF2             ; 2077
                                 60   AE     00149                                                          ;
                                 14   AE  D4 0014B        CLRL    OUTPUT_STR_LEN                            ; 2078
                   5A    AE    010E   8F  B0 0014E        MOVW    #270, CLASS_S_DESC+2                      ; 2085
                   1C    AE 00000000' EF  9E 00154        MOVAB   P.ADX, LRGST_P_LU                         ; 2091
                   10    AE 00000000' EF  9E 0015C        MOVAB   P.ADY, LRGST_D_LU                         ; 2092
                   18    AE 00000000' EF  9E 00164        MOVAB   P.ADZ, LRGST_H_LU                         ; 2093
                   08    AE 00000000' EF  9E 0016C        MOVAB   P.AEA, PACK_ZERO                          ; 2094
                   F9    AD      B0   AD  9E 00174        MOVAB   INTMED_DATA, SRC_INFO+1                   ; 2102
                   FD    AD           20  B0 00179        MOVW    #32, SRC_INFO+5                           ; 2103
                                 28   AE  9F 0017D        PUSHAB  CVT_PATH                                  ; 2110
                                 F0   AD  9F 00180        PUSHAB  DST_INFO                                  ;
                                 F8   AD  9F 00183        PUSHAB  SRC_INFO                                  ;
                                      59  DD 00186        PUSHL   R9                                        ;
                                      5A  DD 00188        PUSHL   R10                                       ;
                 0000V   CF           05  FB 0018A        CALLS   #5, FIND_CVT_PATH                         ;
                         6E           50  D0 0018F        MOVL    R0, STATUS                                ;
                                      43  18 00192        BGEQ    22$                                       ; 2119
              06 FFFFFFF9    8F       6E  CF 00194        CASEL   STATUS, #-7, #6                           ; 2122
001E          0016         000E      0026    0019C  16$:  .WORD   20$-16$,-                                 ;
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                     0016        000E        001E   001A4                  17$-16$,-                              ;
                                                                           18$-16$,-                              ;
                                                                           19$-16$,-                              ;
                                                                           19$-16$,-                              ;
                                                                           17$-16$,-                              ;
                                                                           18$-16$                                ;
                                       00000000'  EF  9F 001AA 17$:   PUSHAB  P.AEB                               ; 2124
                                                  16  11 001B0        BRB     21$                                 ;
                                       00000000'  EF  9F 001B2 18$:   PUSHAB  P.AEC                               ; 2125
                                                  0E  11 001B8        BRB     21$                                 ;
                                       00000000'  EF  9F 001BA 19$:   PUSHAB  P.AED                               ; 2126
                                                  06  11 001C0        BRB     21$                                 ;
                                       00000000'  EF  9F 001C2 20$:   PUSHAB  P.AEE                               ; 2127
                                                  01  DD 001C8 21$:   PUSHL   #1                                  ;
                                       00028362   8F  DD 001CA        PUSHL   #164706                             ;
                         00000000G  00            03  FB 001D0        CALLS   #3, LIB$SIGNAL                      ;
                                            00E0  8F  B8 001D7 22$:   BISPSW  #224                                ; 2136
                     04         FF   AD           01  E1 001DB        BBC     #1, SRC_INFO+7, 23$                 ; 2137
                                                  51  D4 001E0        CLRL    R1                                  ;
                                                  04  11 001E2        BRB     24$                                 ;
                                     51       F8  AD  98 001E4 23$:   CVTBL   SRC_INFO, R1                        ;
                     04         F7   AD           01  E1 001E8 24$:   BBC     #1, DST_INFO+7, 25$                 ; 2138
                                                  50  D4 001ED        CLRL    R0                                  ;
                                                  04  11 001EF        BRB     26$                                 ;
                                     50       F0  AD  98 001F1 25$:   CVTBL   DST_INFO, R0                        ;
                30   AE              51           50  C3 001F5 26$:   SUBL3   R0, R1, SCALE                       ;
                     06         FF   AD           01  E1 001FA        BBC     #1, SRC_INFO+7, 27$                 ; 2139
                                     51       F8  AD  98 001FF        CVTBL   SRC_INFO, R1                        ;
                                                  02  11 00203        BRB     28$                                 ;
                                                  51  D4 00205 27$:   CLRL    R1                                  ;
                     06         F7   AD           01  E1 00207 28$:   BBC     #1, DST_INFO+7, 29$                 ; 2140
                                     50       F0  AD  98 0020C        CVTBL   DST_INFO, R0                        ;
                                                  02  11 00210        BRB     30$                                 ;
                                                  50  D4 00212 29$:   CLRL    R0                                  ;
                     58              51           50  C3 00214 30$:   SUBL3   R0, R1, BIN_SCALE                   ;
                                     56       28  AE  D0 00218        MOVL    CVT_PATH, R6                        ; 2187
                     23              01           56  CF 0021C        CASEL   R6, #1, #35                         ;
       058B          02C7          0119         0048     00220 31$:   .WORD   32$-31$,-                           ;
       0119          0CA3          118F         09FF     00228                46$-31$,-                           ;
       118F          0E5B          058B         02C7     00230                76$-31$,-                           ;
       058B          02C7          165E         1528     00238                110$-31$,-                          ;
       1A93          1831          17A3         0E5B     00240                159$-31$,-                          ;
       1E9A          0E5B          058B         1CAB     00248                277$-31$,-                          ;
       058B          02C7          239B         1FEE     00250                198$-31$,-                          ;
       2852          251A          118F         09FF     00258                46$-31$,-                           ;
       2AE4          0E5B          2A33         02C7     00260                76$-31$,-                           ;
                                                                              110$-31$,-                          ;
                                                                              227$-31$,-                          ;
                                                                              277$-31$,-                          ;
                                                                              332$-31$,-                          ;
                                                                              344$-31$,-                          ;
                                                                              76$-31$,-                           ;
                                                                              110$-31$,-                          ;
                                                                              227$-31$,-                          ;
                                                                              357$-31$,-                          ;
                                                                              368$-31$,-                          ;
                                                                              390$-31$,-                          ;
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                                                          410$-31$,-                              :
                                                          110$-31$,-                              :
                                                          227$-31$,-                              :
                                                          430$-31$,-                              :
                                                          449$-31$,-                              :
                                                          503$-31$,-                              :
                                                          76$-31$,-                               :
                                                          110$-31$,-                              :
                                                          159$-31$,-                              :
                                                          277$-31$,-                              :
                                                          519$-31$,-                              :
                                                          575$-31$,-                              :
                                                          76$-31$,-                               :
                                                          599$-31$,-                              :
                                                          227$-31$,-                              :
                                                          607$-31$                                :
                        58  D5 00268 32$:      TSTL       BIN_SCALE                               : 2191
                        08  15 0026A           BLEQ       33$                                     :
            B0  AD      02  C4 0026C           MULL2      #2, INTMED_DATA                         :
                        58  D7 00270           DECL       BIN_SCALE                               :
                        F4  11 00272           BRB        32$                                     :
                        08  18 00274 33$:      BGEQ       34$                                     :
            B0  AD      02  C6 00276           DIVL2      #2, INTMED_DATA                         :
                        58  D6 0027A           INCL       BIN_SCALE                               :
                        F6  11 0027C           BRB        33$                                     :
                    30  AE  D5 0027E 34$:      TSTL       SCALE                                   :
                        09  15 00281           BLEQ       35$                                     :
            B0  AD      0A  C4 00283           MULL2      #10, INTMED_DATA                        :
                    30  AE  D7 00287           DECL       SCALE                                   :
                        F2  11 0028A           BRB        34$                                     :
                        09  18 0028C 35$:      BGEQ       36$                                     :
            B0  AD      0A  C6 0028E           DIVL2      #10, INTMED_DATA                        :
                    30  AE  D6 00292           INCL       SCALE                                   :
                        F5  11 00295           BRB        35$                                     :
          29        01  6B  8F 00297 36$:      CASEB      (R11), #1, #41                          : 2193
0054      006E      005D      0082   0029B 37$:      .WORD      42$-37$,-                         :
0DBD      0D85      0D5B      0054   002A3                      39$-37$,-                         :
0054      0054      0054      0054   002AB                      40$-37$,-                         :
0054      0054      0054      0054   002B3                      38$-37$,-                         :
0054      0054      0054      0054   002BB                      38$-37$,-                         :
0054      0054      0054      0054   002C3                      214$-37$,-                        :
0054      0054      0054      0054   002CB                      217$-37$,-                        :
0054      0054      0054      0054   002D3                      221$-37$,-                        :
0054      0054      0082      0054   002DB                      38$-37$,-                         :
0082      0054      0054      0054   002E3                      38$-37$,-                         :
                    0082      0082   002EB                      38$-37$,-                         :
                                                                38$-37$,-                         :
                                                                38$-37$,-                         :
                                                                38$-37$,-                         :
                                                                38$-37$,-                         :
                                                                38$-37$,-                         :
                                                                38$-37$,-                         :
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                                                                38$-37$,-                         :
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                                                                38$-37$,-                         :
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                                                                    38$-37$,-                            ;
                                                                    38$-37$,-                            ;
                                                                    38$-37$,-                            ;
                                                                    38$-37$,-                            ;
                                                                    38$-37$,-                            ;
                                                                    38$-37$,-                            ;
                                                                    38$-37$,-                            ;
                                                                    42$-37$,-                            ;
                                                                    38$-37$,-                            ;
                                                                    38$-37$,-                            ;
                                                                    38$-37$,-                            ;
                                                                    38$-37$,-                            ;
                                                                    38$-37$,-                            ;
                                                                    42$-37$,-                            ;
                                                                    42$-37$,-                            ;
                                                                    42$-37$                              ;
                            00000000'  EF  9F 002EF 38$:   PUSHAB   P.AEF                                ; 2230
                                 2CD1  31 002F5            BRW      647$                                 ;
                     50      B0    AD  D0 002F8 39$:       MOVL     INTMED_DATA, R0                      ; 2198
                 34  BE            50  90 002FC            MOVB     R0, @OUTPUT                          ;
          000000FF   8F            50  D1 00300            CMPL     R0, #255                             ;
                                   0F  11 00307            BRB      41$                                  ;
                     50      B0    AD  D0 00309 40$:       MOVL     INTMED_DATA, R0                      ; 2204
                 34  BE            50  B0 0030D            MOVW     R0, @OUTPUT                          ;
          0000FFFF   8F            50  D1 00311            CMPL     R0, #65535                           ;
                                   1C  1B 00318 41$:       BLEQU    45$                                  ;
                                 26F2  31 0031A            BRW      565$                                 ; 2205
                     52      F5    AD  3C 0031D 42$:       MOVZWL   DST_INFO+5, R2                       ; 2223
                     50            01  CE 00321            MNEGL    #1, I                                ; 2225
                                   0C  11 00324            BRB      44$                                  ;
    51      B0   AD  01            50  EF 00326 43$:       EXTZV    I, #1, INTMED_DATA, R1               ;
34  BE           01  50            51  F0 0032C            INSV     R1, I, #1, @OUTPUT                   ;
                 F0  50            52  F2 00332 44$:       AOBLSS   R2, I, 43$                           ; 2223
                                 2C9F  31 00336 45$:       BRW      649$                                 ; 2187
                     02            56  D1 00339 46$:       CMPL     R6, #2                               ; 2239
                                   5D  12 0033C            BNEQ     52$                                  ;
                             B0    AD  D5 0033E            TSTL     INTMED_DATA                          ; 2240
                                   11  18 00341            BGEQ     48$                                  ;
                     50      B0    AD  D0 00343            MOVL     INTMED_DATA, R0                      ;
                                   03  18 00347            BGEQ     47$                                  ;
                     50            50  CE 00349            MNEGL    R0, R0                               ;
                 B0  AD            50  D0 0034C 47$:       MOVL     R0, INTMED_DATA                      ;
                 FF  AD            01  88 00350            BISB2    #1, SRC_INFO+7                       ;
                             30    AE  D5 00354 48$:       TSTL     SCALE                                ;
                                   0F  15 00357            BLEQ     49$                                  ;
                     50      B0    AD  9E 00359            MOVAB    INTMED_DATA, R0                      ;
                      00000000G    00  16 0035D            JSB      LIB$$CVT_SCALE_OU_UP_BY_10_R1        ;
                             30    AE  D7 00363            DECL     SCALE                                ;
                                   EC  11 00366            BRB      48$                                  ;
                                   0F  18 00368 49$:       BGEQ     50$                                  ;
                     50      B0    AD  9E 0036A            MOVAB    INTMED_DATA, R0                      ;
                      00000000G    00  16 0036E            JSB      LIB$$CVT_SCALE_OU_DOWN_BY_10_R1      ;
                             30    AE  D6 00374            INCL     SCALE                                ;
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                                EF  11 00377        BRB     49$                                               ;
                                58  D5 00379 50$:   TSTL    BIN_SCALE                                         ;
                                0E  15 0037B        BLEQ    51$                                               ;
                   50      B0   AD  9E 0037D        MOVAB   INTMED_DATA, R0                                   ;
                      00000000G 00  16 00381        JSB     DBG$CVT_SCALE_OU_UP_BY_2_R1                       ;
                                58  D7 00387        DECL    BIN_SCALE                                         ;
                                EE  11 00389        BRB     50$                                               ;
                                5A  18 0038B 51$:   BGEQ    57$                                               ;
                   50      B0   AD  9E 0038D        MOVAB   INTMED_DATA, R0                                   ;
                      00000000G 00  16 00391        JSB     DBG$CVT_SCALE_OU_DOWN_BY_2_R1                     ;
                                58  D6 00397        INCL    BIN_SCALE                                         ;
                                F0  11 00399        BRB     51$                                               ;
                   08           56  D1 0039B 52$:   CMPL    R6, #8                                            ; 2244
                                47  12 0039E        BNEQ    57$                                               ;
                           30   AE  D5 003A0 53$:   TSTL    SCALE                                             ; 2245
                                0F  15 003A3        BLEQ    54$                                               ;
                   50      B0   AD  9E 003A5        MOVAB   INTMED_DATA, R0                                   ;
                      00000000G 00  16 003A9        JSB     LIB$$CVT_SCALE_OU_UP_BY_10_R1                     ;
                           30   AE  D7 003AF        DECL    SCALE                                             ;
                                EC  11 003B2        BRB     53$                                               ;
                                0F  18 003B4 54$:   BGEQ    55$                                               ;
                   50      B0   AD  9E 003B6        MOVAB   INTMED_DATA, R0                                   ;
                      00000000G 00  16 003BA        JSB     LIB$$CVT_SCALE_OU_DOWN_BY_10_R1                   ;
                           30   AE  D6 003C0        INCL    SCALE                                             ;
                                EF  11 003C3        BRB     54$                                               ;
                                58  D5 003C5 55$:   TSTL    BIN_SCALE                                         ;
                                0E  15 003C7        BLEQ    56$                                               ;
                   50      B0   AD  9E 003C9        MOVAB   INTMED_DATA, R0                                   ;
                      00000000G 00  16 003CD        JSB     DBG$CVT_SCALE_OU_UP_BY_2_R1                       ;
                                58  D7 003D3        DECL    BIN_SCALE                                         ;
                                EE  11 003D5        BRB     55$                                               ;
                                0E  18 003D7 56$:   BGEQ    57$                                               ;
                   50      B0   AD  9E 003D9        MOVAB   INTMED_DATA, R0                                   ;
                      00000000G 00  16 003DD        JSB     DBG$CVT_SCALE_OU_DOWN_BY_2_R1                     ;
                                58  D6 003E3        INCL    BIN_SCALE                                         ;
                                F0  11 003E5        BRB     56$                                               ;
                   04           6B  91 003E7 57$:   CMPB    (R11), #4                                         ; 2253
                                31  12 003EA        BNEQ    59$                                               ;
   50      B4      AD      B8   AD  C9 003EC        BISL3   INTMED_DATA+8, INTMED_DATA+4, R0                  ; 2255
                   50      BC   AD  C8 003F2        BISL2   INTMED_DATA+12, R0                                ;
                                15  13 003F6        BEQL    58$                                               ;
                      00000000G 00  DD 003F8        PUSHL   DBG$GL_OPCODE_NAME                                ; 2256
                                01  DD 003FE        PUSHL   #1                                                ;
                      000286A3  8F  DD 00400        PUSHL   #165539                                           ;
         00000000G 00           03  FB 00406        CALLS   #3, LIB$SIGNAL                                    ;
           34      BE      B0   AD  D0 0040D 58$:   MOVL    INTMED_DATA, @OUTPUT                              ; 2257
           60      FF           AD  E9 00412        BLBC    SRC_INFO+7, 64$                                   ; 2258
           34      BE      34   BE  CE 00416        MNEGL   @OUTPUT, @OUTPUT                                  ; 2260
                                59  11 0041B        BRB     64$                                               ; 2250
                   05           6B  91 0041D 59$:   CMPB    (R11), #5                                         ; 2263
                                05  13 00420        BEQL    60$                                               ;
                   09           6B  91 00422        CMPB    (R11), #9                                         ;
                                51  12 00425        BNEQ    65$                                               ;
   50      B8      AD      BC   AD  C9 00427 60$:   BISL3   INTMED_DATA+12, INTMED_DATA+8, R0                 ; 2265
                                15  13 0042D        BEQL    61$                                               ;
                      00000000G 00  DD 0042F        PUSHL   DBG$GL_OPCODE_NAME                                ; 2266
                                01  DD 00435        PUSHL   #1                                                ;
```

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                          000286A3  8F  DD 00437          PUSHL   #165539                                  ;
          00000000G  00             03  FB 0043D          CALLS   #3, LIB$SIGNAL                           ;
                     26       FF    AD  E9 00444  61$:    BLBC    SRC_INFO+7, 63$                          ; 2267
                              B0    AD  D5 00448          TSTL    INTMED_DATA                              ; 2269
                                    14  12 0044B          BNEQ    62$                                      ;
          80000000   8F       B4    AD  D1 0044D          CMPL    INTMED_DATA+4, #-2147483648              ; 2272
                                    17  13 00455          BEQL    63$                                      ;
                B4   AD       B4    AD  D2 00457          MCOML   INTMED_DATA+4, INTMED_DATA+4             ; 2275
                              B4    AD  D6 0045C          INCL    INTMED_DATA+4                            ; 2276
                                    0D  11 0045F          BRB     63$                                      ; 2269
                B0   AD       B0    AD  D2 00461  62$:    MCOML   INTMED_DATA, INTMED_DATA                 ; 2281
                B4   AD       B4    AD  D2 00466          MCOML   INTMED_DATA+4, INTMED_DATA+4             ; 2282
                              B0    AD  D6 0046B          INCL    INTMED_DATA                              ; 2283
                     50       34    AE  D0 0046E  63$:    MOVL    OUTPUT, R0                               ; 2285
                     60       B0    AD  7D 00472          MOVQ    INTMED_DATA, (R0)                        ;
                                    51  11 00476  64$:    BRB     72$                                      ; 2250
                     1A             6B  91 00478  65$:    CMPB    (R11), #26                               ; 2289
                                    4F  12 0047B          BNEQ    73$                                      ;
                     42       FF    AD  E9 0047D          BLBC    SRC_INFO+7, 71$                          ; 2294
                              B0    AD  D5 00481          TSTL    INTMED_DATA                              ; 2302
                                    14  12 00484          BNEQ    66$                                      ;
                              B4    AD  D5 00486          TSTL    INTMED_DATA+4                            ; 2303
                                    0F  12 00489          BNEQ    66$                                      ;
                              B8    AD  D5 0048B          TSTL    INTMED_DATA+8                            ; 2304
                                    0A  12 0048E          BNEQ    66$                                      ;
          80000000   8F       BC    AD  D1 00490          CMPL    INTMED_DATA+12, #-2147483648             ; 2305
                                    29  13 00498          BEQL    71$                                      ;
                                    50  D4 0049A  66$:    CLRL    NEXT_LONGWORD                            ; 2313
                B0 AD40       B0 AD40   D2 0049C  67$:    MCOML   INTMED_DATA[NEXT_LONGWORD], INTMED_DATA- ; 2315
                                                                  [NEXT_LONGWORD]
       F5            50             03  F3 004A3          AOBLEQ  #3, NEXT_LONGWORD, 67$                   ; 2314
                                    50  D4 004A7          CLRL    NEXT_LONGWORD                            ; 2319
                     51       B0 AD40   DE 004A9  68$:    MOVAL   INTMED_DATA[NEXT_LONGWORD], R1           ; 2320
          FFFFFFFF   8F             61  D1 004AE          CMPL    (R1), #-1                                ;
                                    04  12 004B5          BNEQ    69$                                      ;
                                    61  D4 004B7          CLRL    (R1)                                     ; 2322
                                    04  11 004B9          BRB     70$                                      ;
                                    61  D6 004BB  69$:    INCL    (R1)                                     ; 2326
                                    04  11 004BD          BRB     71$                                      ; 2324
       E6            50             03  F3 004BF  70$:    AOBLEQ  #3, NEXT_LONGWORD, 68$                   ; 2320
   34  BE       B0   AD             10  28 004C3  71$:    MOVC3   #16, INTMED_DATA, @OUTPUT                ; 2332
                                  2B0C  31 004C9  72$:    BRW     649$                                     ; 2250
                     02             56  D1 004CC  73$:    CMPL    R6, #2                                   ; 2338
                                    08  12 004CF          BNEQ    74$                                      ;
                          00000000' EF  9F 004D1          PUSHAB  P.AEG                                    ; 2339
                                    0B  11 004D7          BRB     75$                                      ;
                     08             56  D1 004D9  74$:    CMPL    R6, #8                                   ; 2341
                                    EB  12 004DC          BNEQ    72$                                      ;
                          00000000' EF  9F 004DE          PUSHAB  P.AEH                                    ; 2342
                                  2AE2  31 004E4  75$:    BRW     647$                                     ;
                     03             56  D1 004E7  76$:    CMPL    R6, #3                                   ; 2352
                                    68  12 004EA          BNEQ    81$                                      ;
                B0   AD       B0    AD  6E 004EC          CVTLD   INTMED_DATA, INTMED_DATA                 ; 2353
                                    58  D5 004F1  77$:    TSTL    BIN_SCALE                                ;
                                    15  15 004F3          BLEQ    78$                                      ;
                     51       B0    AD  9E 004F5          MOVAB   INTMED_DATA, R1                          ;
                     50 00000000'   EF  9E 004F9          MOVAB   P.AEI, R0                                ;
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                      00000000G  00  16 00500          JSB     DBG$CVT_MULD2_R1                    ;
                                 58  D7 00506          DECL    BIN_SCALE                           ;
                                 E7  11 00508          BRB     77$                                 ;
                                 15  18 0050A 78$:     BGEQ    79$                                 ;
                 51       B0     AD  9E 0050C          MOVAB   INTMED_DATA, R1                     ;
                 50 00000000'    EF  9E 00510          MOVAB   P.AEJ, R0                           ;
                      00000000G  00  16 00517          JSB     DBG$CVT_DIVD2_R1                    ;
                                 58  D6 0051D          INCL    BIN_SCALE                           ;
                                 E9  11 0051F          BRB     78$                                 ;
                          30     AE  D5 00521 79$:     TSTL    SCALE                               ;
                                 16  15 00524          BLEQ    80$                                 ;
                 51       B0     AD  9E 00526          MOVAB   INTMED_DATA, R1                     ;
                 50 00000000'    EF  9E 0052A          MOVAB   P.AEK, R0                           ;
                      00000000G  00  16 00531          JSB     DBG$CVT_MULD2_R1                    ;
                          30     AE  D7 00537          DECL    SCALE                               ;
                                 E5  11 0053A          BRB     79$                                 ;
                                 7C  18 0053C 80$:     BGEQ    85$                                 ;
                 51       B0     AD  9E 0053E          MOVAB   INTMED_DATA, R1                     ;
                 50 00000000'    EF  9E 00542          MOVAB   P.AEL, R0                           ;
                      00000000G  00  16 00549          JSB     DBG$CVT_DIVD2_R1                    ;
                          30     AE  D6 0054F          INCL    SCALE                               ;
                                 E8  11 00552          BRB     80$                                 ;
                 09              56  D1 00554 81$:     CMPL    R6, #9                              ; 2357
                                 7C  12 00557          BNEQ    87$                                 ;
                 51     FF7C     CD  9E 00559          MOVAB   TEMP_BUF1, R1                       ; 2358
                 50       B0     AD  9E 0055E          MOVAB   INTMED_DATA, R0                     ;
                      00000000G  00  16 00562          JSB     DBG$CVT_CVTROUD_R1                  ;
B0    AD       FF7C     CD       08  28 00568          MOVC3   #8, TEMP_BUF1, INTMED_DATA          ;
                                 58  D5 0056F 82$:     TSTL    BIN_SCALE                           ;
                                 15  15 00571          BLEQ    83$                                 ;
                 51       B0     AD  9E 00573          MOVAB   INTMED_DATA, R1                     ;
                 50 00000000'    EF  9E 00577          MOVAB   P.AEM, R0                           ;
                      00000000G  00  16 0057E          JSB     DBG$CVT_MULD2_R1                    ;
                                 58  D7 00584          DECL    BIN_SCALE                           ;
                                 E7  11 00586          BRB     82$                                 ;
                                 15  18 00588 83$:     BGEQ    84$                                 ;
                 51       B0     AD  9E 0058A          MOVAB   INTMED_DATA, R1                     ;
                 50 00000000'    EF  9E 0058E          MOVAB   P.AEN, R0                           ;
                      00000000G  00  16 00595          JSB     DBG$CVT_DIVD2_R1                    ;
                                 58  D6 0059B          INCL    BIN_SCALE                           ;
                                 E9  11 0059D          BRB     83$                                 ;
                          30     AE  D5 0059F 84$:     TSTL    SCALE                               ;
                                 16  15 005A2          BLEQ    85$                                 ;
                 51       B0     AD  9E 005A4          MOVAB   INTMED_DATA, R1                     ;
                 50 00000000'    EF  9E 005A8          MOVAB   P.AEO, R0                           ;
                      00000000G  00  16 005AF          JSB     DBG$CVT_MULD2_R1                    ;
                          30     AE  D7 005B5          DECL    SCALE                               ;
                                 E5  11 005B8          BRB     84$                                 ;
                                 03  19 005BA 85$:     BLSS    86$                                 ;
                               0179  31 005BC          BRW     98$                                 ;
                 51       B0     AD  9E 005BF 86$:     MOVAB   INTMED_DATA, R1                     ;
                 50 00000000'    EF  9E 005C3          MOVAB   P.AEP, R0                           ;
                      00000000G  00  16 005CA          JSB     DBG$CVT_DIVD2_R1                    ;
                          30     AE  D6 005D0          INCL    SCALE                               ;
                                 E5  11 005D3          BRB     85$                                 ;
                 0F              56  D1 005D5 87$:     CMPL    R6, #15                             ; 2362
                                 03  13 005D8          BEQL    88$                                 ;
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                                        00AA  31 005DA        BRW     93$                                          ;
                                          58  D5 005DD 88$:   TSTL    BIN_SCALE                                    ; 2363
                                          26  15 005DF        BLEQ    89$                                          ;
                      51        B0        AD  9E 005E1        MOVAB   INTMED_DATA, R1                              ;
                      50 00000000'        EF  9E 005E5        MOVAB   P.AEQ, R0                                    ;
                         00000000G        00  16 005EC        JSB     DBG$CVT_MULD2_R1                             ;
                      51        B8        AD  9E 005F2        MOVAB   INTMED_DATA+8, R1                            ;
                      50 00000000'        EF  9E 005F6        MOVAB   P.AER, R0                                    ;
                         00000000G        00  16 005FD        JSB     DBG$CVT_MULD2_R1                             ;
                                          58  D7 00603        DECL    BIN_SCALE                                    ;
                                          D6  11 00605        BRB     88$                                          ;
                                          26  18 00607 89$:   BGEQ    90$                                          ;
                      51        B0        AD  9E 00609        MOVAB   INTMED_DATA, R1                              ;
                      50 00000000'        EF  9E 0060D        MOVAB   P.AES, R0                                    ;
                         00000000G        00  16 00614        JSB     DBG$CVT_DIVD2_R1                             ;
                      51        B8        AD  9E 0061A        MOVAB   INTMED_DATA+8, R1                            ;
                      50 00000000'        EF  9E 0061E        MOVAB   P.AET, R0                                    ;
                         00000000G        00  16 00625        JSB     DBG$CVT_DIVD2_R1                             ;
                                          58  D6 0062B        INCL    BIN_SCALE                                    ;
                                          D8  11 0062D        BRB     89$                                          ;
                                30        AE  D5 0062F 90$:   TSTL    SCALE                                        ;
                                          27  15 00632        BLEQ    91$                                          ;
                      51        B0        AD  9E 00634        MOVAB   INTMED_DATA, R1                              ;
                      50 00000000'        EF  9E 00638        MOVAB   P.AEU, R0                                    ;
                         00000000G        00  16 0063F        JSB     DBG$CVT_MULD2_R1                             ;
                      51        B8        AD  9E 00645        MOVAB   INTMED_DATA+8, R1                            ;
                      50 00000000'        EF  9E 00649        MOVAB   P.AEV, R0                                    ;
                         00000000G        00  16 00650        JSB     DBG$CVT_MULD2_R1                             ;
                                30        AE  D7 00656        DECL    SCALE                                        ;
                                          D4  11 00659        BRB     90$                                          ;
                                          03  19 0065B 91$:   BLSS    92$                                          ;
                                        00D8  31 0065D        BRW     98$                                          ;
                      51        B0        AD  9E 00660 92$:   MOVAB   INTMED_DATA, R1                              ;
                      50 00000000'        EF  9E 00664        MOVAB   P.AEW, R0                                    ;
                         00000000G        00  16 0066B        JSB     DBG$CVT_DIVD2_R1                             ;
                      51        B8        AD  9E 00671        MOVAB   INTMED_DATA+8, R1                            ;
                      50 00000000'        EF  9E 00675        MOVAB   P.AEX, R0                                    ;
                         00000000G        00  16 0067C        JSB     DBG$CVT_DIVD2_R1                             ;
                                30        AE  D6 00682        INCL    SCALE                                        ;
                                          D4  11 00685        BRB     91$                                          ;
                      1B                  56  D1 00687 93$:   CMPL    R6, #27                                      ; 2367
                                          6B  12 0068A        BNEQ    96$                                          ;
              2C      AE        FD        AD  3C 0068C        MOVZWL  SRC_INFO+5, NO_DIGITS                        ; 2368
                      09        03        AA  91 00691        CMPB    3(R10), #9                                   ;
                                          0A  12 00695        BNEQ    94$                                          ;
              30      AE        08        AA  98 00697        CVTBL   8(R10), SCALE                                ;
              30      AE        30        AE  CE 0069C        MNEGL   SCALE, SCALE                                 ;
FF7C   CD     2C      AE        B0        AD  2C      AE  08 006A1 94$:   CVTPS   NO_DIGITS, INTMED_DATA, NO_DIGITS, -   ;
                                                                      TEMP_BUF1                                    ;
       58     AE      2C        AE        01  A1 006AB        ADDW3   #1, NO_DIGITS, CLASS_S_DESC                  ;
              5C      AE      FF7C        CD  9E 006B1        MOVAB   TEMP_BUF1, CLASS_S_DESC+4                    ;
                      7E        44        8F  9A 006B7        MOVZBL  #68, -(SP)                                   ;
                                34        AE  DD 006BB        PUSHL   SCALE                                        ;
                                          7E  D4 006BE        CLRL    -(SP)                                        ;
                                B0        AD  9F 006C0        PUSHAB  INTMED_DATA                                  ;
                                68        AE  9F 006C3        PUSHAB  CLASS_S_DESC                                 ;
               00000000G  00              05  FB 006C6        CALLS   #5, OTS$CVT_T_D                              ;
```

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           6E                    50  D0 006CD          MOVL    R0, STATUS                          :
           65                    6E  E8 006D0          BLBS    STATUS, 98$                         :
           50   00000000G        00  D0 006D3          MOVL    DBG$GL_OPCODE_NAME, R0              :
                       30        AE  D5 006DA          TSTL    SCALE                               :
                                 0C  18 006DD          BGEQ    95$                                 :
                                 50  DD 006DF          PUSHL   R0                                  :
                                 01  DD 006E1          PUSHL   #1                                  :
                00028698         8F  DD 006E3          PUSHL   #165531                             :
                                 46  11 006E9          BRB     97$                                 :
                                 50  DD 006EB  95$:    PUSHL   R0                                  :
                                 01  DD 006ED          PUSHL   #1                                  :
                00028A02         8F  DD 006EF          PUSHL   #166402                             :
                                 3A  11 006F5          BRB     97$                                 :
           21                    56  D1 006F7  96$:    CMPL    R6, #33                             : 2372
                                 3C  12 006FA          BNEQ    98$                                 :
       58  AE            FD      AD  B0 006FC          MOVW    SRC_INFO+5, CLASS_S_DESC            : 2374
       5C  AE            F9      AD  D0 00701          MOVL    SRC_INFO+1, CLASS_S_DESC+4          : 2375
           7E            55      8F  9A 00706          MOVZBL  #85, -(SP)                          : 2377
           7E            34      AE  CE 0070A          MNEGL   SCALE, -(SP)                        : 2376
                                 7E  D4 0070E          CLRL    -(SP)                               :
                         B0      AD  9F 00710          PUSHAB  INTMED_DATA                         :
                         68      AE  9F 00713          PUSHAB  CLASS_S_DESC                        :
        00000000G  00            05  FB 00716          CALLS   #5, OTS$CVT_T_D                     :
           6E                    50  D0 0071D          MOVL    R0, STATUS                          :
           15                    6E  E8 00720          BLBS    STATUS, 98$                         : 2378
                00000000G        00  DD 00723          PUSHL   DBG$GL_OPCODE_NAME                  :
                                 01  DD 00729          PUSHL   #1                                  :
                00028298         8F  DD 0072B          PUSHL   #164504                             :
        00000000G  00            03  FB 00731  97$:    CALLS   #3, LIB$SIGNAL                      :
     01            0A            6B  8F 00738  98$:    CASEB   (R11), #10, #1                      : 2382
         0064            005D           0073C  99$:    .WORD   107$-99$,-                          :
                                                               108$-99$                            :
     01            0C            6B  8F 00740          CASEB   (R11), #12, #1                      : 2395
         04C8            0046           00744  100$:   .WORD   106$-100$,-                         :
                                                               156$-100$                           :
           03                    56  D1 00748          CMPL    R6, #3                              : 2410
                                 08  12 0074B          BNEQ    101$                                :
                00000000'        EF  9F 0074D          PUSHAB  P.AEY                               : 2411
                                 32  11 00753          BRB     105$                                :
           09                    56  D1 00755  101$:   CMPL    R6, #9                              : 2412
                                 08  12 00758          BNEQ    102$                                :
                00000000'        EF  9F 0075A          PUSHAB  P.AEZ                               : 2413
                                 25  11 00760          BRB     105$                                :
           0F                    56  D1 00762  102$:   CMPL    R6, #15                             : 2414
                                 08  12 00765          BNEQ    103$                                :
                00000000'        EF  9F 00767          PUSHAB  P.AFA                               : 2415
                                 18  11 0076D          BRB     105$                                :
           1B                    56  D1 0076F  103$:   CMPL    R6, #27                             : 2416
                                 08  12 00772          BNEQ    104$                                :
                00000000'        EF  9F 00774          PUSHAB  P.AFB                               : 2417
                                 0B  11 0077A          BRB     105$                                :
           21                    56  D1 0077C  104$:   CMPL    R6, #33                             : 2418
                                 27  12 0077F          BNEQ    109$                                :
                00000000'        EF  9F 00781          PUSHAB  P.AFC                               : 2419
                               0440  31 00787  105$:   BRW     151$                                :
           50            34      AE  D0 0078A  106$:   MOVL    OUTPUT, R0                          : 2400
           60            B0      AD  76 0078E          CVTDF   INTMED_DATA, (R0)                   :
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                     04   A0      B8  AD  76 00792         CVTDF   INTMED_DATA+8, 4(R0)                    ; 2401
                                          0F  11 00797         BRB     109$                                    ; 2395
                     34   BE      B0  AD  76 00799 107$:   CVTDF   INTMED_DATA, @OUTPUT                    ; 2386
                                          08  11 0079E         BRB     109$                                    ;
                          50      34  AE  D0 007A0 108$:   MOVL    OUTPUT, R0                              ; 2390
                          60      B0  AD  7D 007A4         MOVQ    INTMED_DATA, (R0)                       ;
                                        0467  31 007A8 109$:   BRW     157$                                    ; 2424
                          04          56  D1 007AB 110$:   CMPL    R6, #4                                  ; 2432
                                          71  12 007AE         BNEQ    115$                                    ;
                          51      B0  AD  9E 007B0         MOVAB   INTMED_DATA, R1                         ; 2433
                          50      B0  AD  9E 007B4         MOVAB   INTMED_DATA, R0                         ;
                           00000000G  00  16 007B8         JSB     DBG$CVT_CVTLH_R1                        ;
                                          58  D5 007BE 111$:   TSTL    BIN_SCALE                               ;
                                          15  15 007C0         BLEQ    112$                                    ;
                          51      B0  AD  9E 007C2         MOVAB   INTMED_DATA, R1                         ;
                          50  00000000'   EF  9E 007C6         MOVAB   P.AFD, R0                               ;
                           00000000G  00  16 007CD         JSB     DBG$CVT_MULH2_R1                        ;
                                          58  D7 007D3         DECL    BIN_SCALE                               ;
                                          E7  11 007D5         BRB     111$                                    ;
                                          15  18 007D7 112$:   BGEQ    113$                                    ;
                          51      B0  AD  9E 007D9         MOVAB   INTMED_DATA, R1                         ;
                          50  00000000'   EF  9E 007DD         MOVAB   P.AFE, R0                               ;
                           00000000G  00  16 007E4         JSB     DBG$CVT_DIVH2_R1                        ;
                                          58  D6 007EA         INCL    BIN_SCALE                               ;
                                          E9  11 007EC         BRB     112$                                    ;
                                  30  AE  D5 007EE 113$:   TSTL    SCALE                                   ;
                                          16  15 007F1         BLEQ    114$                                    ;
                          51      B0  AD  9E 007F3         MOVAB   INTMED_DATA, R1                         ;
                          50  00000000'   EF  9E 007F7         MOVAB   P.AFF, R0                               ;
                           00000000G  00  16 007FE         JSB     DBG$CVT_MULH2_R1                        ;
                                  30  AE  D7 00804         DECL    SCALE                                   ;
                                          E5  11 00807         BRB     113$                                    ;
                                          7C  18 00809 114$:   BGEQ    119$                                    ;
                          51      B0  AD  9E 0080B         MOVAB   INTMED_DATA, R1                         ;
                          50  00000000'   EF  9E 0080F         MOVAB   P.AFG, R0                               ;
                           00000000G  00  16 00816         JSB     DBG$CVT_DIVH2_R1                        ;
                                  30  AE  D6 0081C         INCL    SCALE                                   ;
                                          E8  11 0081F         BRB     114$                                    ;
                          0A          56  D1 00821 115$:   CMPL    R6, #10                                 ; 2437
                                          7C  12 00824         BNEQ    121$                                    ;
                          51    FF7C  CD  9E 00826         MOVAB   TEMP_BUF1, R1                           ; 2438
                          50      B0  AD  9E 0082B         MOVAB   INTMED_DATA, R0                         ;
                           00000000G  00  16 0082F         JSB     DBG$CVT_CVTROUH_R1                      ;
           B0   AD      FF7C  CD  10  28 00835         MOVC3   #16, TEMP_BUF1, INTMED_DATA             ;
                                          58  D5 0083C 116$:   TSTL    BIN_SCALE                               ;
                                          15  15 0083E         BLEQ    117$                                    ;
                          51      B0  AD  9E 00840         MOVAB   INTMED_DATA, R1                         ;
                          50  00000000'   EF  9E 00844         MOVAB   P.AFH, R0                               ;
                           00000000G  00  16 0084B         JSB     DBG$CVT_MULH2_R1                        ;
                                          58  D7 00851         DECL    BIN_SCALE                               ;
                                          E7  11 00853         BRB     116$                                    ;
                                          15  18 00855 117$:   BGEQ    118$                                    ;
                          51      B0  AD  9E 00857         MOVAB   INTMED_DATA, R1                         ;
                          50  00000000'   EF  9E 0085B         MOVAB   P.AFI, R0                               ;
                           00000000G  00  16 00862         JSB     DBG$CVT_DIVH2_R1                        ;
                                          58  D6 00868         INCL    BIN_SCALE                               ;
                                          E9  11 0086A         BRB     117$                                    ;
                          30    AE   D5 0086C 118$:   TSTL     SCALE                                          :
                                16   15 0086F         BLEQ     119$                                           :
               51         B0    AD   9E 00871         MOVAB    INTMED_DATA, R1                                :
               50 00000000'     EF   9E 00875         MOVAB    P.AFJ, R0                                      :
                  00000000G     00   16 0087C         JSB      DBG$CVT_MULH2_R1                               :
                          30    AE   D7 00882         DECL     SCALE                                          :
                                E5   11 00885         BRB      118$                                           :
                                03   19 00887 119$:   BLSS     120$                                           :
                              02EF   31 00889         BRW      144$                                           :
               51         B0    AD   9E 0088C 120$:   MOVAB    INTMED_DATA, R1                                :
               50 00000000'     EF   9E 00890         MOVAB    P.AFK, R0                                      :
                  00000000G     00   16 00897         JSB      DBG$CVT_DIVH2_R1                               :
                          30    AE   D6 0089D         INCL     SCALE                                          :
                                E5   11 008A0         BRB      119$                                           :
               10               56   D1 008A2 121$:   CMPL     R6, #16                                        : 2442
                                03   13 008A5         BEQL     122$                                           :
                              00CE   31 008A7         BRW      128$                                           :
               51       FF7C    CD   9E 008AA 122$:   MOVAB    TEMP_BUF1, R1                                  : 2443
               50         B0    AD   9E 008AF         MOVAB    INTMED_DATA, R0                                :
                  00000000G     00   16 008B3         JSB      DBG$CVT_CVTDH_R1                               :
               51         C0    AD   9E 008B9         MOVAB    INTMED_DATA+16, R1                             :
               50         B8    AD   9E 008BD         MOVAB    INTMED_DATA+8, R0                              :
                  00000000G     00   16 008C1         JSB      DBG$CVT_CVTDH_R1                               :
  B0    AD        FF7C    CD    10   28 008C7         MOVC3    #16, TEMP_BUF1, INTMED_DATA                    :
                                58   D5 008CE 123$:   TSTL     BIN_SCALE                                      :
                                26   15 008D0         BLEQ     124$                                           :
               51         B0    AD   9E 008D2         MOVAB    INTMED_DATA, R1                                :
               50 00000000'     EF   9E 008D6         MOVAB    P.AFL, R0                                      :
                  00000000G     00   16 008DD         JSB      DBG$CVT_MULH2_R1                               :
               51         C0    AD   9E 008E3         MOVAB    INTMED_DATA+16, R1                             :
               50 00000000'     EF   9E 008E7         MOVAB    P.AFM, R0                                      :
                  00000000G     00   16 008EE         JSB      DBG$CVT_MULH2_R1                               :
                                58   D7 008F4         DECL     BIN_SCALE                                      :
                                D6   11 008F6         BRB      123$                                           :
                                26   18 008F8 124$:   BGEQ     125$                                           :
               51         B0    AD   9E 008FA         MOVAB    INTMED_DATA, R1                                :
               50 00000000'     EF   9E 008FE         MOVAB    P.AFN, R0                                      :
                  00000000G     00   16 00905         JSB      DBG$CVT_DIVH2_R1                               :
               51         C0    AD   9E 0090B         MOVAB    INTMED_DATA+16, R1                             :
               50 00000000'     EF   9E 0090F         MOVAB    P.AFO, R0                                      :
                  00000000G     00   16 00916         JSB      DBG$CVT_DIVH2_R1                               :
                                58   D6 0091C         INCL     BIN_SCALE                                      :
                                D8   11 0091E         BRB      124$                                           :
                          30    AE   D5 00920 125$:   TSTL     SCALE                                          :
                                27   15 00923         BLEQ     126$                                           :
               51         B0    AD   9E 00925         MOVAB    INTMED_DATA, R1                                :
               50 00000000'     EF   9E 00929         MOVAB    P.AFP, R0                                      :
                  00000000G     00   16 00930         JSB      DBG$CVT_MULH2_R1                               :
               51         C0    AD   9E 00936         MOVAB    INTMED_DATA+16, R1                             :
               50 00000000'     EF   9E 0093A         MOVAB    P.AFQ, R0                                      :
                  00000000G     00   16 00941         JSB      DBG$CVT_MULH2_R1                               :
                          30    AE   D7 00947         DECL     SCALE                                          :
                                D4   11 0094A         BRB      125$                                           :
                                03   19 0094C 126$:   BLSS     127$                                           :
                              022A   31 0094E         BRW      144$                                           :
               51         B0    AD   9E 00951 127$:   MOVAB    INTMED_DATA, R1                                :
               50 00000000'     EF   9E 00955         MOVAB    P.AFR, R0                                      :
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                          00000000G  00  16 0095C           JSB     DBG$CVT_DIVH2_R1                          :
                    51           C0  AD  9E 00962           MOVAB   INTMED_DATA+16, R1                        :
                    50    00000000'  EF  9E 00966           MOVAB   P.AFS, R0                                 :
                          00000000G  00  16 0096D           JSB     DBG$CVT_DIVH2_R1                          :
                                 30  AE  D6 00973           INCL    SCALE                                     :
                                     D4  11 00976           BRB     126$                                      :
                    16               56  D1 00978  128$:    CMPL    R6, #22                                   : 2447
                                     03  13 0097B           BEQL    129$                                      :
                                   0186  31 0097D           BRW     140$                                      :
                    1B           04  BE  91 00980  129$:    CMPB    @4(SP), #27                               : 2449
                                     09  13 00984           BEQL    130$                                      :
                    1D           04  BE  91 00986           CMPB    @4(SP), #29                               : 2450
                                     03  13 0098A           BEQL    130$                                      :
                                   00CB  31 0098C           BRW     135$                                      :
                    51         FF7C  CD  9E 0098F  130$:    MOVAB   TEMP_BUF1, R1                             : 2451
                    50           B0  AD  9E 00994           MOVAB   INTMED_DATA, R0                           :
                          00000000G  00  16 00998           JSB     DBG$CVT_CVTGH_R1                          :
                    51           C0  AD  9E 0099E           MOVAB   INTMED_DATA+16, R1                        :
                    50           B8  AD  9E 009A2           MOVAB   INTMED_DATA+8, R0                         :
                          00000000G  00  16 009A6           JSB     DBG$CVT_CVTGH_R1                          :
B0    AD      FF7C    CD             10  28 009AC           MOVC3   #16, TEMP_BUF1, INTMED_DATA               :
                                     58  D5 009B3  131$:    TSTL    BIN_SCALE                                 :
                                     26  15 009B5           BLEQ    132$                                      :
                    51           B0  AD  9E 009B7           MOVAB   INTMED_DATA, R1                           :
                    50    00000000'  EF  9E 009BB           MOVAB   P.AFT, R0                                 :
                          00000000G  00  16 009C2           JSB     DBG$CVT_MULH2_R1                          :
                    51           C0  AD  9E 009C8           MOVAB   INTMED_DATA+16, R1                        :
                    50    00000000'  EF  9E 009CC           MOVAB   P.AFU, R0                                 :
                          00000000G  00  16 009D3           JSB     DBG$CVT_MULH2_R1                          :
                                     58  D7 009D9           DECL    BIN_SCALE                                 :
                                     D6  11 009DB           BRB     131$                                      :
                                     26  18 009DD  132$:    BGEQ    133$                                      :
                    51           B0  AD  9E 009DF           MOVAB   INTMED_DATA, R1                           :
                    50    00000000'  EF  9E 009E3           MOVAB   P.AFV, R0                                 :
                          00000000G  00  16 009EA           JSB     DBG$CVT_DIVH2_R1                          :
                    51           C0  AD  9E 009F0           MOVAB   INTMED_DATA+16, R1                        :
                    50    00000000'  EF  9E 009F4           MOVAB   P.AFW, R0                                 :
                          00000000G  00  16 009FB           JSB     DBG$CVT_DIVH2_R1                          :
                                     58  D6 00A01           INCL    BIN_SCALE                                 :
                                     D8  11 00A03           BRB     132$                                      :
                                 30  AE  D5 00A05  133$:    TSTL    SCALE                                     :
                                     27  15 00A08           BLEQ    134$                                      :
                    51           B0  AD  9E 00A0A           MOVAB   INTMED_DATA, R1                           :
                    50    00000000'  EF  9E 00A0E           MOVAB   P.AFX, R0                                 :
                          00000000G  00  16 00A15           JSB     DBG$CVT_MULH2_R1                          :
                    51           C0  AD  9E 00A1B           MOVAB   INTMED_DATA+16, R1                        :
                    50    00000000'  EF  9E 00A1F           MOVAB   P.AFY, R0                                 :
                          00000000G  00  16 00A26           JSB     DBG$CVT_MULH2_R1                          :
                                 30  AE  D7 00A2C           DECL    SCALE                                     :
                                     D4  11 00A2F           BRB     133$                                      :
                                     51  18 00A31  134$:    BGEQ    136$                                      :
                    51           B0  AD  9E 00A33           MOVAB   INTMED_DATA, R1                           :
                    50    00000000'  EF  9E 00A37           MOVAB   P.AFZ, R0                                 :
                          00000000G  00  16 00A3E           JSB     DBG$CVT_DIVH2_R1                          :
                    51           C0  AD  9E 00A44           MOVAB   INTMED_DATA+16, R1                        :
                    50    00000000'  EF  9E 00A48           MOVAB   P.AGA, R0                                 :
                          00000000G  00  16 00A4F           JSB     DBG$CVT_DIVH2_R1                          :
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                                    30      AE  D6 00A55           INCL    SCALE                              :
                                            D7  11 00A58           BRB     134$                               :
                                            58  D5 00A5A  135$:    TSTL    BIN_SCALE                          : 2453
                                            26  15 00A5C           BLEQ    136$                               :
                        51          B0      AD  9E 00A5E           MOVAB   INTMED_DATA, R1                    :
                        50   00000000'      EF  9E 00A62           MOVAB   P.AGB, R0                          :
                             00000000G      00  16 00A69           JSB     DBG$CVT_MULH2_R1                   :
                        51          C0      AD  9E 00A6F           MOVAB   INTMED_DATA+16, R1                 :
                        50   00000000'      EF  9E 00A73           MOVAB   P.AGC, R0                          :
                             00000000G      00  16 00A7A           JSB     DBG$CVT_MULH2_R1                   :
                                            58  D7 00A80           DECL    BIN_SCALE                          :
                                            D6  11 00A82           BRB     135$                               :
                                            58  D5 00A84  136$:    TSTL    BIN_SCALE                          :
                                            26  18 00A86           BGEQ    137$                               :
                        51          B0      AD  9E 00A88           MOVAB   INTMED_DATA, R1                    :
                        50   00000000'      EF  9E 00A8C           MOVAB   P.AGD, R0                          :
                             00000000G      00  16 00A93           JSB     DBG$CVT_DIVH2_R1                   :
                        51          C0      AD  9E 00A99           MOVAB   INTMED_DATA+16, R1                 :
                        50   00000000'      EF  9E 00A9D           MOVAB   P.AGE, R0                          :
                             00000000G      00  16 00AA4           JSB     DBG$CVT_DIVH2_R1                   :
                                            58  D6 00AAA           INCL    BIN_SCALE                          :
                                            D6  11 00AAC           BRB     136$                               :
                                    30      AE  D5 00AAE  137$:    TSTL    SCALE                              :
                                            27  15 00AB1           BLEQ    138$                               :
                        51          B0      AD  9E 00AB3           MOVAB   INTMED_DATA, R1                    :
                        50   00000000'      EF  9E 00AB7           MOVAB   P.AGF, R0                          :
                             00000000G      00  16 00ABE           JSB     DBG$CVT_MULH2_R1                   :
                        51          C0      AD  9E 00AC4           MOVAB   INTMED_DATA+16, R1                 :
                        50   00000000'      EF  9E 00AC8           MOVAB   P.AGG, R0                          :
                             00000000G      00  16 00ACF           JSB     DBG$CVT_MULH2_R1                   :
                                    30      AE  D7 00AD5           DECL    SCALE                              :
                                            D4  11 00AD8           BRB     137$                               :
                                            03  19 00ADA  138$:    BLSS    139$                               :
                                        009C    31 00ADC           BRW     144$                               :
                        51          B0      AD  9E 00ADF  139$:    MOVAB   INTMED_DATA, R1                    :
                        50   00000000'      EF  9E 00AE3           MOVAB   P.AGH, R0                          :
                             00000000G      00  16 00AEA           JSB     DBG$CVT_DIVH2_R1                   :
                        51          C0      AD  9E 00AF0           MOVAB   INTMED_DATA+16, R1                 :
                        50   00000000'      EF  9E 00AF4           MOVAB   P.AGI, R0                          :
                             00000000G      00  16 00AFB           JSB     DBG$CVT_DIVH2_R1                   :
                                    30      AE  D6 00B01           INCL    SCALE                              :
                                            D4  11 00B04           BRB     138$                               :
                        1C                  56  D1 00B06  140$:    CMPL    R6, #28                            : 2457
                                            70  12 00B09           BNEQ    144$                               :
                  2C    AE          FD      AD  3C 00B0B           MOVZWL  SRC_INFO+5, NO_DIGITS              : 2458
                        09          03      AA  91 00B10           CMPB    3(R10), #9                         :
                                            0A  12 00B14           BNEQ    141$                               :
                  30    AE          08      AA  98 00B16           CVTBL   8(R10), SCALE                      :
                  30    AE          30      AE  CE 00B1B           MNEGL   SCALE, SCALE                       :
    FF7C   CD     2C    AE    B0    AD  2C  AE  08 00B20  141$:    CVTPS   NO_DIGITS, INTMED_DATA, NO_DIGITS, - :
                                                                           TEMP_BUF1                          :
           58     AE          2C    AE      01  A1 00B2A           ADDW3   #1, NO_DIGITS, CLASS_S_DESC        :
                              5C    AE    FF7C  CD  9E 00B30       MOVAB   TEMP_BUF1, CLASS_S_DESC+4          :
                                    7E      44  8F  9A 00B36       MOVZBL  #68, -(SP)                         :
                                            34  AE  DD 00B3A       PUSHL   SCALE                              :
                                                7E  D4 00B3D       CLRL    -(SP)                              :
                                            B0  AD  9F 00B3F       PUSHAB  INTMED_DATA                        :
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                                68   AE  9F 00B42         PUSHAB  CLASS_S_DESC                              ;
             00000000G  00           05  FB 00B45         CALLS   #5, OTS$CVT_T_H                           ;
                        6E           50  D0 00B4C         MOVL    R0, STATUS                                ;
                        29           6E  E8 00B4F         BLBS    STATUS, 144$                              ;
                        50 00000000G 00  D0 00B52         MOVL    DBG$GL_OPCODE_NAME, R0                    ;
                                30   AE  D5 00B59         TSTL    SCALE                                     ;
                                     0C  18 00B5C         BGEQ    142$                                      ;
                                     50  DD 00B5E         PUSHL   R0                                        ;
                                     01  DD 00B60         PUSHL   #1                                        ;
                         0002869B    8F  DD 00B62         PUSHL   #165531                                   ;
                                     0A  11 00B68         BRB     143$                                      ;
                                     50  DD 00B6A  142$:  PUSHL   R0                                        ;
                                     01  DD 00B6C         PUSHL   #1                                        ;
                         00028A02    8F  DD 00B6E         PUSHL   #166402                                   ;
             00000000G  00           03  FB 00B74  143$:  CALLS   #3, LIB$SIGNAL                            ;
      01                1B           6B  8F 00B7B  144$:  CASEB   (R11), #27, #1                            ;  2463
                      008D      007D        00B7F  145$:  .WORD   154$-145$,-                               ;
                                                                  156$-145$                                 ;
      01                1D           6B  8F 00B83         CASEB   (R11), #29, #1                            ;  2473
                      006D      0054        00B87  146$:  .WORD   152$-146$,-                               ;
                                                                  153$-146$                                 ;
                        04           56  D1 00B8B         CMPL    R6, #4                                    ;  2488
                                     08  12 00B8E         BNEQ    147$                                      ;
                         00000000'   EF  9F 00B90         PUSHAB  P.AGJ                                     ;  2489
                                     32  11 00B96         BRB     151$                                      ;
                        0A           56  D1 00B98  147$:  CMPL    R6, #10                                   ;  2490
                                     08  12 00B9B         BNEQ    148$                                      ;
                         00000000'   EF  9F 00B9D         PUSHAB  P.AGK                                     ;  2491
                                     25  11 00BA3         BRB     151$                                      ;
                        10           56  D1 00BA5  148$:  CMPL    R6, #16                                   ;  2492
                                     08  12 00BA8         BNEQ    149$                                      ;
                         00000000'   EF  9F 00BAA         PUSHAB  P.AGL                                     ;  2493
                                     18  11 00BB0         BRB     151$                                      ;
                        16           56  D1 00BB2  149$:  CMPL    R6, #22                                   ;  2494
                                     08  12 00BB5         BNEQ    150$                                      ;
                         00000000'   EF  9F 00BB7         PUSHAB  P.AGM                                     ;  2495
                                     0B  11 00BBD         BRB     151$                                      ;
                        1C           56  D1 00BBF  150$:  CMPL    R6, #28                                   ;  2496
                                     4E  12 00BC2         BNEQ    157$                                      ;
                         00000000'   EF  9F 00BC4         PUSHAB  P.AGN                                     ;  2497
                                     01  DD 00BCA  151$:  PUSHL   #1                                        ;
                         00028362    8F  DD 00BCC         PUSHL   #164706                                   ;
             00000000G  00           03  FB 00BD2         CALLS   #3, LIB$SIGNAL                            ;
                                     37  11 00BD9         BRB     157$                                      ;  2486
                        50      B0   AD  9E 00BDB  152$:  MOVAB   INTMED_DATA, R0                           ;  2478
                        51      34   AE  D0 00BDF         MOVL    OUTPUT, R1                                ;
                         00000000G   00  16 00BE3         JSB     DBG$CVT_CVTHG_R1                          ;
      51          34    AE           08  C1 00BE9         ADDL3   #8, OUTPUT, R1                            ;  2479
                        50      C0   AD  9E 00BEE         MOVAB   INTMED_DATA+16, R0                        ;
                                     10  11 00BF2         BRB     155$                                      ;
  34  BE          B0    AD           20  28 00BF4  153$:  MOVC3   #32, INTMED_DATA, @OUTPUT                 ;  2483
                                     16  11 00BFA         BRB     157$                                      ;  2473
                        50      B0   AD  9E 00BFC  154$:  MOVAB   INTMED_DATA, R0                           ;  2467
                        51      34   AE  D0 00C00         MOVL    OUTPUT, R1                                ;
                         00000000G   00  16 00C04  155$:  JSB     DBG$CVT_CVTHG_R1                          ;
                                     06  11 00C0A         BRB     157$                                      ;
  34  BE          B0    AD           10  28 00C0C  156$:  MOVC3   #16, INTMED_DATA, @OUTPUT                 ;  2470
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                         06       FF   AD  E9 00C12 157$:    BLBC    SRC_INFO+7, 158$                                  ; 2502
                   34    BE     8000   8F  A8 00C16          BISW2   #32768, @OUTPUT                                   ;
                                     23B9  31 00C1C 158$:    BRW     649$                                              ; 2187
                         05            56  D1 00C1F 159$:    CMPL    R6, #5                                            ; 2510
                                       03  13 00C22          BEQL    160$                                              ;
                                     00C2  31 00C24          BRW     168$                                              ;
                               B0      AD  D5 00C27 160$:    TSTL    INTMED_DATA                                       ; 2511
                                       04  18 00C2A          BGEQ    161$                                              ;
                    FF    AD           01  88 00C2C          BISB2   #1, SRC_INFO+7                                    ;
                    2C    AE           1F  D0 00C30 161$:    MOVL    #31, NO_DIGITS                                    ;
       B0    AD     2C    AE     B0    AD  F9 00C34          CVTLP   INTMED_DATA, NO_DIGITS, INTMED_DATA               ;
                               30      AE  D5 00C3B          TSTL    SCALE                                             ;
                                       3C  13 00C3E          BEQL    164$                                              ;
     FF7C    CD     B0    AD     2C    AE  34 00C40          MOVP    NO_DIGITS, INTMED_DATA, TEMP_BUF1                 ;
                          0E     0C    AE  E9 00C48          BLBC    CVT_ROUND_FLAG, 162$                              ;
                          55     B0    AD  9E 00C4C          MOVAB   INTMED_DATA, R5                                   ;
                          54     2C    AE  9E 00C50          MOVAB   NO_DIGITS, R4                                     ;
                    08    AE           05  D0 00C54          MOVL    #5, 8(SP)                                         ;
                                       0B  11 00C58          BRB     163$                                              ;
                          55     B0    AD  9E 00C5A 162$:    MOVAB   INTMED_DATA, R5                                   ;
                          54     2C    AE  9E 00C5E          MOVAB   NO_DIGITS, R4                                     ;
                                 08    AE  D4 00C62          CLRL    8(SP)                                             ;
                          53     08    AE  9E 00C65 163$:    MOVAB   8(SP), R3                                         ;
                          52   FF7C    CD  9E 00C69          MOVAB   TEMP_BUF1, R2                                     ;
                          51     2C    AE  9E 00C6E          MOVAB   NO_DIGITS, R1                                     ;
                          50     30    AE  9E 00C72          MOVAB   SCALE, R0                                         ;
                          00000000G    00  16 00C76          JSB     DBG$CVT_ASHP_R1                                   ;
                                       58  D5 00C7C 164$:    TSTL    BIN_SCALE                                         ;
                                       32  15 00C7E          BLEQ    165$                                              ;
     FF7C    CD     B0    AD     2C    AE  34 00C80          MOVP    NO_DIGITS, INTMED_DATA, TEMP_BUF1                 ;
                          55     B0    AD  9E 00C88          MOVAB   INTMED_DATA, R5                                   ;
                          54     2C    AE  9E 00C8C          MOVAB   NO_DIGITS, R4                                     ;
                          53   FF7C    CD  9E 00C90          MOVAB   TEMP_BUF1, R3                                     ;
                          52     2C    AE  9E 00C95          MOVAB   NO_DIGITS, R2                                     ;
                          51 00000000'  EF 9E 00C99          MOVAB   P.AGO, R1                                         ;
                    08    AE           01  D0 00CA0          MOVL    #1, 8(SP)                                         ;
                          50     08    AE  9E 00CA4          MOVAB   8(SP), R0                                         ;
                          00000000G    00  16 00CA8          JSB     DBG$CVT_MULP_R1                                   ;
                                       58  D7 00CAE          DECL    BIN_SCALE                                         ;
                                       CA  11 00CB0          BRB     164$                                              ;
                                       03  19 00CB2 165$:    BLSS    167$                                              ;
                                     0105  31 00CB4 166$:    BRW     175$                                              ;
     FF7C    CD     B0    AD     2C    AE  34 00CB7 167$:    MOVP    NO_DIGITS, INTMED_DATA, TEMP_BUF1                 ;
                          55     B0    AD  9E 00CBF          MOVAB   INTMED_DATA, R5                                   ;
                          54     2C    AE  9E 00CC3          MOVAB   NO_DIGITS, R4                                     ;
                          53   FF7C    CD  9E 00CC7          MOVAB   TEMP_BUF1, R3                                     ;
                          52     2C    AE  9E 00CCC          MOVAB   NO_DIGITS, R2                                     ;
                          51 00000000'  EF 9E 00CD0          MOVAB   P.AGP, R1                                         ;
                    08    AE           01  D0 00CD7          MOVL    #1, 8(SP)                                         ;
                          50     08    AE  9E 00CDB          MOVAB   8(SP), R0                                         ;
                          00000000G    00  16 00CDF          JSB     DBG$CVT_DIVP_R1                                   ;
                                       58  D6 00CE5          INCL    BIN_SCALE                                         ;
                                       C9  11 00CE7          BRB     165$                                              ;
                         1D            56  D1 00CE9 168$:    CMPL    R6, #29                                           ; 2515
                                       C6  12 00CEC          BNEQ    166$                                              ;
                    2C    AE     FD    AD  3C 00CEE          MOVZWL  SRC_INFO+5, NO_DIGITS                             ; 2516
  08    BE     01   B0    AD     2C    AE  37 00CF3          CMPP4   NO_DIGITS, INTMED_DATA, #1, @PACK_ZERO            ;
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                                        54  DC 00CFB          MOVPSL  R4                                          :
    54         54         02            02  EF 00CFD          EXTZV   #2, #2, R4, R4                              :
                                        54  D7 00D02          DECL    R4                                          :
                                        04  15 00D04          BLEQ    169$                                        :
                      FF  AD            01  88 00D06          BISB2   #1, SRC_INFO+7                              :
                                  30    AE  D5 00D0A 169$:    TSTL    SCALE                                       :
                                        3C  13 00D0D          BEQL    172$                                        :
          FF7C    CD      B0      AD    2C  AE  34 00D0F      MOVP    NO_DIGITS, INTMED_DATA, TEMP_BUF1           :
                                  0E    0C  AE  E9 00D17      BLBC    CVT_ROUND_FLAG, 170$                        :
                                  55    B0  AD  9E 00D1B      MOVAB   INTMED_DATA, R5                             :
                                  54    2C  AE  9E 00D1F      MOVAB   NO_DIGITS, R4                               :
                          08      AE        05  D0 00D23      MOVL    #5, 8(SP)                                   :
                                            0B  11 00D27      BRB     171$                                        :
                                  55    B0  AD  9E 00D29 170$: MOVAB  INTMED_DATA, R5                             :
                                  54    2C  AE  9E 00D2D      MOVAB   NO_DIGITS, R4                               :
                                        08  AE  D4 00D31      CLRL    8(SP)                                       :
                                  53    08  AE  9E 00D34 171$: MOVAB  8(SP), R3                                   :
                                  52  FF7C  CD  9E 00D38      MOVAB   TEMP_BUF1, R2                               :
                                  51    2C  AE  9E 00D3D      MOVAB   NO_DIGITS, R1                               :
                                  50    30  AE  9E 00D41      MOVAB   SCALE, R0                                   :
                                   00000000G  00  16 00D45    JSB     DBG$CVT_ASHP_R1                             :
                                  50        6A  3C 00D4B 172$: MOVZWL (R10), R0                                   :
                                  51    08  AA  98 00D4E      CVTBL   8(R10), R1                                  :
                                  50        51  C0 00D52      ADDL2   R1, R0                                      :
                                  52        69  3C 00D55      MOVZWL  (R9), R2                                    :
                                  51    08  A9  98 00D58      CVTBL   8(R9), R1                                   :
                                  52        51  C0 00D5C      ADDL2   R1, R2                                      :
                                  52        50  D1 00D5F      CMPL    R0, R2                                      :
                                            58  15 00D62      BLEQ    175$                                        :
                                  15    04  BE  91 00D64      CMPB    @4(SP), #21                                 :
                                            52  12 00D68      BNEQ    175$                                        :
                                  15        6B  91 00D6A      CMPB    (R11), #21                                  :
                                            4D  12 00D6D      BNEQ    175$                                        :
                                  50    BF  AD  9E 00D6F      MOVAB   INTMED_DATA+15, HIGH_NIBBLE_PTR             :
                                  52        69  3C 00D73      MOVZWL  (R9), R2                                    :
                                  52        02  C6 00D76      DIVL2   #2, R2                                      :
                                  52        50  C2 00D79      SUBL2   HIGH_NIBBLE_PTR, R2                         :
                                  52        52  CE 00D7C      MNEGL   R2, LOW_NIBBLE_PTR                          :
                                  50        69  3C 00D7F      MOVZWL  (R9), R0                                    :
    7E         00                 50        01  7A 00D82      EMUL    #1, R0, #0, -(SP)                           :
    50         50                 8E        02  7B 00D87      EDIV    #2, (SP)+, R0, R0                           :
                                            50  D5 00D8C      TSTL    R0                                          :
                                            08  12 00D8E      BNEQ    173$                                        :
    50         62                 04        00  EF 00D90      EXTZV   #0, #4, (LOW_NIBBLE_PTR), R0                :
                                  62        50  90 00D95      MOVB    R0, (LOW_NIBBLE_PTR)                        :
                                            52  D7 00D98 173$: DECL   LOW_NIBBLE_PTR                              :
                                  50    B0  AD  9E 00D9A      MOVAB   INTMED_DATA, R0                             :
                                  50        52  D1 00D9E      CMPL    LOW_NIBBLE_PTR, R0                          :
                                            04  19 00DA1      BLSS    174$                                        :
                                            62  94 00DA3      CLRB    (LOW_NIBBLE_PTR)                            :
                                            F1  11 00DA5      BRB     173$                                        :
                                   00000000G  00  DD 00DA7 174$: PUSHL DBG$GL_OPCODE_NAME                         :
                                            01  DD 00DAD      PUSHL   #1                                          :
                                   0002809B   8F  DD 00DAF    PUSHL   #163995                                     :
                    00000000G     00        03  FB 00DB5      CALLS   #3, LIB$SIGNAL                              :
               06                 0F        6B  8F 00DBC 175$: CASEB  (R11), #15, #6                              : 2521
  009F       0069               0051      0029     00DC0 176$: .WORD  179$-176$,-                                 :
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                                                                   E 12
DBGCVTDX                                                     15-Sep-1984 23:57:30     VAX-11 Bliss-32 V4.0-742               Page 124
V04-000                                                      14-Sep-1984 12:16:44     [DEBUG.SRC]DBGCVTDX.B32;1                 (29)

               00ED        00CD        00CD     00DC8                 181$-176$,-                                      :
                                                                      184$-176$,-                                      :
                                                                      188$-176$,-                                      :
                                                                      192$-176$,-                                      :
                                                                      192$-176$,-                                      :
                                                                      196$-176$                                        :
                            05          56  D1 00DCE          CMPL    R6, #5                                          : 2574
                                        08  12 00DD1          BNEQ    177$                                            :
                               00000000'  EF  9F 00DD3          PUSHAB  P.AGQ                                           : 2575
                                        0B  11 00DD9          BRB     178$                                            :
                            1D          56  D1 00DDB 177$:    CMPL    R6, #29                                         : 2576
                                        7D  12 00DDE          BNEQ    187$                                            :
                               00000000'  EF  9F 00DE0          PUSHAB  P.AGR                                           : 2577
                                      21E0  31 00DE6 178$:    BRW     647$                                            :
                            15     FF   AD  E9 00DE9 179$:    BLBC    SRC_INFO+7, 180$                                : 2526
                               00000000G  00  DD 00DED          PUSHL   DBG$GL_OPCODE_NAME                              :
                                        01  DD 00DF3          PUSHL   #1                                              :
                               00028EF0   8F  DD 00DF5          PUSHL   #167664                                         :
                       00000000G   00   03  FB 00DFB          CALLS   #3, LIB$SIGNAL                                  :
          69 00000000G   00     B0   AD  2C  AE  24 00E02 180$:    CVTPT   NO_DIGITS, INTMED_DATA, LIB$AB_CVTPT_U, -      : 2527
                                       34  BE     00E0D                  (R9), @OUTPUT                                   :
                                        7A  11 00E0F          BRB     191$                                            : 2521
                                        69  B5 00E11 181$:    TSTW    (R9)                                            : 2533
                                        04  12 00E13          BNEQ    182$                                            :
                                        50  D4 00E15          CLRL    R0                                              :
                                        05  11 00E17          BRB     183$                                            :
                            50          69  3C 00E19 182$:    MOVZWL  (R9), R0                                        :
                                        50  D7 00E1C          DECL    R0                                              :
     34    BE        50     B0   AD  2C  AE  08 00E1E 183$:    CVTPS   NO_DIGITS, INTMED_DATA, R0, @OUTPUT             : 2534
                                      0082  31 00E26          BRW     195$                                            : 2531
          69 00000000G   00     B0   AD  2C  AE  24 00E29 184$:    CVTPT   NO_DIGITS, INTMED_DATA, LIB$AB_CVTPT_U, -      : 2538
                                    FF7C  CD     00E34                  (R9), TEMP_BUF1                                 :
                            50    FF7C  CD  9A 00E37          MOVZBL  TEMP_BUF1, R0                                   : 2539
                            50 00000000G0040  9E 00E3C          MOVAB   LIB$AB_CVT_U_O-48[R0], R0                       :
                            06     FF   AD  E9 00E44          BLBC    SRC_INFO+7, 185$                                :
                            50     0A   A0  D0 00E48          MOVL    10(R0), R0                                      :
                                        03  11 00E4C          BRB     186$                                            :
                            50          60  D0 00E4E 185$:    MOVL    (R0), R0                                        : 2540
                         FF7C  CD       50  90 00E51 186$:    MOVB    R0, TEMP_BUF1                                   : 2539
                  34   BE   FF7C  CD       69  28 00E56          MOVC3   (R9), TEMP_BUF1, @OUTPUT                        : 2541
                                        61  11 00E5D 187$:    BRB     197$                                            : 2521
                                        69  B5 00E5F 188$:    TSTW    (R9)                                            : 2550
                                        04  12 00E61          BNEQ    189$                                            :
                                        57  D4 00E63          CLRL    DES_LEN                                         :
                                        05  11 00E65          BRB     190$                                            :
                            57          69  3C 00E67 189$:    MOVZWL  (R9), DES_LEN                                   :
                                        57  D7 00E6A          DECL    DES_LEN                                         :
   FF7C    CD        57     B0   AD  2C  AE  08 00E6C 190$:    CVTPS   NO_DIGITS, INTMED_DATA, DES_LEN, TEMP_BUF1      : 2552
                         B0 AD47   FF7C  CD  90 00E75          MOVB    TEMP_BUF1, INTMED_DATA[DES_LEN]                 : 2553
                  B0   AD   FF7D  CD       57  28 00E7C          MOVC3   DES_LEN, TEMP_BUF1+1, INTMED_DATA               : 2554
                                        57  D6 00E83          INCL    R7                                              : 2555
                  34   BE     B0  AD       57  28 00E85          MOVC3   R7, INTMED_DATA, @OUTPUT                        :
                                        33  11 00E8B 191$:    BRB     197$                                            : 2521
                            13          6B  91 00E8D 192$:    CMPB    (R11), #19                                      : 2560
                                        09  12 00E90          BNEQ    193$                                            :
                            50 00000000G  00  9E 00E92          MOVAB   LIB$AB_CVTPT_O, R0                              :
                                        07  11 00E99          BRB     194$                                            :
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                                50 00000000G   00   9E 00E9B 193$:   MOVAB   LIB$AB_CVTPT_Z, R0                                 ;
     69            60      B0   AD         2C   AE   24 00EA2 194$:   CVTPT   NO_DIGITS, INTMED_DATA, (R0), (R9), @OUTPUT        ; 2561
                                           34   BE      00EA9                                                                    ;
                                                13   11 00EAB 195$:   BRB     197$                                               ;
FF7C CD      2C    AE      B0   AD         2C   AE   08 00EAD 196$:   CVTPS   NO_DIGITS, INTMED_DATA, NO_DIGITS, -               ; 2567
                                                                              TEMP_BUF1                                          ;
  34 BE            69    FF7C   CD         2C   AE   09 00EB7         CVTSP   NO_DIGITS, TEMP_BUF1, (R9), @OUTPUT                ; 2568
                                              2115   31 00EC0 197$:   BRW     649$                                               ; 2187
                                           30   AE   D5 00EC3 198$:   TSTL    SCALE                                              ; 2583
                                                0F   15 00EC6         BLEQ    199$                                               ;
                                50         B0   AD   9E 00EC8         MOVAB   INTMED_DATA, R0                                    ;
                                   00000000G    00   16 00ECC         JSB     LIB$$CVT_SCALE_OU_UP_BY_10_R1                      ;
                                           30   AE   D7 00ED2         DECL    SCALE                                              ;
                                                EC   11 00ED5         BRB     198$                                               ;
                                                0F   18 00ED7 199$:   BGEQ    200$                                               ;
                                50         B0   AD   9E 00ED9         MOVAB   INTMED_DATA, R0                                    ;
                                   00000000G    00   16 00EDD         JSB     LIB$$CVT_SCALE_OU_DOWN_BY_10_R1                    ;
                                           30   AE   D6 00EE3         INCL    SCALE                                              ;
                                                EF   11 00EE6         BRB     199$                                               ;
                                                58   D5 00EE8 200$:   TSTL    BIN_SCALE                                          ;
                                                0E   15 00EEA         BLEQ    201$                                               ;
                                50         B0   AD   9E 00EEC         MOVAB   INTMED_DATA, R0                                    ;
                                   00000000G    00   16 00EF0         JSB     DBG$CVT_SCALE_OU_UP_BY_2_R1                        ;
                                                58   D7 00EF6         DECL    BIN_SCALE                                          ;
                                                EE   11 00EF8         BRB     200$                                               ;
                                                0E   18 00EFA 201$:   BGEQ    202$                                               ;
                                50         B0   AD   9E 00EFC         MOVAB   INTMED_DATA, R0                                    ;
                                   00000000G    00   16 00F00         JSB     DBG$CVT_SCALE_OU_DOWN_BY_2_R1                      ;
                                                58   D6 00F06         INCL    BIN_SCALE                                          ;
                                                F0   11 00F08         BRB     201$                                               ;
                   50      B4   AD         B8   AD   C9 00F0A 202$:   BISL3   INTMED_DATA+8, INTMED_DATA+4, R0                   ; 2585
                                50         BC   AD   C8 00F10         BISL2   INTMED_DATA+12, R0                                 ;
                                                15   13 00F14         BEQL    203$                                               ;
                                     00000000G  00   DD 00F16         PUSHL   DBG$GL_OPCODE_NAME                                 ; 2587
                                                01   DD 00F1C         PUSHL   #1                                                 ;
                                     000286A3   8F   DD 00F1E         PUSHL   #165539                                            ;
                        00000000G  00           03   FB 00F24         CALLS   #3, LIB$SIGNAL                                     ;
                   29              01           6B   8F 00F2B 203$:   CASEB   (R11), #1, #41                                     ; 2588
     0054          0082          005D         0130      00F2F 204$:   .WORD   223$-204$,-                                        ;
     00F8          00CE          00A4         0054      00F37                 206$-204$,-                                        ;
     0054          0054          0054         0054      00F3F                 209$-204$,-                                        ;
     0054          0054          0054         0054      00F47                 205$-204$,-                                        ;
     0054          0054          0054         0054      00F4F                 205$-204$,-                                        ;
     0054          0054          0054         0054      00F57                 212$-204$,-                                        ;
     0054          0054          0054         0054      00F5F                 215$-204$,-                                        ;
     0054          0054          0054         0054      00F67                 218$-204$,-                                        ;
     0054          0054          0130         0054      00F6F                 205$-204$,-                                        ;
     0130          0054          0054         0054      00F77                 205$-204$,-                                        ;
                                 0130         0130      00F7F                 205$-204$,-                                        ;
                                                                              205$-204$,-                                        ;
                                                                              205$-204$,-                                        ;
                                                                              205$-204$,-                                        ;
                                                                              205$-204$,-                                        ;
                                                                              205$-204$,-                                        ;
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                                                        205$-204$,-                                     ;
                                                        205$-204$,-                                     ;
                                                        205$-204$,-                                     ;
                                                        223$-204$,-                                     ;
                                                        205$-204$,-                                     ;
                                                        205$-204$,-                                     ;
                                                        205$-204$,-                                     ;
                                                        205$-204$,-                                     ;
                                                        205$-204$,-                                     ;
                                                        205$-204$,-                                     ;
                                                        223$-204$,-                                     ;
                                                        223$-204$,-                                     ;
                                                        223$-204$                                       ;
                    00000000'  EF   9F 00F83 205$:  PUSHAB  P.AGS                                   ; 2644
                          203D      31 00F89        BRW     647$                                    ;
            05       B1        AD   E8 00F8C 206$:  BLBS    INTMED_DATA+1, 207$                     ; 2593
                     B2        AD   B5 00F90        TSTW    INTMED_DATA+2                           ;
                               15   13 00F93        BEQL    208$                                    ;
                    00000000G  00   DD 00F95 207$:  PUSHL   DBG$GL_OPCODE_NAME                      ; 2594
                               01   DD 00F9B        PUSHL   #1                                      ;
                    000286A3   8F   DD 00F9D        PUSHL   #165539                                 ;
     00000000G  00             03   FB 00FA3        CALLS   #3, LIB$SIGNAL                          ;
            34  BE       B0    AD   90 00FAA 208$:  MOVB    INTMED_DATA, @OUTPUT                    ; 2595
                               1F   11 00FAF        BRB     211$                                    ; 2588
                     B2        AD   B5 00FB1 209$:  TSTW    INTMED_DATA+2                           ; 2600
                               15   13 00FB4        BEQL    210$                                    ;
                    00000000G  00   DD 00FB6        PUSHL   DBG$GL_OPCODE_NAME                      ;
                               01   DD 00FBC        PUSHL   #1                                      ;
                    000286A3   8F   DD 00FBE        PUSHL   #165539                                 ;
     00000000G  00             03   FB 00FC4        CALLS   #3, LIB$SIGNAL                          ;
            34  BE       B0    AD   B0 00FCB 210$:  MOVW    INTMED_DATA, @OUTPUT                    ; 2601
                          008A      31 00FD0 211$:  BRW     222$                                    ; 2588
                     B0        AD   D5 00FD3 212$:  TSTL    INTMED_DATA                             ; 2606
                               15   18 00FD6        BGEQ    213$                                    ;
                    00000000G  00   DD 00FD8        PUSHL   DBG$GL_OPCODE_NAME                      ;
                               01   DD 00FDE        PUSHL   #1                                      ;
                    000286A3   8F   DD 00FE0        PUSHL   #165539                                 ;
     00000000G  00             03   FB 00FE6        CALLS   #3, LIB$SIGNAL                          ;
                05       FF    AD   E9 00FED 213$:  BLBC    SRC_INFO+7, 214$                        ; 2607
            B0  AD       B0    AD   CE 00FF1        MNEGL   INTMED_DATA, INTMED_DATA                ;
                50       B0    AD   9E 00FF6 214$:  MOVAB   INTMED_DATA, R0                         ; 2608
                          18FB      31 00FFA        BRW     540$                                    ;
                     B0        AD   D5 00FFD 215$:  TSTL    INTMED_DATA                             ; 2613
                               15   18 01000        BGEQ    216$                                    ;
                    00000000G  00   DD 01002        PUSHL   DBG$GL_OPCODE_NAME                      ;
                               01   DD 01008        PUSHL   #1                                      ;
                    000286A3   8F   DD 0100A        PUSHL   #165539                                 ;
                    00000000G  00           03  FB 01010          CALLS   #3, LIB$SIGNAL                       ;
                               05      FF   AD  E9 01017 216$:    BLBC    SRC_INFO+7, 217$                     ; 2614
                           B0  AD      B0   AD  CE 0101B          MNEGL   INTMED_DATA, INTMED_DATA             ;
                               50      B0   AD  9E 01020 217$:    MOVAB   INTMED_DATA, R0                      ; 2615
                                          1946  31 01024          BRW     551$                                 ;
                    80000000   8F      B0   AD  D1 01027 218$:    CMPL    INTMED_DATA, #-2147483648            ; 2620
                                            04  12 0102F          BNEQ    219$                                 ;
                               23      FF   AD  E8 01031          BLBS    SRC_INFO+7, 221$                     ;
                                       B0   AD  D5 01035 219$:    TSTL    INTMED_DATA                          ; 2625
                                            15  18 01038          BGEQ    220$                                 ;
                                 00000000G  00  DD 0103A          PUSHL   DBG$GL_OPCODE_NAME                   ;
                                            01  DD 01040          PUSHL   #1                                   ;
                                 000286A3   8F  DD 01042          PUSHL   #165539                              ;
                    00000000G  00           03  FB 01048          CALLS   #3, LIB$SIGNAL                       ;
                               05      FF   AD  E9 0104F 220$:    BLBC    SRC_INFO+7, 221$                     ; 2626
                           B0  AD      B0   AD  CE 01053          MNEGL   INTMED_DATA, INTMED_DATA             ;
                           34  BE      B0   AD  D0 01058 221$:    MOVL    INTMED_DATA, @OUTPUT                 ; 2627
                                            19  11 0105D 222$:    BRB     226$                                 ; 2588
                               52      F5   AD  3C 0105F 223$:    MOVZWL  DST_INFO+5, R2                       ; 2637
                               50           01  CE 01063          MNEGL   #1, I                                ; 2639
                                            0C  11 01066          BRB     225$                                 ;
          51        B0   AD    01           50  EF 01068 224$:    EXTZV   I, #1, INTMED_DATA, R1               ;
    34    BE             01    50           51  F0 0106E          INSV    R1, I, #1, @OUTPUT                   ;
                         F0    50           52  F2 01074 225$:    AOBLSS  R2, I, 224$                          ; 2637
                                          1F5D  31 01078 226$:    BRW     649$                                 ; 2187
                           58  AE           32  B0 0107B 227$:    MOVW    #50, CLASS_S_DESC                    ; 2650
                           5C  AE      60   AE  9E 0107F          MOVAB   TEMP_BUF2, CLASS_S_DESC+4            ; 2651
                               0B           56  D1 01084          CMPL    R6, #11                              ; 2655
                                            23  12 01087          BNEQ    229$                                 ;
                               51    FF7C   CD  9E 01089          MOVAB   TEMP_BUF1, R1                        ; 2657
                               50      B0   AD  9E 0108E          MOVAB   INTMED_DATA, R0                      ;
                                 00000000G  00  16 01092          JSB     DBG$CVT_CVTROUH_R1                   ;
                               06      FF   AD  E9 01098          BLBC    SRC_INFO+7, 228$                     ; 2658
                         FF7D  CD      80   8F  88 0109C          BISB2   #128, TEMP_BUF1+1                    ;
                                            01  DD 010A2 228$:    PUSHL   #1                                   ; 2659
                                            7E  7C 010A4          CLRQ    -(SP)                                ;
                                       3C   AE  DD 010A6          PUSHL   SCALE                                ;
                                          00C4  31 010A9          BRW     239$                                 ;
                               11           56  D1 010AC 229$:    CMPL    R6, #17                              ; 2662
                                            21  12 010AF          BNEQ    231$                                 ;
                                       B1   AD  95 010B1          TSTB    INTMED_DATA+1                        ; 2664
                                            04  18 010B4          BGEQ    230$                                 ;
                           FF  AD           01  88 010B6          BISB2   #1, SRC_INFO+7                       ;
                                            01  DD 010BA 230$:    PUSHL   #1                                   ; 2665
                                            7E  7C 010BC          CLRQ    -(SP)                                ;
                                       3C   AE  DD 010BE          PUSHL   SCALE                                ;
                                            7E  D4 010C1          CLRL    -(SP)                                ;
                                       6C   AE  9F 010C3          PUSHAB  CLASS_S_DESC                         ;
                                       B0   AD  9F 010C6          PUSHAB  INTMED_DATA                          ;
                    00000000G  00           07  FB 010C9          CALLS   #7, FOR$CVT_D_TF                     ;
                                            30  11 010D0          BRB     234$                                 ;
                               17           56  D1 010D2 231$:    CMPL    R6, #23                              ; 2668
                                            3E  12 010D5          BNEQ    236$                                 ;
                                       B1   AD  95 010D7          TSTB    INTMED_DATA+1                        ; 2670
                                            04  18 010DA          BGEQ    232$                                 ;
                           FF  AD           01  88 010DC          BISB2   #1, SRC_INFO+7                       ;
                               1B      04   BE  91 010E0 232$:    CMPB    @4(SP), #27                          ; 2671
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                                   06  13 010E4        BEQL     233$                                    ;
                        1D     04  BE  91 010E6        CMPB     @4(SP), #29                             ; 2672
                                   18  12 010EA        BNEQ     235$                                    ;
                                   01  DD 010EC 233$:  PUSHL    #1                                      ; 2674
                                   7E  7C 010EE        CLRQ     -(SP)                                   ;
                               3C  AE  DD 010F0        PUSHL    SCALE                                   ;
                                   7E  D4 010F3        CLRL     -(SP)                                   ;
                               6C  AE  9F 010F5        PUSHAB   CLASS_S_DESC                            ;
                               B0  AD  9F 010F8        PUSHAB   INTMED_DATA                             ;
              00000000G  00        07  FB 010FB        CALLS    #7, FOR$CVT_G_TF                        ;
                                   7C  11 01102 234$:  BRB      241$                                    ;
                                   01  DD 01104 235$:  PUSHL    #1                                      ; 2676
                                   7E  7C 01106        CLRQ     -(SP)                                   ;
                               3C  AE  DD 01108        PUSHL    SCALE                                   ;
                                   7E  D4 0110B        CLRL     -(SP)                                   ;
                               6C  AE  9F 0110D        PUSHAB   CLASS_S_DESC                            ;
                               B0  AD  9F 01110        PUSHAB   INTMED_DATA                             ;
                                   64  11 01113        BRB      240$                                    ;
                        23         56  D1 01115 236$:  CMPL     R6, #35                                 ; 2679
                                   69  12 01118        BNEQ     242$                                    ;
               58    AE        FD  AD  B0 0111A        MOVW     SRC_INFO+5, CLASS_S_DESC                ; 2681
               5C    AE        F9  AD  D0 0111F        MOVL     SRC_INFO+1, CLASS_S_DESC+4              ; 2682
                     7E        55  8F  9A 01124        MOVZBL   #85, -(SP)                              ; 2684
                     7E        34  AE  CE 01128        MNEGL    SCALE, -(SP)                            ; 2683
                                   7E  D4 0112C        CLRL     -(SP)                                   ;
                             FF7C  CD  9F 0112E        PUSHAB   TEMP_BUF1                               ;
                               68  AE  9F 01132        PUSHAB   CLASS_S_DESC                            ;
              00000000G  00        05  FB 01135        CALLS    #5, OTS$CVT_T_H                         ;
                         6E        50  D0 0113C        MOVL     R0, STATUS                              ;
                         15        6E  E8 0113F        BLBS     STATUS, 237$                            ; 2685
                       00000000G   00  DD 01142        PUSHL    DBG$GL_OPCODE_NAME                      ;
                                   01  DD 01148        PUSHL    #1                                      ;
                       00028298    8F  DD 0114A        PUSHL    #164504                                 ;
              00000000G  00        03  FB 01150        CALLS    #3, LIB$SIGNAL                          ;
                             FF7D  CD  95 01157 237$:  TSTB     TEMP_BUF1+1                             ; 2686
                                   04  18 0115B        BGEQ     238$                                    ;
               FF    AD            01  88 0115D        BISB2    #1, SRC_INFO+7                          ;
               58    AE            32  B0 01161 238$:  MOVW     #50, CLASS_S_DESC                       ; 2687
               5C    AE        60  AE  9E 01165        MOVAB    TEMP_BUF2, CLASS_S_DESC+4               ; 2688
                                   01  DD 0116A        PUSHL    #1                                      ; 2689
                                   7E  7C 0116C        CLRQ     -(SP)                                   ;
                                   7E  D4 0116E        CLRL     -(SP)                                   ;
                                   7E  D4 01170 239$:  CLRL     -(SP)                                   ;
                               6C  AE  9F 01172        PUSHAB   CLASS_S_DESC                            ;
                             FF7C  CD  9F 01175        PUSHAB   TEMP_BUF1                               ;
              00000000G  00        07  FB 01179 240$:  CALLS    #7, FOR$CVT_H_TF                        ;
                         6E        50  D0 01180 241$:  MOVL     R0, STATUS                              ;
                         15        6E  E8 01183 242$:  BLBS     STATUS, 243$                            ; 2693
                       00000000G   00  DD 01186        PUSHL    DBG$GL_OPCODE_NAME                      ;
                                   01  DD 0118C        PUSHL    #1                                      ;
                       00028A3A    8F  DD 0118E        PUSHL    #166458                                 ;
              00000000G  00        03  FB 01194        CALLS    #3, LIB$SIGNAL                          ;
          60    AE       32        20  3B 0119B 243$:  SKPC     #32, #50, TEMP_BUF2                     ; 2694
                                   02  12 011A0        BNEQ     244$                                    ;
                                   51  D4 011A2        CLRL     R1                                      ;
                         50    60  AE  9E 011A4 244$:  MOVAB    TEMP_BUF2, R0                           ;
                5A       51        50  C3 011A8        SUBL3    R0, R1, BUF_OFFSET                      ;
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                                                                 J 12
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                  2C    AE            30           5A  C3 011AC        SUBL3    BUF_OFFSET, #48, NO_DIGITS                          ; 2695
                        06            0F           6B  8F 011B1        CASEB    (R1T), #15, #6                                      ; 2697
        0130          00DA          009E         0046     011B5 245$:  .WORD    252$-245$,-                                         ;
                      01D3          018C         018C     011BD                 255$-245$,-                                         ;
                                                                                259$-245$,-                                         ;
                                                                                264$-245$,-                                         ;
                                                                                270$-245$,-                                         ;
                                                                                270$-245$,-                                         ;
                                                                                274$-245$                                           ;
                                      0B           56  D1 011C3        CMPL     R6, #11                                             ; 2768
                                                   08  12 011C6        BNEQ     246$                                                ;
                                       00000000'   EF  9F 011C8        PUSHAB   P.AGT                                               ; 2769
                                                   29  11 011CE        BRB      251$                                                ;
                                      11           56  D1 011D0 246$:  CMPL     R6, #17                                             ; 2770
                                                   08  12 011D3        BNEQ     247$                                                ;
                                       00000000'   EF  9F 011D5        PUSHAB   P.AGU                                               ; 2771
                                                   1C  11 011DB        BRB      251$                                                ;
                                      17           56  D1 011DD 247$:  CMPL     R6, #23                                             ; 2772
                                                   09  12 011E0        BNEQ     249$                                                ;
                                       00000000'   EF  9F 011E2        PUSHAB   P.AGV                                               ; 2773
                                                 1DDE  31 011E8 248$:  BRW      647$                                                ;
                                      23           56  D1 011EB 249$:  CMPL     R6, #35                                             ; 2774
                                                   03  13 011EE        BEQL     250$                                                ;
                                                 1DE5  31 011F0        BRW      649$                                                ;
                                       00000000'   EF  9F 011F3 250$:  PUSHAB   P.AGW                                               ; 2775
                                                   ED  11 011F9 251$:  BRB      248$                                                ;
                                      15        FF AD  E9 011FB 252$:  BLBC     SRC_INFO+7, 253$                                    ; 2702
                                       00000000G   00  DD 011FF        PUSHL    DBG$GL_OPCODE_NAME                                  ;
                                                   01  DD 01205        PUSHL    #1                                                  ;
                                       00028EF0    8F  DD 01207        PUSHL    #167664                                             ;
                           00000000G  00           03  FB 0120D        CALLS    #3, LIB$SIGNAL                                      ;
                                      57           69  3C 01214 253$:  MOVZWL   (R9), R7                                            ; 2703
                                      57        2C AE  D1 01217        CMPL     NO_DIGITS, R7                                       ;
                                                   15  15 0121B        BLEQ     254$                                                ;
                                       00000000G   00  DD 0121D        PUSHL    DBG$GL_OPCODE_NAME                                  ;
                                                   01  DD 01223        PUSHL    #1                                                  ;
                                       00028A3A    8F  DD 01225        PUSHL    #166458                                             ;
                           00000000G  00           03  FB 0122B        CALLS    #3, LIB$SIGNAL                                      ;
                        50            57        2C AE  C3 01232 254$:  SUBL3    NO_DIGITS, R7, R0                                   ; 2704
          50            30            6E           00  2C 01237        MOVC5    #0, (SP), #48, R0, TEMP_BUF1                        ;
                                              FF7C CD     0123C                                                                     ;
                        50            FF7C    CD47  9E 0123F           MOVAB    TEMP_BUF1[R7], R0                                   ; 2706
                        50              2C     AE  C2 01245            SUBL2    NO_DIGITS, R0                                       ;
                        60    61 AE4A   2C     AE  28 01249            MOVC3    NO_DIGITS, TEMP_BUF2+1[BUF_OFFSET], (R0)            ;
                                                 00E5  31 01250        BRW      268$                                                ; 2707
                                                   69  B5 01253 255$:  TSTW     (R9)                                                ; 2716
                                                   04  12 01255        BNEQ     256$                                                ;
                                                   54  D4 01257        CLRL     DES_LEN                                             ;
                                                   05  11 01259        BRB      257$                                                ;
                                      54           69  3C 0125B 256$:  MOVZWL   (R9), DES_LEN                                       ;
                                                   54  D7 0125E        DECL     DES_LEN                                             ;
                  2C    AE                         54  D1 01260 257$:  CMPL     DES_LEN, NO_DIGITS                                  ; 2718
                                                   15  18 01264        BGEQ     258$                                                ;
                                       00000000G   00  DD 01266        PUSHL    DBG$GL_OPCODE_NAME                                  ;
                                                   01  DD 0126C        PUSHL    #1                                                  ;
                                       00028A3A    8F  DD 0126E        PUSHL    #166458                                             ;
                           00000000G  00           03  FB 01274        CALLS    #3, LIB$SIGNAL                                      ;
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   FF7C   CD          54      60 AE4A       2C   AE   09 0127B 258$:    CVTSP   NO_DIGITS, TEMP_BUF2[BUF_OFFSET], DES_LEN, -  2719
                                                                                TEMP_BUF1
     34   BE          54      FF7C   CD          54   08 01285          CVTPS   DES_LEN, TEMP_BUF1, DES_LEN, @OUTPUT          2720
                                                 54   11 0128D          BRB     263$                                          2697
                                     52     01   AA   9E 0128F 259$:    MOVAB   1(R10), R2                                    2725
          52          30             6E          00   2C 01293          MOVC5   #0, (SP), #48, R2, TEMP_BUF2
                                            60   AE      01298
     2C   AE          69             10          00   ED 0129A          CMPZV   #0, #16, (R9), NO_DIGITS                      2726
                                                 15   18 012A0          BGEQ    260$
                                      00000000G  00   DD 012A2          PUSHL   DBG$GL_OPCODE_NAME
                                                 01   DD 012A8          PUSHL   #1
                                      00028A3A   8F   DD 012AA          PUSHL   #166458
                           00000000G  00         03   FB 012B0          CALLS   #3, LIB$SIGNAL
                                     5A          69   3C 012B7 260$:    MOVZWL  (R9), BUF_OFFSET                              2727
                      5A             31          5A   C3 012BA          SUBL3   BUF_OFFSET, #49, BUF_OFFSET
                                     51     60 AE4A   9E 012BE          MOVAB   TEMP_BUF2[BUF_OFFSET], R1                     2728
                                     50          61   9A 012C3          MOVZBL  (R1), R0
                                     50 00000000G0040 9E 012C6          MOVAB   LIB$AB_CVT_U_O-48[R0], R0                     2729
                                     06     FF   AD   E9 012CE          BLBC    SRC_INFO+7, 261$                              2728
                                     50     0A   A0   D0 012D2          MOVL    10(R0), R0
                                                 03   11 012D6          BRB     262$
                                     50          60   D0 012D8 261$:    MOVL    (R0), R0                                      2729
                                     61          50   90 012DB 262$:    MOVB    R0, (R1)                                      2728
                 34   BE             61          69   28 012DE          MOVC3   (R9), (R1), @OUTPUT                           2731
                                                 5A   11 012E3 263$:    BRB     269$                                          2697
                                                 69   B5 012E5 264$:    TSTW    (R9)                                          2740
                                                 04   12 012E7          BNEQ    265$
                                                 57   D4 012E9          CLRL    DES_LEN
                                                 05   11 012EB          BRB     266$
                                     57          69   3C 012ED 265$:    MOVZWL  (R9), DES_LEN
                                                 57   D7 012F0          DECL    DES_LEN
                                     57     2C   AE   D1 012F2 266$:    CMPL    NO_DIGITS, DES_LEN                            2742
                                                 15   15 012F6          BLEQ    267$
                                      00000000G  00   DD 012F8          PUSHL   DBG$GL_OPCODE_NAME
                                                 01   DD 012FE          PUSHL   #1
                                      00028A3A   8F   DD 01300          PUSHL   #166458
                           00000000G  00         03   FB 01306          CALLS   #3, LIB$SIGNAL
                      50             57     2C   AE   C3 0130D 267$:    SUBL3   NO_DIGITS, DES_LEN, R0                        2743
                                                 50   D6 01312          INCL    R0
          50          30             6E          00   2C 01314          MOVC5   #0, (SP), #48, R0, TEMP_BUF1
                                          FF7C   CD      01319
                           10   AE        FF7C CD47   9E 0131C          MOVAB   TEMP_BUF1[DES_LEN], 16(SP)                    2744
                      50   10   AE          2C   AE   C3 01323          SUBL3   NO_DIGITS, 16(SP), R0
                      60   61 AE4A          2C   AE   28 01329          MOVC3   NO_DIGITS, TEMP_BUF2+1[BUF_OFFSET], (R0)
                           10   BE        60 AE4A   90 01330          MOVB    TEMP_BUF2[BUF_OFFSET], @16(SP)                2745
                                                 57   D6 01336          INCL    R7                                            2747
                 34   BE      FF7C   CD          57   28 01338 268$:    MOVC3   R7, TEMP_BUF1, @OUTPUT
                                                 6B   11 0133F 269$:    BRB     276$                                          2697
     2C   AE          69             10          00   ED 01341 270$:    CMPZV   #0, #16, (R9), NO_DIGITS                      2752
                                                 15   18 01347          BGEQ    271$
                                      00000000G  00   DD 01349          PUSHL   DBG$GL_OPCODE_NAME
                                                 01   DD 0134F          PUSHL   #1
                                      00028A3A   8F   DD 01351          PUSHL   #166458
                           00000000G  00         03   FB 01357          CALLS   #3, LIB$SIGNAL
   FF7C   CD          69      60 AE4A       2C   AE   09 0135E 271$:    CVTSP   NO_DIGITS, TEMP_BUF2[BUF_OFFSET], (R9), -     2753
                                                                                TEMP_BUF1
                                     13          6B   91 01368          CMPB    (R11), #19                                    2755
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                                                 09  12 0136B        BNEQ    272$                                              :
                              50 00000000G       00  9E 0136D        MOVAB   LIB$AB_CVTPT_O, R0                                :
                                                 07  11 01374        BRB     273$                                              :
                              50 00000000G       00  9E 01376 272$:  MOVAB   LIB$AB_CVTPT_Z, R0                                :
          69          60       FF7C     CD       69  24 0137D 273$:  CVTPT   (R9), TEMP_BUF1, (R0), (R9), @OUTPUT             : 2756
                                        34       BE     01384                                                              :
                                                 24  11 01386        BRB     276$                                              : 2697
                              1F        2C       AE  D1 01388 274$:  CMPL    NO_DIGITS, #31                                    : 2761
                                                 15  15 0138C        BLEQ    275$                                              :
                                 00000000G       00  DD 0138E        PUSHL   DBG$GL_OPCODE_NAME                                :
                                                 01  DD 01394        PUSHL   #1                                                :
                                 00028A3A        8F  DD 01396        PUSHL   #166458                                           :
                     00000000G   00              03  FB 0139C        CALLS   #3, LIB$SIGNAL                                    :
     34   BE          69         60 AE4A        2C   AE  09 013A3 275$:  CVTSP   NO_DIGITS, TEMP_BUF2[BUF_OFFSET], (R9), -     : 2762
                                                                             @OUTPUT                                           :
                                               1C29  31 013AC 276$:  BRW     649$                                              : 2187
                              02                 6B  91 013AF 277$:  CMPB    (R11), #2                                         : 2784
                                                 12  13 013B2        BEQL    280$                                              :
                              0E                 6B  91 013B4        CMPB    (R11), #14                                        :
                                                 0D  13 013B7        BEQL    280$                                              :
                              25                 6B  91 013B9        CMPB    (R11), #37                                        :
                                                 03  1E 013BC        BGEQU   279$                                              :
                                               035C  31 013BE 278$:  BRW     327$                                              :
                              27                 6B  91 013C1 279$:  CMPB    (R11), #39                                        :
                                                 F8  1A 013C4        BGTRU   278$                                              :
                         58   AE                 32  B0 013C6 280$:  MOVW    #50, CLASS_S_DESC                                 : 2786
                         5C   AE        60       AE  9E 013CA        MOVAB   TEMP_BUF2, CLASS_S_DESC+4                         : 2787
                                                 57  D4 013CF        CLRL    DIGITS_IN_FRACT                                   : 2800
                                                 52  D4 013D1        CLRL    R2                                                : 2801
                                                 58  D5 013D3        TSTL    BIN_SCALE                                         :
                                                 1C  13 013D5        BEQL    281$                                              :
                                                 52  D6 013D7        INCL    R2                                                :
                                        30       AE  D5 013D9        TSTL    SCALE                                             :
                                                 15  13 013DC        BEQL    281$                                              :
                                 00000000'       EF  9F 013DE        PUSHAB  P.AGX                                             : 2803
                                                 01  DD 013E4        PUSHL   #1                                                :
                                 00028362        8F  DD 013E6        PUSHL   #164706                                           :
                     00000000G   00              03  FB 013EC        CALLS   #3, LIB$SIGNAL                                    :
                                                 58  D5 013F3 281$:  TSTL    BIN_SCALE                                         : 2804
                                                 03  18 013F5        BGEQ    282$                                              :
                              57                 58  CE 013F7        MNEGL   BIN_SCALE, DIGITS_IN_FRACT                        : 2806
                                        30       AE  D5 013FA 282$:  TSTL    SCALE                                             : 2807
                                                 04  18 013FD        BGEQ    283$                                              :
                              57        30       AE  CE 013FF        MNEGL   SCALE, DIGITS_IN_FRACT                            : 2809
                              06                 56  D1 01403 283$:  CMPL    R6, #6                                            : 2814
                                                 4E  12 01406        BNEQ    287$                                              :
                    FF7C      CD        B0       AD  6E 01408        CVTLD   INTMED_DATA, TEMP_BUF1                            : 2816
                                                 58  D5 0140E 284$:  TSTL    BIN_SCALE                                         : 2821
                                                 16  18 01410        BGEQ    285$                                              :
                              51      FF7C       CD  9E 01412        MOVAB   TEMP_BUF1, R1                                     : 2823
                              50 00000000'       EF  9E 01417        MOVAB   P.AGY, R0                                         :
                                 00000000G       00  16 0141E        JSB     DBG$CVT_DIVD2_R1                                  :
                                                 58  D6 01424        INCL    BIN_SCALE                                         : 2824
                                                 E6  11 01426        BRB     284$                                              : 2821
                                                 16  15 01428 285$:  BLEQ    286$                                              : 2826
                              51      FF7C       CD  9E 0142A        MOVAB   TEMP_BUF1, R1                                     : 2828
                              50 00000000'       EF  9E 0142F        MOVAB   P.AGZ, R0                                         :
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                         00000000G  00  16 01436        JSB     DBG$CVT_MULD2_R1                          ;
                                    58  D7 0143C        DECL    BIN_SCALE                                 ; 2829
                                    E8  11 0143E        BRB     285$                                      ; 2826
                             30     AE  DD 01440 286$:  PUSHL   SCALE                                     ; 2832
                                    57  DD 01443        PUSHL   DIGITS_IN_FRACT                           ;
                             60     AE  9F 01445        PUSHAB  CLASS_S_DESC                              ;
                           FF7C     CD  9F 01448        PUSHAB  TEMP_BUF1                                 ;
            00000000G  00           04  FB 0144C        CALLS   #4, FOR$CVT_D_TF                          ;
                                  015A  31 01453        BRW     303$                                      ;
                       0C           56  D1 01456 287$:  CMPL    R6, #12                                   ; 2835
                                    03  13 01459        BEQL    288$                                      ;
                                  00FC  31 0145B        BRW     300$                                      ;
                       1A    04     BE  91 0145E 288$:  CMPB    @4(SP), #26                               ; 2836
                                    4E  13 01462        BEQL    292$                                      ;
                       51  FF7C     CD  9E 01464        MOVAB   TEMP_BUF1, R1                             ; 2839
                       50    B0     AD  9E 01469        MOVAB   INTMED_DATA, R0                           ;
                         00000000G  00  16 0146D        JSB     DBG$CVT_CVTROUH_R1                        ;
                       06    FF     AD  E9 01473        BLBC    SRC_INFO+7, 289$                          ; 2840
                FF7D   CD    80     8F  88 01477        BISB2   #128, TEMP_BUF1+1                         ;
                                    58  D5 0147D 289$:  TSTL    BIN_SCALE                                 ; 2846
                                    16  18 0147F        BGEQ    290$                                      ;
                       51  FF7C     CD  9E 01481        MOVAB   TEMP_BUF1, R1                             ; 2848
                       50 00000000' EF  9E 01486        MOVAB   P.AHA, R0                                 ;
                         00000000G  00  16 0148D        JSB     DBG$CVT_DIVH2_R1                          ;
                                    58  D6 01493        INCL    BIN_SCALE                                 ; 2849
                                    E6  11 01495        BRB     289$                                      ; 2846
                                    03  14 01497 290$:  BGTR    291$                                      ; 2851
                                  0101  31 01499        BRW     302$                                      ;
                       51  FF7C     CD  9E 0149C 291$:  MOVAB   TEMP_BUF1, R1                             ; 2853
                       50 00000000' EF  9E 014A1        MOVAB   P.AHB, R0                                 ;
                         00000000G  00  16 014A8        JSB     DBG$CVT_MULH2_R1                          ;
                                    58  D7 014AE        DECL    BIN_SCALE                                 ; 2854
                                    E5  11 014B0        BRB     290$                                      ; 2851
                       15           52  E9 014B2 292$:  BLBC    R2, 293$                                  ; 2869
                         00000000'  EF  9F 014B5        PUSHAB  P.AHC                                     ; 2871
                                    01  DD 014BB        PUSHL   #1                                        ;
                         00028362   8F  DD 014BD        PUSHL   #164706                                   ;
            00000000G  00           03  FB 014C3        CALLS   #3, LIB$SIGNAL                            ;
                             58     AE  B4 014CA 293$:  CLRW    CLASS_S_DESC                              ; 2873
  48    AE     B0      AD           10  28 014CD        MOVC3   #16, INTMED_DATA, PREVIOUS_VALUE          ; 2880
  48    AE     B0      AD           10  28 014D3 294$:  MOVC3   #16, INTMED_DATA, PREVIOUS_VALUE          ; 2900
                       50    B0     AD  9E 014D9        MOVAB   INTMED_DATA, R0                           ; 2905
                         00000000G  00  16 014DD        JSB     DBG$CVT_SCALE_OU_DOWN_BY_10_R1            ;
  38    AE     B0      AD           10  28 014E3        MOVC3   #16, INTMED_DATA, SAVED_VALUE             ; 2912
                       50    B0     AD  9E 014E9        MOVAB   INTMED_DATA, R0                           ; 2917
                         00000000G  00  16 014ED        JSB     DBG$CVT_SCALE_OU_UP_BY_10_R1              ;
                       51    58     AE  3C 014F3        MOVZWL  CLASS_S_DESC, CURRENT_POSITION            ; 2925
                                    09  11 014F7        BRB     296$                                      ;
        50             51    5C     AE  C1 014F9 295$:  ADDL3   CLASS_S_DESC+4, CURRENT_POSITION, R0      ;
               01      A0           60  90 014FE        MOVB    (R0), 1(R0)                               ;
                                    F4                                                                    ;
                                    51  F4 01502 296$:  SOBGEQ  CURRENT_POSITION, 295$                    ;
        50     48      AE    B0     AD  C3 01505        SUBL3   INTMED_DATA, PREVIOUS_VALUE, R0           ; 2930
  5C    BE             50           30  81 0150B        ADDB3   #48, R0, @CLASS_S_DESC+4                  ;
                             58     AE  B6 01510        INCW    CLASS_S_DESC                              ; 2937
  B0    AD     38      AE           10  28 01513        MOVC3   #16, SAVED_VALUE, INTMED_DATA             ; 2944
                             BC     AD  D5 01519        TSTL    INTMED_DATA+12                            ; 2947
                                    B5  12 0151C        BNEQ    294$                                      ;
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                                           B8  AD  D5 0151E          TSTL    INTMED_DATA+8                           ; 2948
                                               B0  12 01521          BNEQ    294$                                    ;
                                           B4  AD  D5 01523          TSTL    INTMED_DATA+4                           ; 2949
                                               AB  12 01526          BNEQ    294$                                    ;
                                           B0  AD  D5 01528          TSTL    INTMED_DATA                             ; 2950
                                               A6  12 0152B          BNEQ    294$                                    ;
                                 19        FF  AD  E9 0152D          BLBC    SRC_INFO+7, 299$                        ; 2955
                                 51        58  AE  3C 01531          MOVZWL  CLASS_S_DESC, CURRENT_POSITION          ; 2961
                                               09  11 01535          BRB     298$                                    ;
                    50           51        5C  AE  C1 01537 297$:    ADDL3   CLASS_S_DESC+4, CURRENT_POSITION, R0    ;
                            01   A0            60  90 0153C          MOVB    (R0), 1(R0)                             ;
                                 F4            51  F4 01540 298$:    SOBGEQ  CURRENT_POSITION, 297$                  ;
                            5C   BE            2D  90 01543          MOVB    #45, @CLASS_S_DESC+4                    ; 2963
                                           58  AE  B6 01547          INCW    CLASS_S_DESC                            ; 2964
                                 50        58  AE  3C 0154A 299$:    MOVZWL  CLASS_S_DESC, R0                        ; 2971
                                 50        5C  AE  C0 0154E          ADDL2   CLASS_S_DESC+4, R0                      ;
                                 60            2E  90 01552          MOVB    #46, (R0)                               ;
                                 6E            01  D0 01555          MOVL    #1, STATUS                              ; 2973
                                               59  11 01558          BRB     304$                                    ; 2836
                                 1E            56  D1 0155A 300$:    CMPL    R6, #30                                 ; 2976
                                               54  12 0155D          BNEQ    304$                                    ;
                                 15            52  E9 0155F          BLBC    R2, 301$                                ; 2981
                                     00000000'  EF  9F 01562          PUSHAB  P.AHD                                   ; 2983
                                               01  DD 01568          PUSHL   #1                                      ;
                                      00028362  8F  DD 0156A          PUSHL   #164706                                 ;
                     00000000G   00            03  FB 01570          CALLS   #3, LIB$SIGNAL                          ;
                            2C   AE        FD  AD  3C 01577 301$:    MOVZWL  SRC_INFO+5, NO_DIGITS                   ; 2985
60   AE      2C  AE     B0   AD        2C  AE  08 0157C          CVTPS   NO_DIGITS, INTMED_DATA, NO_DIGITS, -    ; 2986
                                                                     TEMP_BUF2                               ;
             58  AE     2C   AE            01  A1 01585          ADDW3   #1, NO_DIGITS, CLASS_S_DESC             ; 2987
                                               15  DD 0158B          PUSHL   #21                                     ; 2989
                                               7E  7C 0158D          CLRQ    -(SP)                                   ; 2988
                                         FF7C  CD  9F 0158F          PUSHAB  TEMP_BUF1                               ;
                                           68  AE  9F 01593          PUSHAB  CLASS_S_DESC                            ;
                     00000000G   00            05  FB 01596          CALLS   #5, OTS$CVT_T_H                         ;
                                           30  AE  DD 0159D 302$:    PUSHL   SCALE                                   ; 2990
                                               57  DD 015A0          PUSHL   DIGITS_IN_FRACT                         ;
                                           60  AE  9F 015A2          PUSHAB  CLASS_S_DESC                            ;
                                         FF7C  CD  9F 015A5          PUSHAB  TEMP_BUF1                               ;
                     00000000G   00            04  FB 015A9          CALLS   #4, FOR$CVT_H_TF                        ;
                                 6E            50  D0 015B0 303$:    MOVL    R0, STATUS                              ;
             60  AE              32            20  3B 015B3 304$:    SKPC    #32, #50, TEMP_BUF2                     ; 2994
                                               02  12 015B8          BNEQ    305$                                    ;
                                               51  D4 015BA          CLRL    R1                                      ;
                                 50        60  AE  9E 015BC 305$:    MOVAB   TEMP_BUF2, R0                           ;
                 5A              51            50  C3 015C0          SUBL3   R0, R1, BUF_OFFSET                      ;
                 52              32            5A  C3 015C4          SUBL3   BUF_OFFSET, #50, R2                     ; 2995
             60 AE4A             52            20  3A 015C8          LOCC    #32, R2, TEMP_BUF2[BUF_OFFSET]          ;
                                               02  12 015CE          BNEQ    306$                                    ;
                                               51  D4 015D0          CLRL    R1                                      ;
                                               51  D5 015D2 306$:    TSTL    NEXT_BLANK                              ; 2996
                                               05  12 015D4          BNEQ    307$                                    ;
                                 55            52  D0 015D6          MOVL    R2, FINAL_LEN                           ; 2998
                                               0B  11 015D9          BRB     308$                                    ;
                                 51            5A  C2 015DB 307$:    SUBL2   BUF_OFFSET, R1                          ; 3000
                                 50        60  AE  9E 015DE          MOVAB   TEMP_BUF2, R0                           ;
                 55              51            50  C3 015E2          SUBL3   R0, R1, FINAL_LEN                       ;
```

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                                   57   D5 015E6 308$:   TSTL    DIGITS_IN_FRACT                                       ; 3001
                                   02   12 015E8         BNEQ    309$                                                  ;
                                   55   D7 015EA         DECL    FINAL_LEN                                             ; 3003
                         72        6E   E8 015EC 309$:   BLBS    STATUS, 317$                                          ; 3005
                    58   AE        32   B0 015EF         MOVW    #50, CLASS_S_DESC                                     ; 3008
                         1E        56   D1 015F3         CMPL    R6, #30                                               ; 3009
                                   05   12 015F6         BNEQ    310$                                                  ;
                         57        1F   D0 015F8         MOVL    #31, DIGITS_IN_FRACT                                  ; 3011
                                   1D   11 015FB         BRB     313$                                                  ;
                         09     F5 AD   B1 015FD 310$:   CMPW    DST_INFO+5, #9                                        ; 3013
                                   05   1A 01601         BGTRU   311$                                                  ;
                         57        21   D0 01603         MOVL    #33, DIGITS_IN_FRACT                                  ; 3015
                                   12   11 01606         BRB     313$                                                  ;
                         50     F5 AD   3C 01608 311$:   MOVZWL  DST_INFO+5, R0                                        ; 3017
                         50        09   C2 0160C         SUBL2   #9, R0                                                ;
                         21        50   D1 0160F         CMPL    R0, #33                                               ;
                                   03   15 01612         BLEQ    312$                                                  ;
                         50        21   D0 01614         MOVL    #33, R0                                               ;
                         57        50   D0 01617 312$:   MOVL    R0, DIGITS_IN_FRACT                                   ;
                                   04   DD 0161A 313$:   PUSHL   #4                                                    ; 3018
                                   7E   D4 0161C         CLRL    -(SP)                                                 ;
                                38 AE   DD 0161E         PUSHL   SCALE                                                 ;
                                   57   DD 01621         PUSHL   DIGITS_IN_FRACT                                       ;
                                68 AE   9F 01623         PUSHAB  CLASS_S_DESC                                          ;
                              FF7C CD   9F 01626         PUSHAB  TEMP_BUF1                                             ;
               00000000G   00      06   FB 0162A         CALLS   #6, FOR$CVT_H_TE                                      ;
                         6E        50   D0 01631         MOVL    R0, STATUS                                            ;
                         15        6E   E8 01634         BLBS    STATUS, 314$                                          ; 3019
                         00000000' EF   9F 01637         PUSHAB  P.AHE                                                 ;
                                   01   DD 0163D         PUSHL   #1                                                    ;
                         00028362  8F   DD 0163F         PUSHL   #164706                                               ;
               00000000G   00      03   FB 01645         CALLS   #3, LIB$SIGNAL                                        ;
         60   AE           32      20   3B 0164C 314$:   SKPC    #32, #50, TEMP_BUF2                                   ; 3020
                                   02   12 01651         BNEQ    316$                                                  ;
                                   51   D4 01653 315$:   CLRL    R1                                                    ;
                         50     60 AE   9E 01655 316$:   MOVAB   TEMP_BUF2, R0                                         ;
              5A         51        50   C3 01659         SUBL3   R0, R1, BUF_OFFSET                                    ;
              55         32        5A   C3 0165D         SUBL3   BUF_OFFSET, #50, FINAL_LEN                            ; 3021
                    14   AE        55   D0 01661 317$:   MOVL    FINAL_LEN, OUTPUT_STR_LEN                             ; 3024
                         26        6B   91 01665         CMPB    (R11), #38                                            ; 3027
                                   46   12 01668         BNEQ    321$                                                  ;
                    58   AE        55   B0 0166A         MOVW    FINAL_LEN, CLASS_S_DESC                               ; 3031
         5C   AE    34   AE        01   C1 0166E         ADDL3   #1, OUTPUT, CLASS_S_DESC+4                            ; 3032
                         52     58 AE   9E 01674         MOVAB   CLASS_S_DESC, R2                                      ; 3033
                         51  60 AE4A    9E 01678         MOVAB   TEMP_BUF2[BUF_OFFSET], R1                             ;
                         50        55   D0 0167D         MOVL    FINAL_LEN, R0                                         ;
                         00000000G 00   16 01680         JSB     LIB$SCOPY_R_DX6                                       ;
                         6E        50   D0 01686         MOVL    R0, STATUS                                            ;
               00000000G   8F      6E   D1 01689         CMPL    STATUS, #LIB$_STRTRU                                  ; 3034
                                   15   12 01690         BNEQ    319$                                                  ;
                         00000000G 00   DD 01692 318$:   PUSHL   DBG$GL_OPCODE_NAME                                    ;
                                   01   DD 01698         PUSHL   #1                                                    ;
                         000286AB  8F   DD 0169A         PUSHL   #165547                                               ;
               00000000G   00      03   FB 016A0         CALLS   #3, LIB$SIGNAL                                        ;
                         03        6E   E9 016A7 319$:   BLBC    STATUS, 320$                                          ; 3035
                                 1761   31 016AA         BRW     622$                                                  ;
                                 1755   31 016AD 320$:   BRW     621$                                                  ;
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                27          6B  91 016B0 321$:      CMPB    (R11), #39                                      ; 3039
                            45  12 016B3            BNEQ    325$                                            ;
       58       AE          55  B0 016B5            MOVW    FINAL_LEN, CLASS_S_DESC                         ; 3043
       5C       AE     34   AE  D0 016B9            MOVL    OUTPUT, CLASS_S_DESC+4                          ; 3044
                52     58   AE  9E 016BE            MOVAB   CLASS_S_DESC, R2                                ; 3045
                51     60 AE4A  9E 016C2            MOVAB   TEMP_BUF2[BUF_OFFSET], R1                       ;
                50          55  D0 016C7            MOVL    FINAL_LEN, R0                                   ;
                   00000000G  00  16 016CA          JSB     LIB$SCOPY_R_DX6                                 ;
                6E          50  D0 016D0            MOVL    R0, STATUS                                      ;
 00000000G      8F          6E  D1 016D3            CMPL    STATUS, #LIB$_STRTRU                            ; 3046
                            15  12 016DA            BNEQ    323$                                            ;
                   00000000G  00  DD 016DC 322$:    PUSHL   DBG$GL_OPCODE_NAME                              ;
                            01  DD 016E2            PUSHL   #1                                              ;
                   000286AB  8F  DD 016E4           PUSHL   #165547                                         ;
 00000000G      00          03  FB 016EA            CALLS   #3, LIB$SIGNAL                                  ;
                03          6E  E9 016F1 323$:      BLBC    STATUS, 324$                                    ; 3047
                          176D  31 016F4            BRW     627$                                            ;
                          1761  31 016F7 324$:      BRW     626$                                            ;
                51     60 AE4A  9E 016FA 325$:      MOVAB   TEMP_BUF2[BUF_OFFSET], R1                       ; 3053
                52          59  D0 016FF            MOVL    R9, R2                                          ;
                50          55  D0 01702            MOVL    FINAL_LEN, R0                                   ;
                   00000000G  00  16 01705          JSB     LIB$SCOPY_R_DX6                                 ;
                6E          50  D0 0170B            MOVL    R0, STATUS                                      ;
 00000000G      8F          6E  D1 0170E            CMPL    STATUS, #LIB$_STRTRU                            ; 3054
                            03  13 01715            BEQL    326$                                            ;
                          1840  31 01717            BRW     641$                                            ;
                          1828  31 0171A 326$:      BRW     640$                                            ;
                06          56  D1 0171D 327$:      CMPL    R6, #6                                          ; 3063
                            08  12 01720            BNEQ    328$                                            ;
                   00000000'  EF  9F 01722          PUSHAB  P.AHF                                           ; 3064
                            1B  11 01728            BRB     331$                                            ;
                0C          56  D1 0172A 328$:      CMPL    R6, #12                                         ; 3065
                            08  12 0172D            BNEQ    329$                                            ;
                   00000000'  EF  9F 0172F          PUSHAB  P.AHG                                           ; 3066
                            0E  11 01735            BRB     331$                                            ;
                1E          56  D1 01737 329$:      CMPL    R6, #30                                         ; 3067
                            03  13 0173A            BEQL    330$                                            ;
                          1899  31 0173C            BRW     649$                                            ;
                   00000000'  EF  9F 0173F 330$:    PUSHAB  P.AHH                                           ; 3068
                          1881  31 01745 331$:      BRW     647$                                            ;
                            58  D5 01748 332$:      TSTL    BIN_SCALE                                       ; 3074
                            26  15 0174A            BLEQ    333$                                            ;
                51     B0   AD  9E 0174C            MOVAB   INTMED_DATA, R1                                 ;
                50 00000000'  EF  9E 01750          MOVAB   P.AHI, R0                                       ;
                   00000000G  00  16 01757          JSB     DBG$CVT_MULD2_R1                                ;
                51     B8   AD  9E 0175D            MOVAB   INTMED_DATA+8, R1                               ;
                50 00000000'  EF  9E 01761          MOVAB   P.AHJ, R0                                       ;
                   00000000G  00  16 01768          JSB     DBG$CVT_MULD2_R1                                ;
                            58  D7 0176E            DECL    BIN_SCALE                                       ;
                            D6  11 01770            BRB     332$                                            ;
                            26  18 01772 333$:      BGEQ    334$                                            ;
                51     B0   AD  9E 01774            MOVAB   INTMED_DATA, R1                                 ;
                50 00000000'  EF  9E 01778          MOVAB   P.AHK, R0                                       ;
                   00000000G  00  16 0177F          JSB     DBG$CVT_DIVD2_R1                                ;
                51     B8   AD  9E 01785            MOVAB   INTMED_DATA+8, R1                               ;
                50 00000000'  EF  9E 01789          MOVAB   P.AHL, R0                                       ;
                   00000000G  00  16 01790          JSB     DBG$CVT_DIVD2_R1                                ;
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                                    58  D6 01796          INCL    BIN_SCALE                         ;
                                    D8  11 01798          BRB     333$                              ;
                          30        AE  D5 0179A 334$:    TSTL    SCALE                             ;
                                    27  15 0179D          BLEQ    335$                              ;
                  51      B0        AD  9E 0179F          MOVAB   INTMED_DATA, R1                   ;
                  50 00000000'      EF  9E 017A3          MOVAB   P.AHM, R0                         ;
                     00000000G      00  16 017AA          JSB     DBG$CVT_MULD2_R1                  ;
                  51      B8        AD  9E 017B0          MOVAB   INTMED_DATA+8, R1                 ;
                  50 00000000'      EF  9E 017B4          MOVAB   P.AHN, R0                         ;
                     00000000G      00  16 017BB          JSB     DBG$CVT_MULD2_R1                  ;
                          30        AE  D7 017C1          DECL    SCALE                             ;
                                    D4  11 017C4          BRB     334$                              ;
                                    27  18 017C6 335$:    BGEQ    336$                              ;
                  51      B0        AD  9E 017C8          MOVAB   INTMED_DATA, R1                   ;
                  50 00000000'      EF  9E 017CC          MOVAB   P.AHO, R0                         ;
                     00000000G      00  16 017D3          JSB     DBG$CVT_DIVD2_R1                  ;
                  51      B8        AD  9E 017D9          MOVAB   INTMED_DATA+8, R1                 ;
                  50 00000000'      EF  9E 017DD          MOVAB   P.AHP, R0                         ;
                     00000000G      00  16 017E4          JSB     DBG$CVT_DIVD2_R1                  ;
                          30        AE  D6 017EA          INCL    SCALE                             ;
                                    D7  11 017ED          BRB     335$                              ;
                  08      0C        AE  E9 017EF 336$:    BLBC    CVT_ROUND_FLAG, 337$              ;  3076
           FF7C   CD      B0        AD  6B 017F3          CVTRDL  INTMED_DATA, TEMP_BUF1            ;  3078
                                    06  11 017F9          BRB     338$                              ;
           FF7C   CD      B0        AD  6A 017FB 337$:    CVTDL   INTMED_DATA, TEMP_BUF1            ;  3080
           29             01            6B 8F 01801 338$: CASEB   (R11), #1, #41                    ;  3082
 0054      046F           044C          005D    01805 339$: .WORD 341$-339$,-                       ;
 0D92      0CD3           0C77          0054    0180D             383$-339$,-                       ;
 0054      0054           0054          0054    01815             385$-339$,-                       ;
 0054      0054           0054          0054    0181D             340$-339$,-                       ;
 0054      0054           0054          0054    01825             340$-339$,-                       ;
 0054      0054           0054          0054    0182D             479$-339$,-                       ;
 0054      0054           0054          0054    01835             486$-339$,-                       ;
 0054      0054           0054          0054    0183D             498$-339$,-                       ;
 0054      0054           005D          0054    01845             340$-339$,-                       ;
 005D      0054           0054          0054    0184D             340$-339$,-                       ;
                          005D          005D    01855             340$-339$,-                       ;
                                                                  340$-339$,-                       ;
                                                                  340$-339$,-                       ;
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                                                                      341$-339$,-                                     ;
                                                                      341$-339$,-                                     ;
                                                                      341$-339$                                       ;
                          00000000'   EF   9F 01859 340$:   PUSHAB   P.AHQ                                            ; 3123
                                1767       31 0185F         BRW      647$                                             ;
                     52          F5   AD   3C 01862 341$:   MOVZWL   DST_INFO+5, R2                                   ; 3116
                     50               01   CE 01866         MNEGL    #1, I                                            ; 3118
                                      0C   11 01869         BRB      343$                                             ;
      51       B0     AD     01       50   EF 0186B 342$:   EXTZV    I, #1, INTMED_DATA, R1                           ;
  34  BE              01     50       51   F0 01871         INSV     R1, I, #1, @OUTPUT                               ;
                      F0     50       52   F2 01877 343$:   AOBLSS   R2, I, 342$                                      ; 3116
                                175A       31 0187B         BRW      649$                                             ; 2187
                                      58   D5 0187E 344$:   TSTL     BIN_SCALE                                        ; 3128
                                      26   15 01880         BLEQ     345$                                             ;
                     51          B0   AD   9E 01882         MOVAB    INTMED_DATA, R1                                  ;
                     50   00000000'   EF   9E 01886         MOVAB    P.AHR, R0                                        ;
                          00000000G   00   16 0188D         JSB      DBG$CVT_MULD2_R1                                 ;
                     51          B8   AD   9E 01893         MOVAB    INTMED_DATA+8, R1                                ;
                     50   00000000'   EF   9E 01897         MOVAB    P.AHS, R0                                        ;
                          00000000G   00   16 0189E         JSB      DBG$CVT_MULD2_R1                                 ;
                                      58   D7 018A4         DECL     BIN_SCALE                                        ;
                                      D6   11 018A6         BRB      344$                                             ;
                                      26   18 018A8 345$:   BGEQ     346$                                             ;
                     51          B0   AD   9E 018AA         MOVAB    INTMED_DATA, R1                                  ;
                     50   00000000'   EF   9E 018AE         MOVAB    P.AHT, R0                                        ;
                          00000000G   00   16 018B5         JSB      DBG$CVT_DIVD2_R1                                 ;
                     51          B8   AD   9E 018BB         MOVAB    INTMED_DATA+8, R1                                ;
                     50   00000000'   EF   9E 018BF         MOVAB    P.AHU, R0                                        ;
                          00000000G   00   16 018C6         JSB      DBG$CVT_DIVD2_R1                                 ;
                                      58   D6 018CC         INCL     BIN_SCALE                                        ;
                                      D8   11 018CE         BRB      345$                                             ;
                                 30   AE   D5 018D0 346$:   TSTL     SCALE                                            ;
                                      27   15 018D3         BLEQ     347$                                             ;
                     51          B0   AD   9E 018D5         MOVAB    INTMED_DATA, R1                                  ;
                     50   00000000'   EF   9E 018D9         MOVAB    P.AHV, R0                                        ;
                          00000000G   00   16 018E0         JSB      DBG$CVT_MULD2_R1                                 ;
                     51          B8   AD   9E 018E6         MOVAB    INTMED_DATA+8, R1                                ;
                     50   00000000'   EF   9E 018EA         MOVAB    P.AHW, R0                                        ;
                          00000000G   00   16 018F1         JSB      DBG$CVT_MULD2_R1                                 ;
                                 30   AE   D7 018F7         DECL     SCALE                                            ;
                                      D4   11 018FA         BRB      346$                                             ;
                                      27   18 018FC 347$:   BGEQ     348$                                             ;
                     51          B0   AD   9E 018FE         MOVAB    INTMED_DATA, R1                                  ;
                     50   00000000'   EF   9E 01902         MOVAB    P.AHX, R0                                        ;
                          00000000G   00   16 01909         JSB      DBG$CVT_DIVD2_R1                                 ;
                     51          B8   AD   9E 0190F         MOVAB    INTMED_DATA+8, R1                                ;
                     50   00000000'   EF   9E 01913         MOVAB    P.AHY, R0                                        ;
                          00000000G   00   16 0191A         JSB      DBG$CVT_DIVD2_R1                                 ;
                                 30   AE   D6 01920         INCL     SCALE                                            ;
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DBGCVTDX                                                                15-Sep-1984 23:57:30   VAX-11 Bliss-32 V4.0-742                  Page 138
V04-000                                                                 14-Sep-1984 12:16:44   [DEBUG.SRC]DBGCVTDX.B32;1                     (29)

                                                       D7  11 01923          BRB     347$                                          ;
                      16             04                6B  8F 01925 348$:    CASEB   (R11), #4, #22                                ; 3130
      002E          002E           0072              0037     01929 349$:    .WORD   351$-349$,-                                   ;
      002E          002E           0072              002E     01931                  355$-349$,-                                   ;
      002E          002E           002E              002E     01939                  350$-349$,-                                   ;
      002E          002E           002E              002E     01941                  350$-349$,-                                   ;
      002E          002E           002E              002E     01949                  350$-349$,-                                   ;
                    0083           002E              002E     01951                  355$-349$,-                                   ;
                                                                                     350$-349$,-                                   ;
                                                                                     350$-349$,-                                   ;
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                                                                                     350$-349$,-                                   ;
                                                                                     350$-349$,-                                   ;
                                                                                     356$-349$                                     ;
                                        00000000'      EF  9F 01957 350$:    PUSHAB  P.AHZ                                         ; 3156
                                                     1669  31 0195D          BRW     647$                                          ;
                             10     BE        B0       AD  71 01960 351$:    CMPD    INTMED_DATA, @LRGST_D_LU                      ; 3135
                                                       50  DC 01965          MOVPSL  R0                                            ;
      50            50               02                02  EF 01967          EXTZV   #2, #2, R0, R0                                ;
                                     15                50  F4 0196C          SOBGEQ  R0, 352$                                      ;
                                        00000000G      00  DD 0196F          PUSHL   DBG$GL_OPCODE_NAME                            ;
                                                       01  DD 01975          PUSHL   #1                                            ;
                                        000286A3       8F  DD 01977          PUSHL   #165539                                       ;
                          00000000G  00                03  FB 0197D          CALLS   #3, LIB$SIGNAL                                ;
                                              00E0     8F  B9 01984 352$:    BICPSW  #224                                          ; 3136
                                     07         0C     AE  E9 01988          BLBC    CVT_ROUND_FLAG, 353$                          ; 3137
                             34     BE        B0       AD  6B 0198C          CVTRDL  INTMED_DATA, @OUTPUT                          ; 3139
                                                       05  11 01991          BRB     354$                                          ;
                             34     BE        B0       AD  6A 01993 353$:    CVTDL   INTMED_DATA, @OUTPUT                          ; 3141
                                                     11A6  31 01998 354$:    BRW     583$                                          ; 3143
                                     50       B0       AD  9E 0199B 355$:    MOVAB   INTMED_DATA, R0                               ; 3147
                                     51       34       AE  D0 0199F          MOVL    OUTPUT, R1                                    ;
                                        00000000G      00  16 019A3          JSB     DBG$CVT_CVTRDQ_R1                             ;
                                                     162C  31 019A9          BRW     649$                                          ;
                                     51     FF7C       CD  9E 019AC 356$:    MOVAB   TEMP_BUF1, R1                                 ; 3151
                                     50       B0       AD  9E 019B1          MOVAB   INTMED_DATA, R0                               ;
                                        00000000G      00  16 019B5          JSB     DBG$CVT_CVTDH_R1                              ;
                                     50     FF7C       CD  9E 019BB          MOVAB   TEMP_BUF1, R0                                 ; 3152
                                                     0501  31 019C0          BRW     409$                                          ;
                                     02                6B  91 019C3 357$:    CMPB    (R11), #2                                     ; 3164
                                                       0F  13 019C6          BEQL    358$                                          ;
                                     0E                6B  91 019C8          CMPB    (R11), #14                                    ;
                                                       0A  13 019CB          BEQL    358$                                          ;
                                     25                6B  91 019CD          CMPB    (R11), #37                                    ;
                                                       76  1F 019D0          BLSSU   367$                                          ;
                                     27                6B  91 019D2          CMPB    (R11), #39                                    ;
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                                    71   1A 019D5          BGTRU   367$                              :
                      58   AE       32   B0 019D7 358$:    MOVW    #50, CLASS_S_DESC                 : 3166
                      5C   AE  60   AE   9E 019DB          MOVAB   TEMP_BUF2, CLASS_S_DESC+4         : 3167
           01              0A  04   BE   8F 019E0          CASEB   @4(SP), #10, #1                   : 3170
                         0009     0004      019E5 359$:    .WORD   360$-359$,-                       :
                                                                   361$-359$                         :
                           57       07   D0 019E9 360$:    MOVL    #7, DIGITS_IN_FRACT               :
                                    03   11 019EC          BRB     362$                              :
                           57       10   D0 019EE 361$:    MOVL    #16, DIGITS_IN_FRACT              :
                           07  F5   AD   B1 019F1 362$:    CMPW    DST_INFO+5, #7                    : 3180
                                    15   1B 019F5          BLEQU   364$                              :
                           51  F5   AD   3C 019F7          MOVZWL  DST_INFO+5, R1                    : 3183
                           51       07   C2 019FB          SUBL2   #7, R1                            :
                           50       57   D0 019FE          MOVL    DIGITS_IN_FRACT, R0               :
                           51       50   D1 01A01          CMPL    R0, R1                            :
                                    03   15 01A04          BLEQ    363$                              :
                           50       51   D0 01A06          MOVL    R1, R0                            :
                           57       50   D0 01A09 363$:    MOVL    R0, DIGITS_IN_FRACT               : 3182
                                    7E   D4 01A0C 364$:    CLRL    -(SP)                             : 3184
                               34   AE   DD 01A0E          PUSHL   SCALE                             :
                                    57   DD 01A11          PUSHL   DIGITS_IN_FRACT                   :
                               64   AE   9F 01A13          PUSHAB  CLASS_S_DESC                      :
                               B0   AD   9F 01A16          PUSHAB  INTMED_DATA                       :
                 00000000G   00     05   FB 01A19          CALLS   #5, FOR$CVT_D_TE                  :
                           6E       50   D0 01A20          MOVL    R0, STATUS                        :
                           15       6E   E8 01A23          BLBS    STATUS, 365$                      : 3185
                         00000000'  EF   9F 01A26          PUSHAB  P.AIA                             :
                                    01   DD 01A2C          PUSHL   #1                                :
                         00028362   8F   DD 01A2E          PUSHL   #164706                           :
                 00000000G   00     03   FB 01A34          CALLS   #3, LIB$SIGNAL                    :
      60    AE             32       20   3B 01A3B 365$:    SKPC    #32, #50, TEMP_BUF2               : 3186
                                    03   13 01A40          BEQL    366$                              :
                                  FC10   31 01A42          BRW     316$                              :
                                  FC0B   31 01A45 366$:    BRW     315$                              :
                         00000000'  EF   9F 01A48 367$:    PUSHAB  P.AIB                             : 3226
                                  1578   31 01A4E          BRW     647$                              :
                           1B  04   BE   91 01A51 368$:    CMPB    @4(SP), #27                       : 3231
                                    09   13 01A55          BEQL    369$                              :
                           1D  04   BE   91 01A57          CMPB    @4(SP), #29                       : 3232
                                    03   13 01A5B          BEQL    369$                              :
                                  00CB   31 01A5D          BRW     374$                              :
                           51    FF7C   CD   9E 01A60 369$:  MOVAB   TEMP_BUF1, R1                   : 3233
                           50  B0   AD   9E 01A65          MOVAB   INTMED_DATA, R0                   :
                         00000000G  00   16 01A69          JSB     DBG$CVT_CVTGH_R1                  :
                           51  C0   AD   9E 01A6F          MOVAB   INTMED_DATA+16, R1                :
                           50  B8   AD   9E 01A73          MOVAB   INTMED_DATA+8, R0                 :
                         00000000G  00   16 01A77          JSB     DBG$CVT_CVTGH_R1                  :
      B0    AD    FF7C     CD       10   28 01A7D          MOVC3   #16, TEMP_BUF1, INTMED_DATA       :
                                    58   D5 01A84 370$:    TSTL    BIN_SCALE                         :
                                    26   15 01A86          BLEQ    371$                              :
                           51  B0   AD   9E 01A88          MOVAB   INTMED_DATA, R1                   :
                           50 00000000'  EF   9E 01A8C     MOVAB   P.AIC, R0                         :
                         00000000G  00   16 01A93          JSB     DBG$CVT_MULH2_R1                  :
                           51  C0   AD   9E 01A99          MOVAB   INTMED_DATA+16, R1                :
                           50 00000000'  EF   9E 01A9D     MOVAB   P.AID, R0                         :
                         00000000G  00   16 01AA4          JSB     DBG$CVT_MULH2_R1                  :
                                    58   D7 01AAA          DECL    BIN_SCALE                         :
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                     D6  11 01AAC          BRB     370$
                     26  18 01AAE 371$:    BGEQ    372$
   51          B0    AD  9E 01AB0          MOVAB   INTMED_DATA, R1
   50  00000000'     EF  9E 01AB4          MOVAB   P.AIE, R0
       00000000G     00  16 01ABB          JSB     DBG$CVT_DIVH2_R1
   51          C0    AD  9E 01AC1          MOVAB   INTMED_DATA+16, R1
   50  00000000'     EF  9E 01AC5          MOVAB   P.AIF, R0
       00000000G     00  16 01ACC          JSB     DBG$CVT_DIVH2_R1
                     58  D6 01AD2          INCL    BIN_SCALE
                     D8  11 01AD4          BRB     371$
               30    AE  D5 01AD6 372$:    TSTL    SCALE
                     27  15 01AD9          BLEQ    373$
   51          B0    AD  9E 01ADB          MOVAB   INTMED_DATA, R1
   50  00000000'     EF  9E 01ADF          MOVAB   P.AIG, R0
       00000000G     00  16 01AE6          JSB     DBG$CVT_MULH2_R1
   51          C0    AD  9E 01AEC          MOVAB   INTMED_DATA+16, R1
   50  00000000'     EF  9E 01AF0          MOVAB   P.AIH, R0
       00000000G     00  16 01AF7          JSB     DBG$CVT_MULH2_R1
               30    AE  D7 01AFD          DECL    SCALE
                     D4  11 01B00          BRB     372$
                     51  18 01B02 373$:    BGEQ    375$
   51          B0    AD  9E 01B04          MOVAB   INTMED_DATA, R1
   50  00000000'     EF  9E 01B08          MOVAB   P.AII, R0
       00000000G     00  16 01B0F          JSB     DBG$CVT_DIVH2_R1
   51          C0    AD  9E 01B15          MOVAB   INTMED_DATA+16, R1
   50  00000000'     EF  9E 01B19          MOVAB   P.AIJ, R0
       00000000G     00  16 01B20          JSB     DBG$CVT_DIVH2_R1
               30    AE  D6 01B26          INCL    SCALE
                     D7  11 01B29          BRB     373$
                     58  D5 01B2B 374$:    TSTL    BIN_SCALE                                  ; 3235
                     26  15 01B2D          BLEQ    375$
   51          B0    AD  9E 01B2F          MOVAB   INTMED_DATA, R1
   50  00000000'     EF  9E 01B33          MOVAB   P.AIK, R0
       00000000G     00  16 01B3A          JSB     DBG$CVT_MULH2_R1
   51          C0    AD  9E 01B40          MOVAB   INTMED_DATA+16, R1
   50  00000000'     EF  9E 01B44          MOVAB   P.AIL, R0
       00000000G     00  16 01B4B          JSB     DBG$CVT_MULH2_R1
                     58  D7 01B51          DECL    BIN_SCALE
                     D6  11 01B53          BRB     374$
                     58  D5 01B55 375$:    TSTL    BIN_SCALE
                     26  18 01B57          BGEQ    376$
   51          B0    AD  9E 01B59          MOVAB   INTMED_DATA, R1
   50  00000000'     EF  9E 01B5D          MOVAB   P.AIM, R0
       00000000G     00  16 01B64          JSB     DBG$CVT_DIVH2_R1
   51          C0    AD  9E 01B6A          MOVAB   INTMED_DATA+16, R1
   50  00000000'     EF  9E 01B6E          MOVAB   P.AIN, R0
       00000000G     00  16 01B75          JSB     DBG$CVT_DIVH2_R1
                     58  D6 01B7B          INCL    BIN_SCALE
                     D6  11 01B7D          BRB     375$
               30    AE  D5 01B7F 376$:    TSTL    SCALE
                     27  15 01B82          BLEQ    377$
   51          B0    AD  9E 01B84          MOVAB   INTMED_DATA, R1
   50  00000000'     EF  9E 01B88          MOVAB   P.AIO, R0
       00000000G     00  16 01B8F          JSB     DBG$CVT_MULH2_R1
   51          C0    AD  9E 01B95          MOVAB   INTMED_DATA+16, R1
   50  00000000'     EF  9E 01B99          MOVAB   P.AIP, R0
       00000000G     00  16 01BA0          JSB     DBG$CVT_MULH2_R1
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                                      30     AE  D7 01BA6         DECL    SCALE                          ;
                                             D4  11 01BA9         BRB     376$                           ;
                                             27  18 01BAB 377$:   BGEQ    378$                           ;
                               51     B0     AD  9E 01BAD         MOVAB   INTMED_DATA, R1                ;
                               50 00000000'  EF  9E 01BB1         MOVAB   P.AIQ, R0                      ;
                                  00000000G  00  16 01BB8         JSB     DBG$CVT_DIVH2_R1               ;
                               51     C0     AD  9E 01BBE         MOVAB   INTMED_DATA+16, R1             ;
                               50 00000000'  EF  9E 01BC2         MOVAB   P.AIR, R0                      ;
                                  00000000G  00  16 01BC9         JSB     DBG$CVT_DIVH2_R1               ;
                                      30     AE  D6 01BCF         INCL    SCALE                          ;
                                             D7  11 01BD2         BRB     377$                           ;
                               11     0C     AE  E9 01BD4 378$:   BLBC    CVT_ROUND_FLAG, 379$           ; 3237
                               51   FF7C     CD  9E 01BD8         MOVAB   TEMP_BUF1, R1                  ; 3239
                               50     B0     AD  9E 01BDD         MOVAB   INTMED_DATA, R0                ;
                                  00000000G  00  16 01BE1         JSB     DBG$CVT_CVTRHL_R1              ;
                                             07  11 01BE7         BRB     380$                           ;
                          FF7C  CD    B0     AD6AFD 01BE9 379$:   CVTHL   INTMED_DATA, TEMP_BUF1         ; 3241
                     29                01     6B  8F 01BF0 380$:   CASEB   (R11), #1, #41                 ; 3242
       0054          0080          005D          00A3   01BF4 381$:   .WORD   387$-381$,-                    ;
       09A3          08E4          0888          0054   01BFC                 383$-381$,-                    ;
       0054          0054          0054          0054   01C04                 385$-381$,-                    ;
       0054          0054          0054          0054   01C0C                 382$-381$,-                    ;
       0054          0054          0054          0054   01C14                 382$-381$,-                    ;
       0054          0054          0054          0054   01C1C                 479$-381$,-                    ;
       0054          0054          0054          0054   01C24                 486$-381$,-                    ;
       0054          0054          0054          0054   01C2C                 498$-381$,-                    ;
       0054          0054          00A3          0054   01C34                 382$-381$,-                    ;
       00A3          0054          0054          0054   01C3C                 382$-381$,-                    ;
                                   00A3          00A3   01C44                 382$-381$,-                    ;
                                                                              382$-381$,-                    ;
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                                                                              387$-381$,-                    ;
                                                                              382$-381$,-                    ;
                                                                              382$-381$,-                    ;
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                                                                            387$-381$,-                      ;
                                                                            387$-381$,-                      ;
                                                                            387$-381$                        ;
                               00000000'   EF   9F 01C48 382$:    PUSHAB    P.AIS                            ; 3283
                                    1378   31 01C4E               BRW       647$                             ;
                  000000FF   8F     FF7C   CD   D1 01C51 383$:    CMPL      TEMP_BUF1, #255                  ; 3247
                                      15   1B 01C5A               BLEQU     384$                             ;
                               00000000G   00   DD 01C5C          PUSHL     DBG$GL_OPCODE_NAME               ;
                                      01   DD 01C62               PUSHL     #1                               ;
                               000286A3   8F   DD 01C64           PUSHL     #165539                          ;
                  00000000G  00           03   FB 01C6A           CALLS     #3, LIB$SIGNAL                   ;
                                    0CEA   31 01C71 384$:         BRW       549$                             ; 3248
                  0000FFFF   8F     FF7C   CD   D1 01C74 385$:    CMPL      TEMP_BUF1, #65535                ; 3253
                                      15   1B 01C7D               BLEQU     386$                             ;
                               00000000G   00   DD 01C7F          PUSHL     DBG$GL_OPCODE_NAME               ;
                                      01   DD 01C85               PUSHL     #1                               ;
                               000286A3   8F   DD 01C87           PUSHL     #165539                          ;
                  00000000G  00           03   FB 01C8D           CALLS     #3, LIB$SIGNAL                   ;
                                    0D3C   31 01C94 386$:         BRW       560$                             ; 3254
                             52       F5   AD   3C 01C97 387$:    MOVZWL    DST_INFO+5, R2                   ; 3276
                             50            01   CE 01C9B          MNEGL     #1, I                            ; 3278
                                      0C   11 01C9E               BRB       389$                             ;
       51        B0   AD     01            50   EF 01CA0 388$:    EXTZV     I, #1, INTMED_DATA, R1           ;
  34   BE             01     50            51   F0 01CA6          INSV      R1, I, #1, @OUTPUT               ;
                      F0     50            52   F2 01CAC 389$:    AOBLSS    R2, I, 388$                      ; 3276
                                    1325   31 01CB0               BRW       649$                             ; 2187
                             1B       04   BE   91 01CB3 390$:    CMPB      @4(SP), #27                      ; 3289
                                      09   13 01CB7               BEQL      391$                             ;
                             1D       04   BE   91 01CB9          CMPB      @4(SP), #29                      ; 3290
                                      03   13 01CBD               BEQL      391$                             ;
                                    00CB   31 01CBF               BRW       396$                             ;
                             51     FF7C   CD   9E 01CC2 391$:    MOVAB     TEMP_BUF1, R1                    ; 3291
                             50       B0   AD   9E 01CC7          MOVAB     INTMED_DATA, R0                  ;
                               00000000G   00   16 01CCB          JSB       DBG$CVT_CVTGH_R1                 ;
                             51       C0   AD   9E 01CD1          MOVAB     INTMED_DATA+16, R1               ;
                             50       B8   AD   9E 01CD5          MOVAB     INTMED_DATA+8, R0                ;
                               00000000G   00   16 01CD9          JSB       DBG$CVT_CVTGH_R1                 ;
                 B0   AD     FF7C     CD   10   28 01CDF          MOVC3     #16, TEMP_BUF1, INTMED_DATA      ;
                                      58   D5 01CE6 392$:         TSTL      BIN_SCALE                        ;
                                      26   15 01CE8               BLEQ      393$                             ;
                             51       B0   AD   9E 01CEA          MOVAB     INTMED_DATA, R1                  ;
                             50 00000000'  EF   9E 01CEE          MOVAB     P.AIT, R0                        ;
                               00000000G   00   16 01CF5          JSB       DBG$CVT_MULH2_R1                 ;
                             51       C0   AD   9E 01CFB          MOVAB     INTMED_DATA+16, R1               ;
                             50 00000000'  EF   9E 01CFF          MOVAB     P.AIU, R0                        ;
                               00000000G   00   16 01D06          JSB       DBG$CVT_MULH2_R1                 ;
                                      58   D7 01D0C               DECL      BIN_SCALE                        ;
                                      D6   11 01D0E               BRB       392$                             ;
                                      26   18 01D10 393$:         BGEQ      394$                             ;
                             51       B0   AD   9E 01D12          MOVAB     INTMED_DATA, R1                  ;
                             50 00000000'  EF   9E 01D16          MOVAB     P.AIV, R0                        ;
                               00000000G   00   16 01D1D          JSB       DBG$CVT_DIVH2_R1                 ;
                             51       C0   AD   9E 01D23          MOVAB     INTMED_DATA+16, R1               ;
                             50 00000000'  EF   9E 01D27          MOVAB     P.AIW, R0                        ;
                               00000000G   00   16 01D2E          JSB       DBG$CVT_DIVH2_R1                 ;
                                      58   D6 01D34               INCL      BIN_SCALE                        ;
                                      D8   11 01D36               BRB       393$                             ;
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              30   AE   D5 01D38 394$:    TSTL    SCALE                          :
                   27   15 01D3B          BLEQ    395$                           :
     51       B0   AD   9E 01D3D          MOVAB   INTMED_DATA, R1                :
     50 00000000'  EF   9E 01D41          MOVAB   P.AIX, R0                      :
        00000000G  00   16 01D48          JSB     DBG$CVT_MULH2_R1               :
     51       C0   AD   9E 01D4E          MOVAB   INTMED_DATA+16, R1             :
     50 00000000'  EF   9E 01D52          MOVAB   P.AIY, R0                      :
        00000000G  00   16 01D59          JSB     DBG$CVT_MULH2_R1               :
              30   AE   D7 01D5F          DECL    SCALE                          :
                   D4   11 01D62          BRB     394$                           :
                   51   18 01D64 395$:    BGEQ    397$                           :
     51       B0   AD   9E 01D66          MOVAB   INTMED_DATA, R1                :
     50 00000000'  EF   9E 01D6A          MOVAB   P.AIZ, R0                      :
        00000000G  00   16 01D71          JSB     DBG$CVT_DIVH2_R1               :
     51       C0   AD   9E 01D77          MOVAB   INTMED_DATA+16, R1             :
     50 00000000'  EF   9E 01D7B          MOVAB   P.AJA, R0                      :
        00000000G  00   16 01D82          JSB     DBG$CVT_DIVH2_R1               :
              30   AE   D6 01D88          INCL    SCALE                          :
                   D7   11 01D8B          BRB     395$                           :
                   58   D5 01D8D 396$:    TSTL    BIN_SCALE                      : 3293
                   26   15 01D8F          BLEQ    397$                           :
     51       B0   AD   9E 01D91          MOVAB   INTMED_DATA, R1                :
     50 00000000'  EF   9E 01D95          MOVAB   P.AJB, R0                      :
        00000000G  00   16 01D9C          JSB     DBG$CVT_MULH2_R1               :
     51       C0   AD   9E 01DA2          MOVAB   INTMED_DATA+16, R1             :
     50 00000000'  EF   9E 01DA6          MOVAB   P.AJC, R0                      :
        00000000G  00   16 01DAD          JSB     DBG$CVT_MULH2_R1               :
                   58   D7 01DB3          DECL    BIN_SCALE                      :
                   D6   11 01DB5          BRB     396$                           :
                   58   D5 01DB7 397$:    TSTL    BIN_SCALE                      :
                   26   18 01DB9          BGEQ    398$                           :
     51       B0   AD   9E 01DBB          MOVAB   INTMED_DATA, R1                :
     50 00000000'  EF   9E 01DBF          MOVAB   P.AJD, R0                      :
        00000000G  00   16 01DC6          JSB     DBG$CVT_DIVH2_R1               :
     51       C0   AD   9E 01DCC          MOVAB   INTMED_DATA+16, R1             :
     50 00000000'  EF   9E 01DD0          MOVAB   P.AJE, R0                      :
        00000000G  00   16 01DD7          JSB     DBG$CVT_DIVH2_R1               :
                   58   D6 01DDD          INCL    BIN_SCALE                      :
                   D6   11 01DDF          BRB     397$                           :
              30   AE   D5 01DE1 398$:    TSTL    SCALE                          :
                   27   15 01DE4          BLEQ    399$                           :
     51       B0   AD   9E 01DE6          MOVAB   INTMED_DATA, R1                :
     50 00000000'  EF   9E 01DEA          MOVAB   P.AJF, R0                      :
        00000000G  00   16 01DF1          JSB     DBG$CVT_MULH2_R1               :
     51       C0   AD   9E 01DF7          MOVAB   INTMED_DATA+16, R1             :
     50 00000000'  EF   9E 01DFB          MOVAB   P.AJG, R0                      :
        00000000G  00   16 01E02          JSB     DBG$CVT_MULH2_R1               :
              30   AE   D7 01E08          DECL    SCALE                          :
                   D4   11 01E0B          BRB     398$                           :
                   27   18 01E0D 399$:    BGEQ    400$                           :
     51       B0   AD   9E 01E0F          MOVAB   INTMED_DATA, R1                :
     50 00000000'  EF   9E 01E13          MOVAB   P.AJH, R0                      :
        00000000G  00   16 01E1A          JSB     DBG$CVT_DIVH2_R1               :
     51       C0   AD   9E 01E20          MOVAB   INTMED_DATA+16, R1             :
     50 00000000'  EF   9E 01E24          MOVAB   P.AJI, R0                      :
        00000000G  00   16 01E2B          JSB     DBG$CVT_DIVH2_R1               :
              30   AE   D6 01E31          INCL    SCALE                          :
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                                          D7   11 01E34          BRB      399$                                   ;
                 16           04          6B   8F 01E36 400$:    CASEB    (R11), #4, #22                         ; 3295
    002E        002E         007F        0037     01E3A 401$:    .WORD    403$-401$,-                            ;
    002E        002E         007F        002E     01E42                   407$-401$,-                            ;
    002E        002E         002E        002E     01E4A                   402$-401$,-                            ;
    002E        002E         002E        002E     01E52                   402$-401$,-                            ;
    002E        002E         002E        002E     01E5A                   402$-401$,-                            ;
                0086         002E        002E     01E62                   407$-401$,-                            ;
                                                                          402$-401$,-                            ;
                                                                          402$-401$,-                            ;
                                                                          402$-401$,-                            ;
                                                                          402$-401$,-                            ;
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                                                                          402$-401$,-                            ;
                                                                          402$-401$,-                            ;
                                                                          402$-401$,-                            ;
                                                                          402$-401$,-                            ;
                                                                          402$-401$,-                            ;
                                                                          402$-401$,-                            ;
                                                                          408$-401$                              ;
                              00000000'   EF   9F 01E68 402$:    PUSHAB   P.AJJ                                  ; 3317
                                        1158   31 01E6E          BRW      647$                                   ;
                          50        B0    AD   9E 01E71 403$:    MOVAB    INTMED_DATA, R0                        ; 3300
                          51        18    AE   D0 01E75          MOVL     LRGST_A_LU, R1                         ;
                              00000000G   00   16 01E79          JSB      DBG$CVT_CMPH_R1                        ;
                                          50   D5 01E7F          TSTL     R0                                     ;
                                          15   15 01E81          BLEQ     404$                                   ;
                              00000000G   00   DD 01E83          PUSHL    DBG$GL_OPCODE_NAME                     ;
                                          01   DD 01E89          PUSHL    #1                                     ;
                              000286A3    8F   DD 01E8B          PUSHL    #165539                                ;
                   00000000G  00          03   FB 01E91          CALLS    #3, LIB$SIGNAL                         ;
                                  00E0    8F   B9 01E98 404$:    BICPSW   #224                                   ; 3301
                          10        0C    AE   E9 01E9C          BLBC     CVT_ROUND_FLAG, 405$                   ; 3302
                          50        B0    AD   9E 01EA0          MOVAB    INTMED_DATA, R0                        ; 3304
                          51        34    AE   D0 01EA4          MOVL     OUTPUT, R1                             ;
                              00000000G   00   16 01EA8          JSB      DBG$CVT_CVTRHL_R1                      ;
                                          06   11 01EAE          BRB      406$                                   ;
                   34     BE        B0    AD6AFD  01EB0 405$:    CVTHL    INTMED_DATA, @OUTPUT                   ; 3306
                                        0C88   31 01EB6 406$:    BRW      583$                                   ; 3307
                          50        B0    AD   9E 01EB9 407$:    MOVAB    INTMED_DATA, R0                        ; 3311
                                        0CC9   31 01EBD          BRW      586$                                   ;
                          50        B0    AD   9E 01EC0 408$:    MOVAB    INTMED_DATA, R0                        ; 3314
                          51        34    AE   D0 01EC4 409$:    MOVL     OUTPUT, R1                             ;
                                        0866   31 01EC8          BRW      518$                                   ;
                          1B        04    BE   91 01ECB 410$:    CMPB     @4(SP), #27                            ; 3323
                                          09   13 01ECF          BEQL     411$                                   ;
                          1D        04    BE   91 01ED1          CMPB     @4(SP), #29                            ; 3324
                                          03   13 01ED5          BEQL     411$                                   ;
                                        00CB   31 01ED7          BRW      416$                                   ;
                          51      FF7C    CD   9E 01EDA 411$:    MOVAB    TEMP_BUF1, R1                          ; 3325
                          50        B0    AD   9E 01EDF          MOVAB    INTMED_DATA, R0                        ;
                              00000000G   00   16 01EE3          JSB      DBG$CVT_CVTGH_R1                       ;
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                    51        C0   AD   9E 01EE9         MOVAB   INTMED_DATA+16, R1
                    50        B8   AD   9E 01EED         MOVAB   INTMED_DATA+8, R0
                       00000000G   00   16 01EF1         JSB     DBG$CVT_CVTGH_R1
  B0   AD     FF7C  CD             10   28 01EF7         MOVC3   #16, TEMP_BUFT, INTMED_DATA
                                   58   D5 01EFE 412$:   TSTL    BIN_SCALE
                                   26   15 01F00         BLEQ    413$
                    51        B0   AD   9E 01F02         MOVAB   INTMED_DATA, R1
                    50 00000000'   EF   9E 01F06         MOVAB   P.AJK, R0
                       00000000G   00   16 01F0D         JSB     DBG$CVT_MULH2_R1
                    51        C0   AD   9E 01F13         MOVAB   INTMED_DATA+16, R1
                    50 00000000'   EF   9E 01F17         MOVAB   P.AJL, R0
                       00000000G   00   16 01F1E         JSB     DBG$CVT_MULH2_R1
                                   58   D7 01F24         DECL    BIN_SCALE
                                   D6   11 01F26         BRB     412$
                                   26   18 01F28 413$:   BGEQ    414$
                    51        B0   AD   9E 01F2A         MOVAB   INTMED_DATA, R1
                    50 00000000'   EF   9E 01F2E         MOVAB   P.AJM, R0
                       00000000G   00   16 01F35         JSB     DBG$CVT_DIVH2_R1
                    51        C0   AD   9E 01F3B         MOVAB   INTMED_DATA+16, R1
                    50 00000000'   EF   9E 01F3F         MOVAB   P.AJN, R0
                       00000000G   00   16 01F46         JSB     DBG$CVT_DIVH2_R1
                                   58   D6 01F4C         INCL    BIN_SCALE
                                   D8   11 01F4E         BRB     413$
                              30   AE   D5 01F50 414$:   TSTL    SCALE
                                   27   15 01F53         BLEQ    415$
                    51        B0   AD   9E 01F55         MOVAB   INTMED_DATA, R1
                    50 00000000'   EF   9E 01F59         MOVAB   P.AJO, R0
                       00000000G   00   16 01F60         JSB     DBG$CVT_MULH2_R1
                    51        C0   AD   9E 01F66         MOVAB   INTMED_DATA+16, R1
                    50 00000000'   EF   9E 01F6A         MOVAB   P.AJP, R0
                       00000000G   00   16 01F71         JSB     DBG$CVT_MULH2_R1
                              30   AE   D7 01F77         DECL    SCALE
                                   D4   11 01F7A         BRB     414$
                                   51   18 01F7C 415$:   BGEQ    417$
                    51        B0   AD   9E 01F7E         MOVAB   INTMED_DATA, R1
                    50 00000000'   EF   9E 01F82         MOVAB   P.AJQ, R0
                       00000000G   00   16 01F89         JSB     DBG$CVT_DIVH2_R1
                    51        C0   AD   9E 01F8F         MOVAB   INTMED_DATA+16, R1
                    50 00000000'   EF   9E 01F93         MOVAB   P.AJR, R0
                       00000000G   00   16 01F9A         JSB     DBG$CVT_DIVH2_R1
                              30   AE   D6 01FA0         INCL    SCALE
                                   D7   11 01FA3         BRB     415$
                                   58   D5 01FA5 416$:   TSTL    BIN_SCALE                              3327
                                   26   15 01FA7         BLEQ    417$
                    51        B0   AD   9E 01FA9         MOVAB   INTMED_DATA, R1
                    50 00000000'   EF   9E 01FAD         MOVAB   P.AJS, R0
                       00000000G   00   16 01FB4         JSB     DBG$CVT_MULH2_R1
                    51        C0   AD   9E 01FBA         MOVAB   INTMED_DATA+16, R1
                    50 00000000'   EF   9E 01FBE         MOVAB   P.AJT, R0
                       00000000G   00   16 01FC5         JSB     DBG$CVT_MULH2_R1
                                   58   D7 01FCB         DECL    BIN_SCALE
                                   D6   11 01FCD         BRB     416$
                                   58   D5 01FCF 417$:   TSTL    BIN_SCALE
                                   26   18 01FD1         BGEQ    418$
                    51        B0   AD   9E 01FD3         MOVAB   INTMED_DATA, R1
                    50 00000000'   EF   9E 01FD7         MOVAB   P.AJU, R0
                       00000000G   00   16 01FDE         JSB     DBG$CVT_DIVH2_R1
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DBGCVTDX                                          N 13
V04-000                                15-Sep-1984 23:57:30    VAX-11 Bliss-32 V4.0-742              Page 146
                                       14-Sep-1984 12:16:44    [DEBUG.SRC]DBGCVTDX.B32;1                 (29)

                 51        C0   AD   9E 01FE4          MOVAB   INTMED_DATA+16, R1          :
                 50 00000000'   EF   9E 01FE8          MOVAB   P.AJV, R0                   :
                    00000000G   00   16 01FEF          JSB     DBG$CVT_DIVH2_R1            :
                                58   D6 01FF5          INCL    BIN_SCALE                   :
                                D6   11 01FF7          BRB     417$                        :
                           30   AE   D5 01FF9 418$:    TSTL    SCALE                       :
                                27   15 01FFC          BLEQ    419$                        :
                 51        B0   AD   9E 01FFE          MOVAB   INTMED_DATA, R1             :
                 50 00000000'   EF   9E 02002          MOVAB   P.AJW, R0                   :
                    00000000G   00   16 02009          JSB     DBG$CVT_MULH2_R1            :
                 51        C0   AD   9E 0200F          MOVAB   INTMED_DATA+16, R1          :
                 50 00000000'   EF   9E 02013          MOVAB   P.AJX, R0                   :
                    00000000G   00   16 0201A          JSB     DBG$CVT_MULH2_R1            :
                           30   AE   D7 02020          DECL    SCALE                       :
                                D4   11 02023          BRB     418$                        :
                                27   18 02025 419$:    BGEQ    420$                        :
                 51        B0   AD   9E 02027          MOVAB   INTMED_DATA, R1             :
                 50 00000000'   EF   9E 0202B          MOVAB   P.AJY, R0                   :
                    00000000G   00   16 02032          JSB     DBG$CVT_DIVH2_R1            :
                 51        C0   AD   9E 02038          MOVAB   INTMED_DATA+16, R1          :
                 50 00000000'   EF   9E 0203C          MOVAB   P.AJZ, R0                   :
                    00000000G   00   16 02043          JSB     DBG$CVT_DIVH2_R1            :
                           30   AE   D6 02049          INCL    SCALE                       :
                                D7   11 0204C          BRB     419$                        :
      01         0A             6B   8F 0204E 420$:    CASEB   (R11), #10, #1              :  3329
               0057          0047       02052 421$:    .WORD   425$-421$,-                 :
                                                               427$-421$                   :
      01         0C             6B   8F 02056          CASEB   (R11), #12, #1              :  3339
               0026          000D       0205A 422$:    .WORD   423$-422$,-                 :
                                                               424$-422$                   :
                    00000000'   EF   9F 0205E          PUSHAB  P.AKA                       :  3355
                         0F62        31 02064          BRW     647$                        :
                 50        B0   AD   9E 02067 423$:    MOVAB   INTMED_DATA, R0             :  3344
                 51        34   AE   D0 0206B          MOVL    OUTPUT, R1                  :
                    00000000G   00   16 0206F          JSB     DBG$CVT_CVTHF_R1            :
      51        34         AE        04 C1 02075       ADDL3   #4, OUTPUT, R1              :  3345
                 50        C0   AD   9E 0207A          MOVAB   INTMED_DATA+16, R0          :
                                21   11 0207E          BRB     426$                        :
                 50        B0   AD   9E 02080 424$:    MOVAB   INTMED_DATA, R0             :  3350
                 51        34   AE   D0 02084          MOVL    OUTPUT, R1                  :
                    00000000G   00   16 02088          JSB     DBG$CVT_CVTHD_R1            :
      51        34         AE        08 C1 0208E       ADDL3   #8, OUTPUT, R1              :  3351
                 50        C0   AD   9E 02093          MOVAB   INTMED_DATA+16, R0          :
                                18   11 02097          BRB     428$                        :
                 50        B0   AD   9E 02099 425$:    MOVAB   INTMED_DATA, R0             :  3333
                 51        34   AE   D0 0209D          MOVL    OUTPUT, R1                  :
                    00000000G   00   16 020A1 426$:    JSB     DBG$CVT_CVTHF_R1            :
                                0E   11 020A7          BRB     429$                        :
                 50        B0   AD   9E 020A9 427$:    MOVAB   INTMED_DATA, R0             :  3336
                 51        34   AE   D0 020AD          MOVL    OUTPUT, R1                  :
                    00000000G   00   16 020B1 428$:    JSB     DBG$CVT_CVTHD_R1            :
                         0F1E        31 020B7 429$:    BRW     649$                        :  2187
                 02             6B   91 020BA 430$:    CMPB    (R11), #2                   :  3364
                                12   13 020BD          BEQL    433$                        :
                 0E             6B   91 020BF          CMPB    (R11), #14                  :
                                0D   13 020C2          BEQL    433$                        :
                 25             6B   91 020C4          CMPB    (R11), #37                  :
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                                        03  1E 020C7        BGEQU   432$                                   ;
                                      0139  31 020C9 431$:  BRW     448$                                   ;
                   27                   6B  91 020CC 432$:  CMPB    (R11), #39                             ;
                                        F8  1A 020CF        BGTRU   431$                                   ;
             58    AE                   32  B0 020D1 433$:  MOVW    #50, CLASS_S_DESC                      ; 3370
             5C    AE         60        AE  9E 020D5        MOVAB   TEMP_BUF2, CLASS_S_DESC+4              ; 3371
       01          1B         04        BE  8F 020DA        CASEB   @4(SP), #27, #1                        ; 3372
                 004E                 0004     020DF 434$:  .WORD   435$-434$,-                            ;
                                                                    438$-434$                              ;
                   57                   0F  D0 020E3 435$:  MOVL    #15, DIGITS_IN_FRACT                   ; 3376
                   52                   03  D0 020E6        MOVL    #3, DIGITS_IN_EXP                      ; 3377
                   50                   07  D0 020E9        MOVL    #7, NOT_DIGITS                         ; 3378
 50       F5    AD 10                   00  ED 020EC        CMPZV   #0, #16, DST_INFO+5, NOT_DIGITS        ; 3379
                   15                   15  15 020F2        BLEQ    437$                                   ;
                   51         F5        AD  3C 020F4        MOVZWL  DST_INFO+5, R1                         ; 3381
                   51                   50  C2 020F8        SUBL2   NOT_DIGITS, R1                         ;
                   50                   57  D0 020FB        MOVL    DIGITS_IN_FRACT, R0                    ;
                   51                   50  D1 020FE        CMPL    R0, R1                                 ;
                                        03  15 02101        BLEQ    436$                                   ;
                   50                   51  D0 02103        MOVL    R1, R0                                 ;
                   57                   50  D0 02106 436$:  MOVL    R0, DIGITS_IN_FRACT                    ;
                                        52  DD 02109 437$:  PUSHL   DIGITS_IN_EXP                          ; 3382
                                        7E  D4 0210B        CLRL    -(SP)                                  ;
                              38        AE  DD 0210D        PUSHL   SCALE                                  ;
                                        57  DD 02110        PUSHL   DIGITS_IN_FRACT                        ;
                              68        AE  9F 02112        PUSHAB  CLASS_S_DESC                           ;
                              B0        AD  9F 02115        PUSHAB  INTMED_DATA                            ;
                00000000G  00           06  FB 02118        CALLS   #6, FOR$CVT_G_TE                       ;
                           6E           50  D0 0211F        MOVL    R0, STATUS                             ;
                           5F           6E  E8 02122        BLBS    STATUS, 442$                           ; 3383
                         00000000'      EF  9F 02125        PUSHAB  P.AKB                                  ;
                                        48  11 0212B        BRB     441$                                   ;
                   57                   21  D0 0212D 438$:  MOVL    #33, DIGITS_IN_FRACT                   ; 3388
                   52                   04  D0 02130        MOVL    #4, DIGITS_IN_EXP                      ; 3389
                   50                   08  D0 02133        MOVL    #8, NOT_DIGITS                         ; 3390
 50       F5    AD 10                   00  ED 02136        CMPZV   #0, #16, DST_INFO+5, NOT_DIGITS        ; 3391
                   15                   15  15 0213C        BLEQ    440$                                   ;
                   51         F5        AD  3C 0213E        MOVZWL  DST_INFO+5, R1                         ; 3393
                   51                   50  C2 02142        SUBL2   NOT_DIGITS, R1                         ;
                   50                   57  D0 02145        MOVL    DIGITS_IN_FRACT, R0                    ;
                   51                   50  D1 02148        CMPL    R0, R1                                 ;
                                        03  15 0214B        BLEQ    439$                                   ;
                   50                   51  D0 0214D        MOVL    R1, R0                                 ;
                   57                   50  D0 02150 439$:  MOVL    R0, DIGITS_IN_FRACT                    ;
                                        52  DD 02153 440$:  PUSHL   DIGITS_IN_EXP                          ; 3394
                                        7E  D4 02155        CLRL    -(SP)                                  ;
                              38        AE  DD 02157        PUSHL   SCALE                                  ;
                                        57  DD 0215A        PUSHL   DIGITS_IN_FRACT                        ;
                              68        AE  9F 0215C        PUSHAB  CLASS_S_DESC                           ;
                              B0        AD  9F 0215F        PUSHAB  INTMED_DATA                            ;
                00000000G  00           06  FB 02162        CALLS   #6, FOR$CVT_H_TE                       ;
                           6E           50  D0 02169        MOVL    R0, STATUS                             ;
                           15           6E  E8 0216C        BLBS    STATUS, 442$                           ; 3395
                         00000000'      EF  9F 0216F        PUSHAB  P.AKC                                  ;
                                        01  DD 02175 441$:  PUSHL   #1                                     ;
                         00028362       8F  DD 02177        PUSHL   #164706                                ;
                00000000G  00           03  FB 0217D        CALLS   #3, LIB$SIGNAL                         ;
                60   AE          32          20  3B 02184 442$:   SKPC    #32, #50, TEMP_BUF2                        ; 3399
                                             02  12 02189          BNEQ    443$                                       ;
                                             51  D4 0218B          CLRL    R1                                         ;
                                 50     60   AE  9E 0218D 443$:   MOVAB   TEMP_BUF2, R0                              ;
                     5A          51          50  C3 02191          SUBL3   R0, R1, BUF_OFFSET                         ;
                     55          32          5A  C3 02195          SUBL3   BUF_OFFSET, #50, FINAL_LEN                 ; 3400
                            14   AE          55  D0 02199          MOVL    FINAL_LEN, OUTPUT_STR_LEN                  ; 3401
                                 26          6B  91 0219D          CMPB    (R11), #38                                 ; 3405
                                             2E  12 021A0          BNEQ    445$                                       ;
                            58   AE          55  B0 021A2          MOVW    FINAL_LEN, CLASS_S_DESC                    ; 3409
                5C   AE     34   AE          01  C1 021A6          ADDL3   #1, OUTPUT, CLASS_S_DESC+4                 ; 3410
                                 52     58   AE  9E 021AC          MOVAB   CLASS_S_DESC, R2                           ; 3411
                                 51     60 AE4A  9E 021B0          MOVAB   TEMP_BUF2[BUF_OFFSET], R1                  ;
                                 50          55  D0 021B5          MOVL    FINAL_LEN, R0                              ;
                                    00000000G 00  16 021B8          JSB     LIB$SCOPY_R_DX6                            ;
                                 6E          50  D0 021BE          MOVL    R0, STATUS                                 ;
                       00000000G 8F          6E  D1 021C1          CMPL    STATUS, #LIB$_STRTRU                       ; 3412
                                             03  13 021C8          BEQL    444$                                       ;
                                           F4DA  31 021CA          BRW     319$                                       ;
                                           F4C2  31 021CD 444$:   BRW     318$                                       ;
                                 27          6B  91 021D0 445$:   CMPB    (R11), #39                                 ; 3417
                                             03  13 021D3          BEQL    446$                                       ;
                                           F522  31 021D5          BRW     325$                                       ;
                            58   AE          55  B0 021D8 446$:   MOVW    FINAL_LEN, CLASS_S_DESC                    ; 3421
                            5C   AE     34   AE  D0 021DC          MOVL    OUTPUT, CLASS_S_DESC+4                     ; 3422
                                 52     58   AE  9E 021E1          MOVAB   CLASS_S_DESC, R2                           ; 3423
                                 51     60 AE4A  9E 021E5          MOVAB   TEMP_BUF2[BUF_OFFSET], R1                  ;
                                 50          55  D0 021EA          MOVL    FINAL_LEN, R0                              ;
                                    00000000G 00  16 021ED          JSB     LIB$SCOPY_R_DX6                            ;
                                 6E          50  D0 021F3          MOVL    R0, STATUS                                 ;
                       00000000G 8F          6E  D1 021F6          CMPL    STATUS, #LIB$_STRTRU                       ; 3424
                                             03  13 021FD          BEQL    447$                                       ;
                                           F4EF  31 021FF          BRW     323$                                       ;
                                           F4D7  31 02202 447$:   BRW     322$                                       ;
                                    00000000' EF  9F 02205 448$:   PUSHAB  P.AKD                                      ; 3439
                                           0DBB  31 0220B          BRW     647$                                       ;
                                 50     FD   AD  3C 0220E 449$:   MOVZWL  SRC_INFO+5, R0                             ; 3447
                            2C   AE          50  D0 02212          MOVL    R0, NO_DIGITS                              ;
           58        0A   A9     01          03  EF 02216          EXTZV   #3, #1, 10(R9), R8                         ; 3445
                                 6E          58  E9 0221C          BLBC    R8, 454$                                   ;
                                 09     03   AA  91 0221F          CMPB    3(R10), #9                                 ; 3447
                                             0A  12 02223          BNEQ    450$                                       ;
                            30   AE     08   AA  98 02225          CVTBL   8(R10), SCALE                              ;
                            30   AE     30   AE  CE 0222A          MNEGL   SCALE, SCALE                               ;
    FF7C   CD        2C   AE     B0   AD     2C   AE  08 0222F 450$:   CVTPS   NO_DIGITS, INTMED_DATA, NO_DIGITS, -       ;
                                                                       TEMP_BUF1                                  ;
                58   AE     2C   AE          01  A1 02239          ADDW3   #1, NO_DIGITS, CLASS_S_DESC                ;
                            5C   AE   FF7C   CD  9E 0223F          MOVAB   TEMP_BUF1, CLASS_S_DESC+4                  ;
                                 7E     44   8F  9A 02245          MOVZBL  #68, -(SP)                                 ;
                                        34   AE  DD 02249          PUSHL   SCALE                                      ;
                                             7E  D4 0224C          CLRL    -(SP)                                      ;
                                        B0   AD  9F 0224E          PUSHAB  INTMED_DATA                                ;
                                        68   AE  9F 02251          PUSHAB  CLASS_S_DESC                               ;
                       00000000G 00          05  FB 02254          CALLS   #5, OTS$CVT_T_H                            ;
                                 6E          50  D0 0225B          MOVL    R0, STATUS                                 ;
                                 29          6E  E8 0225E          BLBS    STATUS, 453$                               ;
                                 50 00000000G 00  D0 02261          MOVL    DBG$GL_OPCODE_NAME, R0                     ;
```

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                                          30  AE D5 02268         TSTL    SCALE
                                              0C 18 0226B         BGEQ    451$
                                              50 DD 0226D         PUSHL   R0
                                              01 DD 0226F         PUSHL   #1
                                    0002869B  8F DD 02271         PUSHL   #165531
                                              0A 11 02277         BRB     452$
                                              50 DD 02279 451$:   PUSHL   R0
                                              01 DD 0227B         PUSHL   #1
                                    00028A02  8F DD 0227D         PUSHL   #166402
                    00000000G  00             03 FB 02283 452$:   CALLS   #3, LIB$SIGNAL
                                            00D1 31 0228A 453$:   BRW     462$
08  BE          01         B0  AD         2C  AE 37 0228D 454$:   CMPP4   NO_DIGITS, INTMED_DATA, #1, @PACK_ZERO        3471
                                              54 DC 02295         MOVPSL  R4
    54          54             02             02 EF 02297         EXTZV   #2, #2, R4, R4
                                              54 D7 0229C         DECL    R4
                                              04 15 0229E         BLEQ    455$
                           FF  AD             01 88 022A0         BISB2   #1, SRC_INFO+7
                                          30  AE D5 022A4 455$:   TSTL    SCALE
                                              3C 13 022A7         BEQL    458$
          FF7C  CD         B0  AD         2C  AE 34 022A9         MOVP    NO_DIGITS, INTMED_DATA, TEMP_BUF1
                               0E         0C  AE E9 022B1         BLBC    CVT_ROUND_FLAG, 456$
                               55         B0  AD 9E 022B5         MOVAB   INTMED_DATA, R5
                               54         2C  AE 9E 022B9         MOVAB   NO_DIGITS, R4
                           18  AE             05 D0 022BD         MOVL    #5, 24(SP)
                                              0B 11 022C1         BRB     457$
                               55         B0  AD 9E 022C3 456$:   MOVAB   INTMED_DATA, R5
                               54         2C  AE 9E 022C7         MOVAB   NO_DIGITS, R4
                                          18  AE D4 022CB         CLRL    24(SP)
                               53         18  AE 9E 022CE 457$:   MOVAB   24(SP), R3
                               52       FF7C  CD 9E 022D2         MOVAB   TEMP_BUF1, R2
                               51         2C  AE 9E 022D7         MOVAB   NO_DIGITS, R1
                               50         30  AE 9E 022DB         MOVAB   SCALE, R0
                                   00000000G  00 16 022DF         JSB     DBG$CVT_ASHP_R1
                               50             6A 3C 022E5 458$:   MOVZWL  (R10), R0
                               51         08  AA 98 022E8         CVTBL   8(R10), R1
                               50             51 C0 022EC         ADDL2   R1, R0
                               52             69 3C 022EF         MOVZWL  (R9), R2
                               51         08  A9 98 022F2         CVTBL   8(R9), R1
                               52             51 C0 022F6         ADDL2   R1, R2
                               52             50 D1 022F9         CMPL    R0, R2
                                              58 15 022FC         BLEQ    461$
                               15         04  BE 91 022FE         CMPB    @4(SP), #21
                                              52 12 02302         BNEQ    461$
                               15             6B 91 02304         CMPB    (R11), #21
                                              4D 12 02307         BNEQ    461$
                               50         BF  AD 9E 02309         MOVAB   INTMED_DATA+15, HIGH_NIBBLE_PTR
                               52             69 3C 0230D         MOVZWL  (R9), R2
                               52             02 C6 02310         DIVL2   #2, R2
                               52             50 C2 02313         SUBL2   HIGH_NIBBLE_PTR, R2
                               52             52 CE 02316         MNEGL   R2, LOW_NIBBLE_PTR
                               50             69 3C 02319         MOVZWL  (R9), R0
    7E          00             50             01 7A 0231C         EMUL    #1, R0, #0, -(SP)
    50          50             8E             02 7B 02321         EDIV    #2, (SP)+, R0, R0
                                              50 D5 02326         TSTL    R0
                                              08 12 02328         BNEQ    459$
    50          62             04             00 EF 0232A         EXTZV   #0, #4, (LOW_NIBBLE_PTR), R0
                               62             50 90 0232F         MOVB    R0, (LOW_NIBBLE_PTR)
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                                          52  D7 02332 459$:   DECL    LOW_NIBBLE_PTR                          :
                         50        B0     AD  9E 02334         MOVAB   INTMED_DATA, R0                         :
                         50               52  D1 02338         CMPL    LOW_NIBBLE_PTR, R0                      :
                                          04  19 0233B         BLSS    460$                                    :
                                          62  94 0233D         CLRB    (LOW_NIBBLE_PTR)                        :
                                          F1  11 0233F         BRB     459$                                    :
                                00000000G 00  DD 02341 460$:   PUSHL   DBG$GL_OPCODE_NAME                      :
                                          01  DD 02347         PUS.L   #1                                      :
                                0002809B  8F  DD 02349         PUSHL   #163995                                 :
                      00000000G  00       03  FB 0234F         CALLS   #3, LIB$SIGNAL                          :
             FF7C  CD       B0   AD   2C  AE  36 02356 461$:   CVTPL   NO_DIGITS, INTMED_DATA, TEMP_BUF1       : 3473
                   29            01       6B  8F 0235E 462$:   CASEB   (RT1), #1, #41                          : 3476
     0054          00BA          005D     023D     02362 463$:   .WORD   499$-463$,-                           :
     01CF          0173          0117     0054     0236A                 465$-463$,-                           :
     0054          0054          0054     0054     02372                 471$-463$,-                           :
     0054          0054          0054     0054     0237A                 464$-463$,-                           :
     0054          0054          0054     0054     02382                 464$-463$,-                           :
     0054          0054          0054     0054     0238A                 478$-463$,-                           :
     0054          0054          0054     0054     02392                 485$-463$,-                           :
     0054          0054          0054     0054     0239A                 492$-463$,-                           :
     0054          0054          023D     0054     023A2                 464$-463$,-                           :
     023D          0054          0054     0054     023AA                 464$-463$,-                           :
                                 023D     023D     023B2                 464$-463$,-                           :
                                                                         464$-463$,-                           :
                                                                         464$-463$,-                           :
                                                                         464$-463$,-                           :
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                                                                         464$-463$,-                           :
                                                                         464$-463$,-                           :
                                                                         499$-463$,-                           :
                                                                         499$-463$,-                           :
                                                                         499$-463$                             :
                                00000000'  EF  9F 023B6 464$:  PUSHAB  P.AKE                                   : 3713
                                     0C0A  31 023BC            BRW     647$                                    :
                         03                58  E8 023BF 465$:  BLBS    R8, 466$                                :
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```
                                          F88C  31 023C2        BRW     383$                            ;
                                    B0    AD  B5 023C5  466$:  TSTW    INTMED_DATA                     ; 3498
                                            03  12 023C8        BNEQ    467$                            ;
                                          053C  31 023CA        BRW     542$                            ;
                                  FF7C    CD  D4 023CD  467$:  CLRL    TEMP_BUF1                       ; 3503
        56    B1    AD          01          07  EF 023D1        EXTZV   #7, #1, INTMED_DATA+1, SIGN     ; 3504
                          B1    AD    80    8F  8A 023D7        BICB2   #128, INTMED_DATA+1             ; 3505
                                54    B0    AD  3C 023DC        MOVZWL  INTMED_DATA, FLOAT_SCALE        ; 3506
                                54  C000    C4  9E 023E0        MOVAB   -16384(R4), FLOAT_SCALE         ;
                                52    08    A9  98 023E5        CVTBL   8(R9), R2                       ; 3507
                                52          07  C0 023E9        ADDL2   #7, R2                          ;
                                52          54  D1 023EC        CMPL    FLOAT_SCALE, R2                 ;
                                            5B  14 023EF        BGTR    474$                            ;
                        FF7C    CD    40    8F  88 023F1        BISB2   #64, TEMP_BUF1                  ; 3512
        50    B3    AD          06          02  EF 023F7        EXTZV   #2, #6, INTMED_DATA+3, R0       ; 3513
  FF7C  CD          06          00          50  F0 023FD        INSV    R0, #0, #6, TEMP_BUF1           ;
                    54          52          54  C3 02404        SUBL3   FLOAT_SCALE, R2, FLOAT_SCALE    ; 3514
                                            09  15 02408  468$:  BLEQ    469$                            ; 3515
                        FF7C    CD          02  C6 0240A        DIVL2   #2, TEMP_BUF1                   ; 3517
                                            54  D7 0240F        DECL    FLOAT_SCALE                     ; 3518
                                            F5  11 02411        BRB     468$                            ; 3515
                                03          56  E8 02413  469$:  BLBS    SIGN, 470$                      ; 3520
                                          0545  31 02416        BRW     549$                            ;
                                          053B  31 02419  470$:  BRW     548$                            ;
                                03          58  E8 0241C  471$:  BLBS    R8, 472$                        ; 3532
                                          F852  31 0241F        BRW     385$                            ;
                                    B0    AD  B5 02422  472$:  TSTW    INTMED_DATA                     ; 3545
                                            03  12 02425        BNEQ    473$                            ;
                                          0554  31 02427        BRW     553$                            ;
                                  FF7C    CD  D4 0242A  473$:  CLRL    TEMP_BUF1                       ; 3550
        56    B1    AD          01          07  EF 0242E        EXTZV   #7, #1, INTMED_DATA+1, SIGN     ; 3551
                          B1    AD    80    8F  8A 02434        BICB2   #128, INTMED_DATA+1             ; 3552
                                54    B0    AD  3C 02439        MOVZWL  INTMED_DATA, FLOAT_SCALE        ; 3553
                                54  C000    C4  9E 0243D        MOVAB   -16384(R4), FLOAT_SCALE         ;
                                52    08    A9  98 02442        CVTBL   8(R9), R2                       ; 3554
                                52          0F  C0 02446        ADDL2   #15, R2                         ;
                                52          54  D1 02449        CMPL    FLOAT_SCALE, R2                 ;
                                            60  14 0244C  474$:  BGTR    482$                            ;
                        FF7D    CD    40    8F  88 0244E        BISB2   #64, TEMP_BUF1+1                ; 3559
        50    B2    AD          0E          02  EF 02454        EXTZV   #2, #14, INTMED_DATA+2, R0      ; 3560
  FF7C  CD          0E          00          50  F0 0245A        INSV    R0, #0, #14, TEMP_BUF1          ;
                    54          52          54  C3 02461        SUBL3   FLOAT_SCALE, R2, FLOAT_SCALE    ; 3561
                                            09  15 02465  475$:  BLEQ    476$                            ; 3562
                        FF7C    CD          02  C6 02467        DIVL2   #2, TEMP_BUF1                   ; 3564
                                            54  D7 0246C        DECL    FLOAT_SCALE                     ; 3565
                                            F5  11 0246E        BRB     475$                            ; 3562
                                03          56  E8 02470  476$:  BLBS    SIGN, 477$                      ; 3567
                                          055D  31 02473        BRW     560$                            ;
                                          0553  31 02476  477$:  BRW     559$                            ;
                                08          58  E8 02479  478$:  BLBS    R8, 480$                        ; 3579
                                50  FF7C    CD  9E 0247C  479$:  MOVAB   TEMP_BUF1, R0                   ; 3581
                                          0474  31 02481        BRW     540$                            ;
                                    B0    AD  B5 02484  480$:  TSTW    INTMED_DATA                     ; 3587
                                            03  12 02487        BNEQ    481$                            ;
                                          047D  31 02489        BRW     542$                            ;
                                  FF7C    CD  D4 0248C  481$:  CLRL    TEMP_BUF1                       ; 3592
        56    B1    AD          01          07  EF 02490        EXTZV   #7, #1, INTMED_DATA+1, SIGN     ; 3593
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                          B1    AD    80    8F 8A 02496        BICB2   #128, INTMED_DATA+1                      ; 3594
                                54    B0    AD 3C 0249B        MOVZWL  INTMED_DATA, FLOAT_SCALE                 ; 3595
                                54  C000    C4 9E 0249F        MOVAB   -16384(R4), FLOAT_SCALE
                                52    08    A9 98 024A4        CVTBL   8(R9), R2                                ; 3596
                                52          07 C0 024A8        ADDL2   #7, R2
                                52          54 D1 024AB        CMPL    FLOAT_SCALE, R2
                                            5A 14 024AE 482$:  BGTR    489$
                        FF7C    CD    40    8F 88 024B0        BISB2   #64, TEMP_BUF1                           ; 3601
        50    B3    AD          06          02 EF 024B6        EXTZV   #2, #6, INTMED_DATA+3, R0                ; 3602
  FF7C  CD          06          00          50 F0 024BC        INSV    R0, #0, #6, TEMP_BUF1
                    54          52          54 C3 024C3        SUBL3   FLOAT_SCALE, R2, FLOAT_SCALE             ; 3603
                                            03 14 024C7 483$:  BGTR    484$                                     ; 3604
                                          FF47 31 024C9        BRW     469$
                        FF7C    CD          02 C6 024CC 484$:  DIVL2   #2, TEMP_BUF1                            ; 3606
                                            54 D7 024D1        DECL    FLOAT_SCALE                              ; 3607
                                            F2 11 024D3        BRB     483$                                     ; 3604
                                08          58 E8 024D5 485$:  BLBS    R8, 487$                                 ; 3621
                                50  FF7C    CD 9E 024D8 486$:  MOVAB   TEMP_BUF1, R0                            ; 3623
                                          048D 31 024DD        BRW     551$
                                      B0    AD B5 024E0 487$:  TSTW    INTMED_DATA                              ; 3629
                                            03 12 024E3        BNEQ    488$
                                          0496 31 024E5        BRW     553$
                                    FF7C    CD D4 024E8 488$:  CLRL    TEMP_BUF1                                ; 3634
        56    B1    AD          01          07 EF 024EC        EXTZV   #7, #1, INTMED_DATA+1, SIGN              ; 3635
                          B1    AD    80    8F 8A 024F2        BICB2   #128, INTMED_DATA+1                      ; 3636
                                54    B0    AD 3C 024F7        MOVZWL  INTMED_DATA, FLOAT_SCALE                 ; 3637
                                54  C000    C4 9E 024FB        MOVAB   -16384(R4), FLOAT_SCALE
                                52    08    A9 98 02500        CVTBL   8(R9), R2                                ; 3638
                                52          0F C0 02504        ADDL2   #15, R2
                                52          54 D1 02507        CMPL    FLOAT_SCALE, R2
                                            52 14 0250A 489$:  BGTR    494$
                        FF7D    CD    40    8F 88 0250C        BISB2   #64, TEMP_BUF1+1                         ; 3643
        50    B2    AD          0E          02 EF 02512        EXTZV   #2, #14, INTMED_DATA+2, R0               ; 3644
  FF7C  CD          0E          00          50 F0 02518        INSV    R0, #0, #14, TEMP_BUF1
                    54          52          54 C3 0251F        SUBL3   FLOAT_SCALE, R2, FLOAT_SCALE             ; 3645
                                            03 14 02523 490$:  BGTR    491$                                     ; 3646
                                          FF48 31 02525        BRW     476$
                        FF7C    CD          02 C6 02528 491$:  DIVL2   #2, TEMP_BUF1                            ; 3648
                                            54 D7 0252D        DECL    FLOAT_SCALE                              ; 3649
                                            F2 11 0252F        BRB     490$                                     ; 3646
                                63          58 E9 02531 492$:  BLBC    R8, 498$                                 ; 3663
                                      B0    AD B5 02534        TSTW    INTMED_DATA                              ; 3671
                                            03 12 02537        BNEQ    493$
                                          04A8 31 02539        BRW     562$
                                    FF7C    CD D4 0253C 493$:  CLRL    TEMP_BUF1                                ; 3676
        56    B1    AD          01          07 EF 02540        EXTZV   #7, #1, INTMED_DATA+1, SIGN              ; 3677
                          B1    AD    80    8F 8A 02546        BICB2   #128, INTMED_DATA+1                      ; 3678
                                54    B0    AD 3C 0254B        MOVZWL  INTMED_DATA, FLOAT_SCALE                 ; 3679
                                54  C000    C4 9E 0254F        MOVAB   -16384(R4), FLOAT_SCALE
                                52    08    A9 98 02554        CVTBL   8(R9), R2                                ; 3680
                                52          1F C0 02558        ADDL2   #31, R2
                                52          54 D1 0255B        CMPL    FLOAT_SCALE, R2
                                            03 15 0255E 494$:  BLEQ    495$
                                          04AC 31 02560        BRW     565$
                        FF7F    CD    40    8F 88 02563 495$:  BISB2   #64, TEMP_BUF1+3                         ; 3685
  FF7D  CD          10          06    B2    AD F0 02569        INSV    INTMED_DATA+2, #6, #16, TEMP_BUF1+1      ; 3686
        50    B6    AD          0E          02 EF 02571        EXTZV   #2, #14, INTMED_DATA+6, R0               ; 3687
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    FF7C      CD              0E        00                 50  F0 02577        INSV     R0, #0, #14, TEMP_BUF1                         ;
                              54        52                 54  C3 0257E        SUBL3    FLOAT_SCALE, R2, FLOAT_SCALE                   ; 3688
                                                           09  15 02582 496$:  BLEQ     497$                                           ; 3689
                                  FF7C  CD                 02  C6 02584        DIVL2    #2, TEMP_BUF1                                  ; 3691
                                                           54  D7 02589        DECL     FLOAT_SCALE                                    ; 3692
                                                           F5  11 0258B        BRB      496$                                           ; 3689
                                        07                 56  E9 0258D 497$:  BLBC     SIGN, 498$                                     ; 3694
                                  FF7C  CD       FF7C      CD  CE 02590        MNEGL    TEMP_BUF1, TEMP_BUF1                           ;
                                    34  BE       FF7C      CD  D0 02597 498$:  MOVL     TEMP_BUF1, @OUTPUT                             ; 3695
                                                           19  11 0259D        BRB      502$                                           ; 3476
                                        52         F5      AD  3C 0259F 499$:  MOVZWL   DST_INFO+5, R2                                 ; 3706
                                        50                 01  CE 025A3        MNEGL    #1, I                                          ; 3708
                                                           0C  11 025A6        BRB      501$                                           ;
              51      B0      AD        01                 50  EF 025A8 500$:  EXTZV    I, #1, INTMED_DATA, R1                         ;
      34      BE              01        50                 51  F0 025AE        INSV     R1, I, #1, @OUTPUT                             ;
                              F0        50                 52  F2 025B4 501$:  AOBLSS   R2, I, 500$                                    ; 3706
                                                     0A1D  31 025B8 502$:      BRW      649$                                           ; 2187
                                    2C  AE         FD      AD  3C 025BB 503$:  MOVZWL   SRC_INFO+5, NO_DIGITS                          ; 3718
      08      BE              01    B0  AD         2C      AE  37 025C0        CMPP4    NO_DIGITS, INTMED_DATA, #1, @PACK_ZERO         ;
                                                           54  DC 025C8        MOVPSL   R4                                             ;
              54              54        02                 02  EF 025CA        EXTZV    #2, #2, R4, R4                                 ;
                                                           54  D7 025CF        DECL     R4                                             ;
                                                           04  15 025D1        BLEQ     504$                                           ;
                                    FF  AD                 01  88 025D3        BISB2    #1, SRC_INFO+7                                 ;
                                                   30      AE  D5 025D7 504$:  TSTL     SCALE                                          ;
                                                           3C  13 025DA        BEQL     507$                                           ;
                      FF7C    CD    B0  AD         2C      AE  34 025DC        MOVP     NO_DIGITS, INTMED_DATA, TEMP_BUF1              ;
                                        0E         0C      AE  E9 025E4        BLBC     CVT_ROUND_FLAG, 505$                           ;
                                        55         B0      AD  9E 025E8        MOVAB    INTMED_DATA, R5                                ;
                                        54         2C      AE  9E 025EC        MOVAB    NO_DIGITS, R4                                  ;
                                    18  AE                 05  D0 025F0        MOVL     #5, 24(SP)                                     ;
                                                           0B  11 025F4        BRB      506$                                           ;
                                        55         B0      AD  9E 025F6 505$:  MOVAB    INTMED_DATA, R5                                ;
                                        54         2C      AE  9E 025FA        MOVAB    NO_DIGITS, R4                                  ;
                                                   18      AE  D4 025FE        CLRL     24(SP)                                         ;
                                        53         18      AE  9E 02601 506$:  MOVAB    24(SP), R3                                     ;
                                        52       FF7C      CD  9E 02605        MOVAB    TEMP_BUF1, R2                                  ;
                                        51         2C      AE  9E 0260A        MOVAB    NO_DIGITS, R1                                  ;
                                        50         30      AE  9E 0260E        MOVAB    SCALE, R0                                      ;
                                            00000000G      00  16 02612        JSB      DBG$CVT_ASHP_R1                                ;
                                        50                 6A  3C 02618 507$:  MOVZWL   (R10), R0                                      ;
                                        51         08      AA  98 0261B        CVTBL    8(R10), R1                                     ;
                                        50                 51  C0 0261F        ADDL2    R1, R0                                         ;
                                        52                 69  3C 02622        MOVZWL   (R9), R2                                       ;
                                        51         08      A9  98 02625        CVTBL    8(R9), R1                                      ;
                                        52                 51  C0 02629        ADDL2    R1, R2                                         ;
                                        52                 50  D1 0262C        CMPL     R0, R2                                         ;
                                                           58  15 0262F        BLEQ     510$                                           ;
                                        15         04      BE  91 02631        CMPB     @4(SP), #21                                    ;
                                                           52  12 02635        BNEQ     510$                                           ;
                                        15                 6B  91 02637        CMPB     (R11), #21                                     ;
                                                           4D  12 0263A        BNEQ     510$                                           ;
                                        50         BF      AD  9E 0263C        MOVAB    INTMED_DATA+15, HIGH_NIBBLE_PTR                ;
                                        52                 69  3C 02640        MOVZWL   (R9), R2                                       ;
                                        52                 02  C6 02643        DIVL2    #2, R2                                         ;
                                        52                 50  C2 02646        SUBL2    HIGH_NIBBLE_PTR, R2                            ;
                                        52                 52  CE 02649        MNEGL    R2, LOW_NIBBLE_PTR                             ;
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                         50             69  3C 0264C        MOVZWL  (R9), R0                                 :
     7E        00        50             01  7A 0264F        EMUL    #1, R0, #0, -(SP)                        :
     50        50        8E             02  7B 02654        EDIV    #2, (SP)+, R0, R0                        :
                                        50  D5 02659        TSTL    R0                                       :
                                        08  12 0265B        BNEQ    508$                                     :
     50        62        04             00  EF 0265D        EXTZV   #0, #4, (LOW_NIBBLE_PTR), R0             :
                         62             50  90 02662        MOVB    R0, (LOW_NIBBLE_PTR)                     :
                                        52  D7 02665 508$:  DECL    LOW_NIBBLE_PTR                           :
                         50       B0    AD  9E 02667        MOVAB   INTMED_DATA, R0                          :
                         50             52  D1 0266B        CMPL    LOW_NIBBLE_PTR, R0                       :
                                        04  19 0266E        BLSS    509$                                     :
                                        62  94 02670        CLRB    (LOW_NIBBLE_PTR)                         :
                                        F1  11 02672        BRB     508$                                     :
                           00000000G    00  DD 02674 509$:  PUSHL   DBG$GL_OPCODE_NAME                       :
                                        01  DD 0267A        PUSHL   #1                                       :
                           0002809B     8F  DD 0267C        PUSHL   #163995                                  :
                00000000G  00           03  FB 02682        CALLS   #3, LIB$SIGNAL                           :
               16          04           6B  8F 02689 510$:  CASEB   (R11), #4, #22                           :  3721
   002E        002E        006C       0037     0268D 511$:  .WORD   513$-511$,-                              :
   002E        002E        006C       002E     02695                515$-511$,-                              :
   002E        002E        002E       002E     0269D                512$-511$,-                              :
   002E        002E        002E       002E     026A5                512$-511$,-                              :
   002E        002E        002E       002E     026AD                512$-511$,-                              :
               006C        002E       002E     026B5                515$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    512$-511$,-                              :
                                                                    515$-511$                                :
                           00000000'    EF  9F 026BB 512$:  PUSHAB  P.AKF                                    :  3749
                                      0905  31 026C1        BRW     647$                                     :
 1C  BE        0A     B0   AD      2C   AE  37 026C4 513$:  CMPP4   NO_DIGITS, INTMED_DATA, #10, @LRGST_P_LU :  3726
                                        58  DC 026CC        MOVPSL  R8                                       :
     58        58          02           02  EF 026CE        EXTZV   #2, #2, R8, R8                           :
                           15           58  F5 026D3        SOBGTR  R8, 514$                                 :
                           00000000G    00  DD 026D6        PUSHL   DBG$GL_OPCODE_NAME                       :  3728
                                        01  DD 026DC        PUSHL   #1                                       :
                           000286A3     8F  DD 026DE        PUSHL   #165539                                  :
                00000000G  00           03  FB 026E4        CALLS   #3, LIB$SIGNAL                           :
                                  00E0  8F  B9 026EB 514$:  BICPSW  #224                                     :  3729
          34   BE     B0   AD      2C   AE  36 026EF        CVTPL   NO_DIGITS, INTMED_DATA, @OUTPUT          :  3730
                                      0448  31 026F6        BRW     583$                                     :  3731
 60  AE   2C   AE     B0   AD      2C   AE  08 026F9 515$:  CVTPS   NO_DIGITS, INTMED_DATA, NO_DIGITS, -     :  3736
                                                                    TEMP_BUF2                                :
          58   AE     2C   AE           01  A1 02702        ADDW3   #1, NO_DIGITS, CLASS_S_DESC              :  3737
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                        5C     AE       60   AE   9E 02708          MOVAB   TEMP_BUF2, CLASS_S_DESC+4              ; 3738
                                      FF7C   CD   9F 0270D          PUSHAB  TEMP_BUF1                              ; 3739
                                        5C   AE   9F 02711          PUSHAB  CLASS_S_DESC                           ;
                 00000000G     00            02   FB 02714          CALLS   #2, OTS$CVT_T_H                        ;
                               09            6B   91 0271B          CMPB    (R11), #9                              ; 3740
                                             03   13 0271E          BEQL    516$                                   ;
                               05            6B   91 02720          CMPB    (R11), #5                              ; 3741
                                             03   12 02723 516$:    BNEQ    517$                                   ;
                                           045C   31 02725          BRW     585$                                   ;
                               51       34   AE   9E 02728 517$:    MOVAB   OUTPUT, R1                             ; 3745
                               50     FF7C   CD   9E 0272C          MOVAB   TEMP_BUF1, R0                          ;
                                 00000000G   00   16 02731 518$:    JSB     DBG$CVT_CVTRHO_R1                      ;
                                           089E   31 02737          BRW     649$                                   ; 3721
                        58     AE       FD   AD   B0 0273A 519$:    MOVW    SRC_INFO+5, CLASS_S_DESC               ; 3755
                        5C     AE       F9   AD   D0 0273F          MOVL    SRC_INFO+1, CLASS_S_DESC+4             ; 3756
                               7E       55   8F   9A 02744          MOVZBL  #85, -(SP)                             ; 3758
                               7E       34   AE   CE 02748          MNEGL   SCALE, -(SP)                           ; 3757
                                             7E   D4 0274C          CLRL    -(SP)                                  ;
                                      FF7C   CD   9F 0274E          PUSHAB  TEMP_BUF1                              ;
                                        68   AE   9F 02752          PUSHAB  CLASS_S_DESC                           ;
                 00000000G     00            05   FB 02755          CALLS   #5, OTS$CVT_T_H                        ;
                               6E            50   D0 0275C          MOVL    R0, STATUS                             ;
                               15            6E   E8 0275F          BLBS    STATUS, 520$                           ; 3759
                                 00000000G   00   DD 02762          PUSHL   DBG$GL_OPCODE_NAME                     ;
                                             01   DD 02768          PUSHL   #1                                     ;
                                  00028298   8F   DD 0276A          PUSHL   #164504                                ;
                 00000000G     00            03   FB 02770          CALLS   #3, LIB$SIGNAL                         ;
    52          0A     A9      01            03   EF 02777 520$:    EXTZV   #3, #1, 10(R9), R2                     ; 3780
                               1C            52   E8 0277D          BLBS    R2, 522$                               ;
                               11       0C   AE   E9 02780          BLBC    CVT_ROUND_FLAG, 521$                   ; 3782
                               51       60   AE   9E 02784          MOVAB   TEMP_BUF2, R1                          ; 3784
                               50     FF7C   CD   9E 02788          MOVAB   TEMP_BUF1, R0                          ;
                                 00000000G   00   16 0278D          JSB     DBG$CVT_CVTRHL_R1                      ;
                                             07   11 02793          BRB     522$                                   ;
                        60     AE     FF7C   CD6AFD 02795 521$:     CVTHL   TEMP_BUF1, TEMP_BUF2                   ; 3786
                   29          01            6B   8F 0279C 522$:    CASEB   (R11), #1, #41                         ; 3788
    0054          00D7       005D          02B6      027A0 523$:    .WORD   571$-523$,-                            ;
    023B          01C6       0151          0054      027A8                  525$-523$,-                            ;
    0054          0054       0054          0054      027B0                  531$-523$,-                            ;
    0054          0054       0054          0054      027B8                  524$-523$,-                            ;
    0054          0054       0054          0054      027C0                  524$-523$,-                            ;
    0054          0054       0054          0054      027C8                  539$-523$,-                            ;
    0054          0054       0054          0054      027D0                  550$-523$,-                            ;
    0054          0054       0054          0054      027D8                  561$-523$,-                            ;
    0054          0054       02B6          0054      027E0                  524$-523$,-                            ;
    02B6          0054       0054          0054      027E8                  524$-523$,-                            ;
                             02B6          02B6      027F0                  524$-523$,-                            ;
                                                                            524$-523$,-                            ;
                                                                            524$-523$,-                            ;
                                                                            524$-523$,-                            ;
                                                                            524$-523$,-                            ;
                                                                            524$-523$,-                            ;
                                                                            524$-523$,-                            ;
                                                                            524$-523$,-                            ;
                                                                            524$-523$,-                            ;
                                                                            524$-523$,-                            ;
                                                                            524$-523$,-                            ;
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                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         571$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         524$-523$,-                              ;
                                                                         571$-523$,-                              ;
                                                                         571$-523$,-                              ;
                                                                         571$-523$                                ;
                                00000000'  EF   9F 027F4 524$:   PUSHAB  P.AKG                                    ; 4025
                                     07CC  31 027FA            BRW     647$                                       ;
                         26            52  E8 027FD 525$:      BLBS    R2, 527$                                   ;
               000000FF  8F       60   AE  D1 02800            CMPL    TEMP_BUF2, #255                            ; 3800
                                       15  1B 02808            BLEQU   526$                                       ;
                              00000000G  00  DD 0280A          PUSHL   DBG$GL_OPCODE_NAME                         ; 3802
                                       01  DD 02810            PUSHL   #1                                         ;
                               000286A3  8F  DD 02812          PUSHL   #165539                                    ;
               00000000G  00           03  FB 02818            CALLS   #3, LIB$SIGNAL                             ;
                         34  BE   60   AE  90 0281F 526$:      MOVB    TEMP_BUF2, @OUTPUT                         ; 3803
                                       78  11 02824            BRB     533$                                       ; 3797
                                  B0   AD  B5 02826 527$:      TSTW    INTMED_DATA                                ; 3810
                                       03  12 02829            BNEQ    528$                                       ;
                                     00DB  31 0282B            BRW     542$                                       ;
                                FF7C   CD  D4 0282E 528$:      CLRL    TEMP_BUF1                                  ; 3815
   56       B1    AD         01        07  EF 02832            EXTZV   #7, #1, INTMED_DATA+1, SIGN                ; 3816
                       B1    AD   80   8F  8A 02838            BICB2   #128, INTMED_DATA+1                        ; 3817
                             54   B0   AD  3C 0283D            MOVZWL  INTMED_DATA, FLOAT_SCALE                   ; 3818
                             54 C000   C4  9E 02841            MOVAB   -16384(R4), FLOAT_SCALE                    ;
                             52   08   A9  98 02846            CVTBL   8(R9), R2                                  ; 3819
                             52        07  C0 0284A            ADDL2   #7, R2                                     ;
                             52        54  D1 0284D            CMPL    FLOAT_SCALE, R2                            ;
                                       78  14 02850            BGTR    536$                                       ;
                     FF7C    CD   40   8F  88 02852            BISB2   #64, TEMP_BUF1                             ; 3824
   50       B3    AD         06        02  EF 02858            EXTZV   #2, #6, INTMED_DATA+3, R0                  ; 3825
FF7C   CD         06         00        50  F0 0285E            INSV    R0, #0, #6, TEMP_BUF1                      ;
                  54         52        54  C3 02865            SUBL3   FLOAT_SCALE, R2, FLOAT_SCALE               ; 3826
                                       03  14 02869 529$:      BGTR    530$                                       ; 3827
                                     FBA5  31 0286B            BRW     469$                                       ;
                     FF7C    CD        02  C6 0286E 530$:      DIVL2   #2, TEMP_BUF1                              ; 3829
                                       54  D7 02873            DECL    FLOAT_SCALE                                ; 3830
                                       F2  11 02875            BRB     529$                                       ; 3827
                         26            52  E8 02877 531$:      BLBS    R2, 534$                                   ; 3844
               0000FFFF  8F       60   AE  D1 0287A            CMPL    TEMP_BUF2, #65535                          ; 3847
                                       15  1B 02882            BLEQU   532$                                       ;
                              00000000G  00  DD 02884          PUSHL   DBG$GL_OPCODE_NAME                         ; 3849
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                                                       L 14
DBGCVTDX                                               15-Sep-1984 23:57:30    VAX-11 Bliss-32 V4.0-742           Page 157
V04-000                                                14-Sep-1984 12:16:44    [DEBUG.SRC]DBGCVTDX.B32;1               (29)

                                                          01  DD 0288A          PUSHL    #1                                      ;
                                               000286A3   8F  DD 0288C          PUSHL    #165539                                 ;
                                00000000G  00             03  FB 02892          CALLS    #3, LIB$SIGNAL                          ;
                                       34  BE        60   AE  B0 02899  532$:   MOVW     TEMP_BUF2, @OUTPUT                      ; 3850
                                                          6C  11 0289E  533$:   BRB      543$                                    ; 3844
                                                     B0   AD  B5 028A0  534$:   TSTW     INTMED_DATA                             ; 3857
                                                          03  12 028A3          BNEQ     535$                                    ;
                                                        00D6  31 028A5          BRW      553$                                    ;
                                                   FF7C   CD  D4 028A8  535$:   CLRL     TEMP_BUF1                               ; 3862
            56        B1    AD             01             07  EF 028AC          EXTZV    #7, #1, INTMED_DATA+1, SIGN             ; 3863
                                       B1  AD        80   8F  8A 028B2          BICB2    #128, INTMED_DATA+1                     ; 3864
                                           54        B0   AD  3C 028B7          MOVZWL   INTMED_DATA, FLOAT_SCALE                ; 3865
                                           54      C000   C4  9E 028BB          MOVAB    -16384(R4), FLOAT_SCALE                 ;
                                           52        08   A9  98 028C0          CVTBL    8(R9), R2                               ; 3866
                                           52             0F  C0 028C4          ADDL2    #15, R2                                 ;
                                           52             54  D1 028C7          CMPL     FLOAT_SCALE, R2                         ;
                                                          64  14 028CA  536$:   BGTR     545$                                    ;
                                     FF7D  CD        40   8F  88 028CC          BISB2    #64, TEMP_BUF1+1                        ; 3871
            50        B2    AD             0E             02  EF 028D2          EXTZV    #2, #14, INTMED_DATA+2, R0              ; 3872
    FF7C    CD              0E             00             50  F0 028D8          INSV     R0, #0, #14, TEMP_BUF1                  ;
                            54             52             54  C3 028DF          SUBL3    FLOAT_SCALE, R2, FLOAT_SCALE            ; 3873
                                                          03  14 028E3  537$:   BGTR     538$                                    ; 3874
                                                        FB88  31 028E5          BRW      476$                                    ;
                                     FF7C  CD             02  C6 028E8  538$:   DIVL2    #2, TEMP_BUF1                           ; 3876
                                                          54  D7 028ED          DECL     FLOAT_SCALE                             ; 3877
                                                          F2  11 028EF          BRB      537$                                    ; 3874
                                           10             52  E8 028F1  539$:   BLBS     R2, 541$                                ; 3891
                                           50        60   AE  9E 028F4          MOVAB    TEMP_BUF2, R0                           ; 3893
                                           51        34   AE  D0 028F8  540$:   MOVL     OUTPUT, R1                              ;
                                              00000000G   00  16 028FC          JSB      DBG$CVT_CVTLB_R1                        ;
                                                          7D  11 02902          BRB      554$                                    ;
                                                     B0   AD  B5 02904  541$:   TSTW     INTMED_DATA                             ; 3899
                                                          05  12 02907          BNEQ     544$                                    ;
                                                     34   BE  94 02909  542$:   CLRB     @OUTPUT                                 ; 3901
                                                          73  11 0290C  543$:   BRB      554$                                    ;
                                                   FF7C   CD  D4 0290E  544$:   CLRL     TEMP_BUF1                               ; 3904
            56        B1    AD             01             07  EF 02912          EXTZV    #7, #1, INTMED_DATA+1, SIGN             ; 3905
                                       B1  AD        80   8F  8A 02918          BICB2    #128, INTMED_DATA+1                     ; 3906
                                           54        B0   AD  3C 0291D          MOVZWL   INTMED_DATA, FLOAT_SCALE                ; 3907
                                           54      C000   C4  9E 02921          MOVAB    -16384(R4), FLOAT_SCALE                 ;
                                           52        08   A9  98 02926          CVTBL    8(R9), R2                               ; 3908
                                           52             07  C0 0292A          ADDL2    #7, R2                                  ;
                                           52             54  D1 0292D          CMPL     FLOAT_SCALE, R2                         ;
                                                          73  14 02930  545$:   BGTR     556$                                    ;
                                     FF7C  CD        40   8F  88 02932          BISB2    #64, TEMP_BUF1                          ; 3913
            50        B3    AD             06             02  EF 02938          EXTZV    #2, #6, INTMED_DATA+3, R0               ; 3914
    FF7C    CD              06             00             50  F0 0293E          INSV     R0, #0, #6, TEMP_BUF1                   ;
                            54             52             54  C3 02945          SUBL3    FLOAT_SCALE, R2, FLOAT_SCALE            ; 3915
                                                          09  15 02949  546$:   BLEQ     547$                                    ; 3916
                                     FF7C  CD             02  C6 0294B          DIVL2    #2, TEMP_BUF1                           ; 3918
                                                          54  D7 02950          DECL     FLOAT_SCALE                             ; 3919
                                                          F5  11 02952          BRB      546$                                    ; 3916
                                           07             56  E9 02954  547$:   BLBC     SIGN, 549$                              ; 3921
                                     FF7C  CD      FF7C   CD  CE 02957  548$:   MNEGL    TEMP_BUF1, TEMP_BUF1                    ;
                                       34  BE      FF7C   CD  90 0295E  549$:   MOVB     TEMP_BUF1, @OUTPUT                      ; 3922
                                                          1B  11 02964          BRB      554$                                    ; 3788
                                           10             52  E8 02966  550$:   BLBS     R2, 552$                                ; 3933
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                                  50         60  AE  9E 02969         MOVAB   TEMP_BUF2, R0                          ; 3935
                                  51         34  AE  D0 0296D 551$:   MOVL    OUTPUT, R1                             ;
                                      00000000G  00  16 02971         JSB     DBG$CVT_CVTLW_R1                       ;
                                                 6E  11 02977         BRB     563$                                   ;
                                             B0  AD  B5 02979 552$:   TSTW    INTMED_DATA                            ; 3941
                                                 05  12 0297C         BNEQ    555$                                   ;
                                             34  BE  B4 0297E 553$:   CLRW    @OUTPUT                                ; 3943
                                                 64  11 02981 554$:   BRB     563$                                   ;
                                           FF7C  CD  D4 02983 555$:   CLRL    TEMP_BUF1                              ; 3946
        56      B1   AD           01             07  EF 02987         EXTZV   #7, #1, INTMED_DATA+1, SIGN            ; 3947
                             B1   AD         80  8F  8A 0298D         BICB2   #128, INTMED_DATA+1                    ; 3948
                                  54         B0  AD  3C 02992         MOVZWL  INTMED_DATA, FLOAT_SCALE               ; 3949
                                  54       C000  C4  9E 02996         MOVAB   -16384(R4), FLOAT_SCALE                ;
                                  52         08  A9  98 0299B         CVTBL   8(R9), R2                              ; 3950
                                  52             0F  C0 0299F         ADDL2   #15, R2                                ;
                                  52             54  D1 029A2         CMPL    FLOAT_SCALE, R2                        ;
                                                 68  14 029A5 556$:   BGTR    565$                                   ;
                           FF7D   CD         40  8F  88 029A7         BISB2   #64, TEMP_BUF1+1                       ; 3955
        50      B2   AD           0E             02  EF 029AD         EXTZV   #2, #14, INTMED_DATA+2, R0             ; 3956
  FF7C  CD           0E           00             50  F0 029B3         INSV    R0, #0, #14, TEMP_BUF1                 ;
                     54           52             54  C3 029BA         SUBL3   FLOAT_SCALE, R2, FLOAT_SCALE           ; 3957
                                                 09  15 029BE 557$:   BLEQ    558$                                   ; 3958
                           FF7C   CD             02  C6 029C0         DIVL2   #2, TEMP_BUF1                          ; 3960
                                                 54  D7 029C5         DECL    FLOAT_SCALE                            ; 3961
                                                 F5  11 029C7         BRB     557$                                   ; 3958
                                  07             56  E9 029C9 558$:   BLBC    SIGN, 560$                             ; 3963
                           FF7C   CD       FF7C  CD  CE 029CC 559$:   MNEGL   TEMP_BUF1, TEMP_BUF1                   ;
                             34   BE       FF7C  CD  B0 029D3 560$:   MOVW    TEMP_BUF1, @OUTPUT                     ; 3964
                                                 79  11 029D9         BRB     570$                                   ; 3788
                                  71             52  E9 029DB 561$:   BLBC    R2, 569$                               ; 3975
                                           FF7C  CD  B5 029DE         TSTW    TEMP_BUF1                              ; 3983
                                                 05  12 029E2         BNEQ    564$                                   ;
                                             34  BE  D4 029E4 562$:   CLRL    @OUTPUT                                ; 3985
                                                 6B  11 029E7 563$:   BRB     570$                                   ;
                                             60  AE  D4 029E9 564$:   CLRL    TEMP_BUF2                              ; 3988
        56    FF7D   CD           01             07  EF 029EC         EXTZV   #7, #1, TEMP_BUF1+1, SIGN              ; 3989
                           FF7D   CD         80  8F  8A 029F3         BICB2   #128, TEMP_BUF1+1                      ; 3990
                                  54       FF7C  CD  3C 029F9         MOVZWL  TEMP_BUF1, FLOAT_SCALE                 ; 3991
                                  54       C000  C4  9E 029FE         MOVAB   -16384(R4), FLOAT_SCALE                ;
                                  52         08  A9  98 02A03         CVTBL   8(R9), R2                              ; 3992
                                  52             1F  C0 02A07         ADDL2   #31, R2                                ;
                                  52             54  D1 02A0A         CMPL    FLOAT_SCALE, R2                        ;
                                                 11  15 02A0D         BLEQ    566$                                   ;
                                      00000000G  00  DD 02A0F 565$:   PUSHL   DBG$GL_OPCODE_NAME                     ; 3994
                                                 01  DD 02A15         PUSHL   #1                                     ;
                                       000286A3  8F  DD 02A17         PUSHL   #165539                                ;
                                               05B1  31 02A1D         BRW     648$                                   ;
                             63   AE         40  8F  88 02A20 566$:   BISB2   #64, TEMP_BUF2+3                       ; 3997
    61  AE           10           06       FF7E  CD  F0 02A25         INSV    TEMP_BUF1+2, #6, #16, TEMP_BUF2+1      ; 3998
        50      82   AD           0E             02  EF 02A2D         EXTZV   #2, #14, TEMP_BUF1+6, R0               ; 3999
    60  AE           0E           00             50  F0 02A33         INSV    R0, #0, #14, TEMP_BUF2                 ;
                     54           52             54  C3 02A39         SUBL3   FLOAT_SCALE, R2, FLOAT_SCALE           ; 4000
                                                 08  15 02A3D 567$:   BLEQ    568$                                   ; 4001
                             60   AE             02  C6 02A3F         DIVL2   #2, TEMP_BUF2                          ; 4003
                                                 54  D7 02A43         DECL    FLOAT_SCALE                            ; 4004
                                                 F6  11 02A45         BRB     567$                                   ; 4001
                                  05             56  E9 02A47 568$:   BLBC    SIGN, 569$                             ; 4006
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                               60   AE       60   AE CE 02A4A         MNEGL   TEMP_BUF2, TEMP_BUF2                 ;
                               34   BE       60   AE D0 02A4F  569$:   MOVL    TEMP_BUF2, @OUTPUT                   ; 4007
                                                  19 11 02A54  570$:   BRB     574$                                 ; 3788
                                    52       F5   AD 3C 02A56  571$:   MOVZWL  DST_INFO+5, R2                       ; 4018
                                    50            01 CE 02A5A         MNEGL   #1, I                                ; 4020
                                                  0C 11 02A5D         BRB     573$                                 ;
          51     B0   AD            01            50 EF 02A5F  572$:   EXTZV   I, #1, INTMED_DATA, R1               ;
    34    BE          01            50            51 F0 02A65         INSV    R1, I, #1, @OUTPUT                   ;
                      F0            50            52 F2 02A6B  573$:   AOBLSS  R2, I, 572$                          ; 4018
                                                0566 31 02A6F  574$:   BRW     649$                                 ; 2187
                      16            04            6B 8F 02A72  575$:   CASEB   (R11), #4, #22                       ; 4030
        002E        002E          00D1          0037    02A76  576$:   .WORD   578$-576$,-                          ;
        002E        002E          00D1          002E    02A7E                  584$-576$,-                          ;
        002E        002E          002E          002E    02A86                  577$-576$,-                          ;
        002E        002E          002E          002E    02A8E                  577$-576$,-                          ;
        002E        002E          002E          002E    02A96                  584$-576$,-                          ;
                    0120          002E          002E    02A9E                  577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               577$-576$,-                          ;
                                                                               588$-576$                            ;
                                       00000000'  EF 9F 02AA4  577$:   PUSHAB  P.AKH                                ; 4140
                                                051C 31 02AAA         BRW     647$                                 ;
                               58   AE       FD   AD B0 02AAD  578$:   MOVW    SRC_INFO+5, CLASS_S_DESC             ; 4035
                               5C   AE       F9   AD D0 02AB2         MOVL    SRC_INFO+1, CLASS_S_DESC+4           ; 4036
                                    7E       55   8F 9A 02AB7         MOVZBL  #85, -(SP)                           ; 4038
                                    7E       34   AE CE 02ABB         MNEGL   SCALE, -(SP)                         ; 4037
                                                  7E D4 02ABF         CLRL    -(SP)                                ;
                                           FF7C   CD 9F 02AC1         PUSHAB  TEMP_BUF1                            ;
                                             68   AE 9F 02AC5         PUSHAB  CLASS_S_DESC                         ;
                        00000000G   00            05 FB 02AC8         CALLS   #5, OTS$CVT_T_D                      ;
                                    6E            50 D0 02ACF         MOVL    R0, STATUS                           ;
                                    15            6E E8 02AD2         BLBS    STATUS, 579$                         ; 4039
                                      00000000G   00 DD 02AD5         PUSHL   DBG$GL_OPCODE_NAME                   ;
                                                  01 DD 02ADB         PUSHL   #1                                   ;
                                       00028298   8F DD 02ADD         PUSHL   #164504                              ;
                        00000000G   00            03 FB 02AE3         CALLS   #3, LIB$SIGNAL                       ;
                                           FF7D   CD 95 02AEA  579$:   TSTB    TEMP_BUF1+1                          ; 4040
                                                  15 18 02AEE         BGEQ    580$                                 ;
                                      00000000G   00 DD 02AF0         PUSHL   DBG$GL_OPCODE_NAME                   ;
                                                  01 DD 02AF6         PUSHL   #1                                   ;
                                       00028EF0   8F DD 02AF8         PUSHL   #167664                              ;
                        00000000G   00            03 FB 02AFE         CALLS   #3, LIB$SIGNAL                       ;
                               10   BE     FF7C   CD 71 02B05  580$:   CMPD    TEMP_BUF1, @LRGST_D_LU               ; 4041
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                                          50   DC 02B0B        MOVPSL  R0                                ;
     50          50        02             02   EF 02B0D        EXTZV   #2, #2, R0, R0                    ;
                           15             50   F4 02B12        SOBGEQ  R0, 581$                          ;
                              00000000G   00   DD 02B15        PUSHL   DBG$GL_OPCODE_NAME                ;
                                          01   DD 02B1B        PUSHL   #1                                ;
                              000286A3    8F   DD 02B1D        PUSHL   #165539                           ;
                 00000000G  00            03   FB 02B23        CALLS   #3, LIB$SIGNAL                    ;
                                   00E0   8F   B9 02B2A 581$:  BICPSW  #224                              ; 4042
                           09        0C   AE   E9 02B2E        BLBC    CVT_ROUND_FLAG, 582$              ; 4043
                 34        BE      FF7C   CD   6B 02B32        CVTRDL  TEMP_BUF1, @OUTPUT                ; 4045
                                      0006     31 02B38        BRW     583$                              ;
                 34        BE      FF7C   CD   6A 02B3B 582$:  CVTDL   TEMP_BUF1, @OUTPUT                ; 4047
                                   00E0   8F   B8 02B41 583$:  BISPSW  #224                              ; 4049
                                          4C   11 02B45        BRB     587$                              ; 4030
                 58        AE        FD   AD   B0 02B47 584$:  MOVW    SRC_INFO+5, CLASS_S_DESC          ; 4054
                 5C        AE        F9   AD   D0 02B4C        MOVL    SRC_INFO+1, CLASS_S_DESC+4        ; 4055
                           7E        55   8F   9A 02B51        MOVZBL  #85, -(SP)                        ; 4057
                           7E        34   AE   CE 02B55        MNEGL   SCALE, -(SP)                      ; 4056
                                          7E   D4 02B59        CLRL    -(SP)                             ;
                                   FF7C   CD   9F 02B5B        PUSHAB  TEMP_BUF1                         ;
                                     68   AE   9F 02B5F        PUSHAB  CLASS_S_DESC                      ;
                 00000000G  00            05   FB 02B62        CALLS   #5, OTS$CVT_T_H                   ;
                           6E             50   D0 02B69        MOVL    R0, STATUS                        ;
                           15             6E   E8 02B6C        BLBS    STATUS, 585$                      ; 4058
                              00000000G   00   DD 02B6F        PUSHL   DBG$GL_OPCODE_NAME                ;
                                          01   DD 02B75        PUSHL   #1                                ;
                              00028298    8F   DD 02B77        PUSHL   #164504                           ;
                 00000000G  00            03   FB 02B7D        CALLS   #3, LIB$SIGNAL                    ;
                           50      FF7C   CD   9E 02B84 585$:  MOVAB   TEMP_BUF1, R0                     ; 4059
                           51        34   AE   D0 02B89 586$:  MOVL    OUTPUT, R1                        ;
                              00000000G   00   16 02B8D        JSB     DBG$CVT_CVTRHQ_R1                 ;
                                      0442     31 02B93 587$:  BRW     649$                              ;
                                          58   D4 02B96 588$:  CLRL    SIGN_FLAG                         ; 4063
                           52        34   AE   D0 02B98        MOVL    OUTPUT, R2                        ; 4073
                                     08   A2   7C 02B9C        CLRQ    8(R2)                             ; 4074
                                     04   A2   D4 02B9F        CLRL    4(R2)                             ; 4075
                           62        F9   BD   9A 02BA2        MOVZBL  @SRC_INFO+1, (R2)                 ; 4076
                           62             30   C2 02BA6        SUBL2   #48, (R2)                         ;
                                          02   18 02BA9        BGEQ    589$                              ; 4081
                                          05   11 02BAB        BRB     590$                              ;
                           09             62   D1 02BAD 589$:  CMPL    (R2), #9                          ;
                                          2F   15 02BB0        BLEQ    592$                              ;
                 FFFFFFFD  8F             62   D1 02BB2 590$:  CMPL    (R2), #-3                         ; 4083
                                          12   12 02BB9        BNEQ    591$                              ;
                                     F9   AD   D6 02BBB        INCL    SRC_INFO+1                        ; 4086
                                     FD   AD   B7 02BBE        DECW    SRC_INFO+5                        ; 4087
                           62        F9   BD   9A 02BC1        MOVZBL  @SRC_INFO+1, (R2)                 ; 4088
                           62             30   C2 02BC5        SUBL2   #48, (R2)                         ;
                           58             01   D0 02BC8        MOVL    #1, SIGN_FLAG                     ; 4090
                                          14   11 02BCB        BRB     592$                              ; 4083
                                     F9   AD   DD 02BCD 591$:  PUSHL   SRC_INFO+1                        ; 4093
                                          01   DD 02BD0        PUSHL   #1                                ;
                                          02   DD 02BD2        PUSHL   #2                                ;
                              00028AAA    8F   DD 02BD4        PUSHL   #166570                           ;
                 00000000G  00            04   FB 02BDA        CALLS   #4, LIB$SIGNAL                    ;
                           56        FD   AD   3C 02BE1 592$:  MOVZWL  SRC_INFO+5, R6                    ; 4100
                                          53   D4 02BE5        CLRL    CURRENT_CHAR_NUM                  ; 4103
                                   32  11 02BE7          BRB     597$                                        :
                   50              52  D0 02BE9  593$:   MOVL    R2, R0                                      : 4102
                       00000000G   00  16 02BEC          JSB     DBG$CVT_SCALE_OU_UP_BY_10_R1                :
                   54        F9  BD43  9A 02BF2          MOVZBL  @SRC_INFO+1[CURRENT_CHAR_NUM], -            : 4104
                                                                 CURRENT_CHARACTER                           :
                   54              30  C2 02BF7          SUBL2   #48, CURRENT_CHARACTER                      :
                                   02  18 02BFA          BGEQ    594$                                        : 4110
                                   05  11 02BFC          BRB     595$                                        :
                   09              54  D1 02BFE  594$:   CMPL    CURRENT_CHARACTER, #9                       : 4111
                                   15  15 02C01          BLEQ    596$                                        :
                             F9  BD43  9F 02C03  595$:   PUSHAB  @SRC_INFO+1[CURRENT_CHAR_NUM]               : 4113
                                   01  DD 02C07          PUSHL   #1                                          :
                                   02  DD 02C09          PUSHL   #2                                          :
                       00028AAA    8F  DD 02C0B          PUSHL   #166570                                     :
           00000000G   00          04  FB 02C11          CALLS   #4, LIB$SIGNAL                              :
                       62          54  C0 02C18  596$:   ADDL2   CURRENT_CHARACTER, (R2)                     : 4116
           CA          53          56  F2 02C1B  597$:   AOBLSS  R6, CURRENT_CHAR_NUM, 593$                  : 4100
                       2F          58  E9 02C1F          BLBC    SIGN_FLAG, 598$                             : 4122
                             50    AE  7C 02C22          CLRQ    OCTAWORD_ZERO+8                             : 4129
                             48    AE  7C 02C25          CLRQ    OCTAWORD_ZERO                               : 4131
           62          48    AE    62  C3 02C28          SUBL3   (R2), OCTAWORD_ZERO, (R2)                   : 4133
                       50    4C    AE  D0 02C2D          MOVL    OCTAWORD_ZERO, R0                           :
                       50    04    A2  D9 02C31          SBWC    4(R2), R0                                   :
                 04    A2          50  D0 02C35          MOVL    R0, 4(R2)                                   :
                       50    50    AE  D0 02C39          MOVL    OCTAWORD_ZERO, R0                           :
                       50    08    A2  D9 02C3D          SBWC    8(R2), R0                                   :
                 08    A2          50  D0 02C41          MOVL    R0, 8(R2)                                   :
                       50    54    AE  D0 02C45          MOVL    OCTAWORD_ZERO, R0                           :
                       50    0C    A2  D9 02C49          SBWC    12(R2), R0                                  :
                 0C    A2          50  D0 02C4D          MOVL    R0, 12(R2)                                  :
                                   63  11 02C51  598$:   BRB     603$                                        : 4030
                 58    AE    FD    AD  B0 02C53  599$:   MOVW    SRC_INFO+5, CLASS_S_DESC                    : 4145
                 5C    AE    F9    AD  D0 02C58          MOVL    SRC_INFO+1, CLASS_S_DESC+4                  : 4146
                 03    1B          6B  8F 02C5D          CASEB   (R11), #27, #3                              : 4147
 0057            0011        0057        0011  02C61  600$:   .WORD   601$-600$,-                            :
                                                                 604$-600$,-                                 :
                                                                 601$-600$,-                                 :
                                                                 604$-600$                                   :
                       00000000'   EF  9F 02C69          PUSHAB  P.AKI                                       : 4185
                             0357  31 02C6F          BRW     647$                                            :
                       7E    55    8F  9A 02C72  601$:   MOVZBL  #85, -(SP)                                  : 4153
                       7E    34    AE  CE 02C76          MNEGL   SCALE, -(SP)                                : 4152
                                   7E  D4 02C7A          CLRL    -(SP)                                       :
                           FF7C    CD  9F 02C7C          PUSHAB  TEMP_BUF1                                   :
                             68    AE  9F 02C80          PUSHAB  CLASS_S_DESC                                :
           00000000G   00          05  FB 02C83          CALLS   #5, OTS$CVT_T_G                             :
                       6E          50  D0 02C8A          MOVL    R0, STATUS                                  :
                       15          6E  E8 02C8D          BLBS    STATUS, 602$                                : 4154
                       00000000G   00  DD 02C90          PUSHL   DBG$GL_OPCODE_NAME                          :
                                   01  DD 02C96          PUSHL   #1                                          :
                       00028298    8F  DD 02C98          PUSHL   #164504                                     :
           00000000G   00          03  FB 02C9E          CALLS   #3, LIB$SIGNAL                              :
                       50    34    AE  D0 02CA5  602$:   MOVL    OUTPUT, R0                                  : 4155
                       60  FF7C    CD  7D 02CA9          MOVQ    TEMP_BUF1, (R0)                             :
                       1D          6B  91 02CAE          CMPB    (R11), #29                                  : 4157
                                   4E  12 02CB1          BNEQ    606$                                        :
                             08    A0  7C 02CB3          CLRQ    8(R0)                                       : 4164
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                                        49 11 02CB6 603$:  BRB     606$                                     ; 4147
                    7E          55      8F 9A 02CB8 604$:  MOVZBL  #85, -(SP)                               ; 4172
                    7E          34      AE CE 02CBC        MNEGL   SCALE, -(SP)                             ; 4171
                                        7E D4 02CC0        CLRL    -(SP)                                    :
                              FF7C      CD 9F 02CC2        PUSHAB  TEMP_BUF1                                :
                                68      AE 9F 02CC6        PUSHAB  CLASS_S_DESC                             :
           00000000G        00          05 FB 02CC9        CALLS   #5, OTS$CVT_T_H                          :
                    6E                  50 D0 02CD0        MOVL    R0, STATUS                               :
                    15                  6E E8 02CD3        BLBS    STATUS, 605$                             ; 4173
                         00000000G      00 DD 02CD6        PUSHL   DBG$GL_OPCODE_NAME                       :
                                        01 DD 02CDC        PUSHL   #1                                       :
                          00028298      8F DD 02CDE        PUSHL   #164504                                  :
           00000000G        00          03 FB 02CE4        CALLS   #3, LIB$SIGNAL                           :
                    58          34      AE D0 02CEB 605$:  MOVL    OUTPUT, R8                               ; 4174
          68      FF7C          CD      10 28 02CEF        MOVC3   #16, TEMP_BUF1, (R8)                     :
                    1E                  6B 91 02CF5        CMPB    (R11), #30                               ; 4175
                    07                  12 02CF8           BNEQ    606$                                     :
  10      00        6E                  00 2C 02CFA        MOVC5   #0, (SP), #0, #16, 16(R8)                ; 4181
                                10      A8    02CFF                                                         :
                                      02D4 31 02D01 606$:  BRW     649$                                     ; 2187
                    02                  6B 91 02D04 607$:  CMPB    (R11), #2                                ; 4193
                                        12 13 02D07        BEQL    610$                                     :
                    0E                  6B 91 02D09        CMPB    (R11), #14                               :
                                        0D 13 02D0C        BEQL    610$                                     :
                    25                  6B 91 02D0E        CMPB    (R11), #37                               :
                                        03 1E 02D11        BGEQU   609$                                     :
                                      0252 31 02D13 608$:  BRW     643$                                     :
                    27                  6B 91 02D16 609$:  CMPB    (R11), #39                               :
                                        F8 1A 02D19        BGTRU   608$                                     :
                                30      AE D5 02D1B 610$:  TSTL    SCALE                                    ; 4195
                                        03 12 02D1E        BNEQ    611$                                     :
                                      015C 31 02D20        BRW     630$                                     :
              58    AE          FD      AD B0 02D23 611$:  MOVW    SRC_INFO+5, CLASS_S_DESC                 ; 4198
              5C    AE          F9      AD D0 02D28        MOVL    SRC_INFO+1, CLASS_S_DESC+4               ; 4199
                    7E          55      8F 9A 02D2D        MOVZBL  #85, -(SP)                               ; 4201
                    7E          34      AE CE 02D31        MNEGL   SCALE, -(SP)                             ; 4200
                                        7E D4 02D35        CLRL    -(SP)                                    :
                              FF7C      CD 9F 02D37        PUSHAB  TEMP_BUF1                                :
                                68      AE 9F 02D3B        PUSHAB  CLASS_S_DESC                             :
           00000000G        00          05 FB 02D3E        CALLS   #5, OTS$CVT_T_H                          :
                    6E                  50 D0 02D45        MOVL    R0, STATUS                               :
                    03                  6E E8 02D48        BLBS    STATUS, 612$                             ; 4202
                                      0120 31 02D4B        BRW     629$                                     :
              58    AE                  32 B0 02D4E 612$:  MOVW    #50, CLASS_S_DESC                        ; 4205
              5C    AE          60      AE 9E 02D52        MOVAB   TEMP_BUF2, CLASS_S_DESC+4                ; 4206
                    09          F5      AD B1 02D57        CMPW    DST_INFO+5, #9                           ; 4207
                                        05 1A 02D5B        BGTRU   613$                                     :
                    57                  21 D0 02D5D        MOVL    #33, DIGITS_IN_FRACT                     ; 4209
                                        12 11 02D60        BRB     615$                                     :
                    50          F5      AD 3C 02D62 613$:  MOVZWL  DST_INFO+5, R0                           ; 4211
                    50                  09 C2 02D66        SUBL2   #9, R0                                   :
                    21                  50 D1 02D69        CMPL    R0, #33                                  :
                                        03 15 02D6C        BLEQ    614$                                     :
                    50                  21 D0 02D6E        MOVL    #33, R0                                  :
                    57                  50 D0 02D71 614$:  MOVL    R0, DIGITS_IN_FRACT                      :
                                        04 DD 02D74 615$:  PUSHL   #4                                       ; 4212
                                        7E 7C 02D76        CLRQ    -(SP)                                    :
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                                    57  DD 02D78         PUSHL   DIGITS_IN_FRACT                     ;
                               68   AE  9F 02D7A         PUSHAB  CLASS_S_DESC                        ;
                             FF7C   CD  9F 02D7D         PUSHAB  TEMP_BUF1                           ;
         00000000G  00              06  FB 02D81         CALLS   #6, FOR$CVT_H_TE                    ;
                    6E              50  D0 02D88         MOVL    R0, STATUS                          ;
                    02              6E  E9 02D8B         BLBC    STATUS, 616$                        ; 4213
                                    15  11 02D8E         BRB     617$                                ;
                        00000000'   EF  9F 02D90 616$:   PUSHAB  P.AKJ                               ;
                                    01  DD 02D96         PUSHL   #1                                  ;
                         00028362   8F  DD 02D98         PUSHL   #164706                             ;
         00000000G  00              03  FB 02D9E         CALLS   #3, LIB$SIGNAL                      ;
60   AE             32              20  3B 02DA5 617$:   SKPC    #32, #50, TEMP_BUF2                 ; 4214
                                    02  12 02DAA         BNEQ    618$                                ;
                                    51  D4 02DAC         CLRL    R1                                  ;
                    50             60   AE  9E 02DAE 618$:   MOVAB   TEMP_BUF2, R0                   ;
     5A             51              50  C3 02DB2         SUBL3   R0, R1, BUF_OFFSET                  ;
     55             32              5A  C3 02DB6         SUBL3   BUF_OFFSET, #50, FINAL_LEN          ; 4215
                14  AE              55  D0 02DBA         MOVL    FINAL_LEN, OUTPUT_STR_LEN           ; 4216
                    26              6B  91 02DBE         CMPB    (R11), #38                          ; 4220
                                    51  12 02DC1         BNEQ    623$                                ;
                58  AE              55  B0 02DC3         MOVW    FINAL_LEN, CLASS_S_DESC             ; 4224
5C   AE         34  AE              01  C1 02DC7         ADDL3   #1, OUTPUT, CLASS_S_DESC+4          ; 4225
                    52             58   AE  9E 02DCD         MOVAB   CLASS_S_DESC, R2                ; 4226
                    51             60 AE4A  9E 02DD1         MOVAB   TEMP_BUF2[BUF_OFFSET], R1       ;
                    50              55  D0 02DD6         MOVL    FINAL_LEN, R0                       ;
                        00000000G   00  16 02DD9         JSB     LIB$SCOPY_R_DX6                     ;
                    6E              50  D0 02DDF         MOVL    R0, STATUS                          ;
         00000000G  8F              6E  D1 02DE2         CMPL    STATUS, #LIB$_STRTRU                ; 4227
                                    02  13 02DE9         BEQL    619$                                ;
                                    15  11 02DEB         BRB     620$                                ;
                        00000000G   00  DD 02DED 619$:   PUSHL   DBG$GL_OPCODE_NAME                  ;
                                    01  DD 02DF3         PUSHL   #1                                  ;
                         000286AB   8F  DD 02DF5         PUSHL   #165547                             ;
         00000000G  00              03  FB 02DFB         CALLS   #3, LIB$SIGNAL                      ;
                    09              6E  E8 02E02 620$:   BLBS    STATUS, 622$                        ; 4228
                                    6E  DD 02E05 621$:   PUSHL   STATUS                              ;
         00000000G  00              01  FB 02E07         CALLS   #1, LIB$SIGNAL                      ;
                34  BE              55  90 02E0E 622$:   MOVB    FINAL_LEN, @OUTPUT                  ; 4229
                                    58  11 02E12         BRB     628$                                ; 4218
                    27              6B  91 02E14 623$:   CMPB    (R11), #39                          ; 4232
                                    03  13 02E17         BEQL    624$                                ;
                                  E8DE  31 02E19         BRW     325$                                ;
                58  AE              55  B0 02E1C 624$:   MOVW    FINAL_LEN, CLASS_S_DESC             ; 4236
                5C  AE         34   AE  D0 02E20         MOVL    OUTPUT, CLASS_S_DESC+4              ; 4237
                    52         58   AE  9E 02E25         MOVAB   CLASS_S_DESC, R2                    ; 4238
                    51         60 AE4A  9E 02E29         MOVAB   TEMP_BUF2[BUF_OFFSET], R1           ;
                    50              55  D0 02E2E         MOVL    FINAL_LEN, R0                       ;
                        00000000G   00  16 02E31         JSB     LIB$SCOPY_R_DX6                     ;
                    6E              50  D0 02E37         MOVL    R0, STATUS                          ;
         00000000G  8F              6E  D1 02E3A         CMPL    STATUS, #LIB$_STRTRU                ; 4239
                                    15  12 02E41         BNEQ    625$                                ;
                        00000000G   00  DD 02E43         PUSHL   DBG$GL_OPCODE_NAME                  ;
                                    01  DD 02E49         PUSHL   #1                                  ;
                         000286AB   8F  DD 02E4B         PUSHL   #165547                             ;
         00000000G  00              03  FB 02E51         CALLS   #3, LIB$SIGNAL                      ;
                    09              6E  E8 02E58 625$:   BLBS    STATUS, 627$                        ; 4240
                                    6E  DD 02E5B 626$:   PUSHL   STATUS                              ;
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            00000000G  00             01  FB 02E5D         CALLS   #1, LIB$SIGNAL                          ;
      50               55        34   AE  C1 02E64 627$:   ADDL3   OUTPUT, FINAL_LEN, R0                   ; 4241
                                 01   A0  94 02E69         CLRB    1(R0)                                   ;
                                      64  11 02E6C 628$:   BRB     634$                                    ; 4218
                      00000000G  00   DD 02E6E 629$:       PUSHL   DBG$GL_OPCODE_NAME                      ; 4253
                                 01   DD 02E74             PUSHL   #1                                      ;
                      00028298   8F   DD 02E76             PUSHL   #164504                                 ;
                               0152   31 02E7C             BRW     648$                                    ;
               14  AE             6A  3C 02E7F 630$:       MOVZWL  (R10), OUTPUT_STR_LEN                   ; 4257
                   26             6B  91 02E83             CMPB    (R11), #38                              ; 4260
                                  4D  12 02E86             BNEQ    635$                                    ;
               58  AE             6A  B0 02E88             MOVW    (R10), CLASS_S_DESC                     ; 4264
  5C      AE   34  AE             01  C1 02E8C             ADDL3   #1, OUTPUT, CLASS_S_DESC+4              ; 4265
                   51        58   AE  9E 02E92             MOVAB   CLASS_S_DESC, R1                        ; 4266
                   50             5A  D0 02E96             MOVL    R10, R0                                 ;
                      00000000G   00  16 02E99             JSB     LIB$SCOPY_DXDX6                         ;
                   6E             50  D0 02E9F             MOVL    R0, STATUS                              ;
            00000000G  8F         6E  D1 02EA2             CMPL    STATUS, #LIB$_STRTRU                    ; 4267
                                  02  13 02EA9             BEQL    631$                                    ;
                                  15  11 02EAB             BRB     632$                                    ;
                      00000000G   00  DD 02EAD 631$:       PUSHL   DBG$GL_OPCODE_NAME                      ;
                                  01  DD 02EB3             PUSHL   #1                                      ;
                      000286AB    8F  DD 02EB5             PUSHL   #165547                                 ;
            00000000G  00         03  FB 02EBB             CALLS   #3, LIB$SIGNAL                          ;
                       09         6E  E8 02EC2 632$:       BLBS    STATUS, 633$                            ; 4268
                                  6E  DD 02EC5             PUSHL   STATUS                                  ;
            00000000G  00         01  FB 02EC7             CALLS   #1, LIB$SIGNAL                          ;
                   34  BE         6A  90 02ECE 633$:       MOVB    (R10), @OUTPUT                          ; 4269
                                0091  31 02ED2 634$:       BRW     642$                                    ; 4258
                       27         6B  91 02ED5 635$:       CMPB    (R11), #39                              ; 4272
                                  51  12 02ED8             BNEQ    639$                                    ;
                   58  AE         6A  B0 02EDA             MOVW    (R10), CLASS_S_DESC                     ; 4276
                   5C  AE    34   AE  D0 02EDE             MOVL    OUTPUT, CLASS_S_DESC+4                  ; 4277
                       51    58   AE  9E 02EE3             MOVAB   CLASS_S_DESC, R1                        ; 4278
                       50         5A  D0 02EE7             MOVL    R10, R0                                 ;
                      00000000G   00  16 02EEA             JSB     LIB$SCOPY_DXDX6                         ;
                       6E         50  D0 02EF0             MOVL    R0, STATUS                              ;
            00000000G  8F         6E  D1 02EF3             CMPL    STATUS, #LIB$_STRTRU                    ; 4279
                                  02  13 02EFA             BEQL    636$                                    ;
                                  15  11 02EFC             BRB     637$                                    ;
                      00000000G   00  DD 02EFE 636$:       PUSHL   DBG$GL_OPCODE_NAME                      ;
                                  01  DD 02F04             PUSHL   #1                                      ;
                      000286AB    8F  DD 02F06             PUSHL   #165547                                 ;
            00000000G  00         03  FB 02F0C             CALLS   #3, LIB$SIGNAL                          ;
                       09         6E  E8 02F13 637$:       BLBS    STATUS, 638$                            ; 4280
                                  6E  DD 02F16             PUSHL   STATUS                                  ;
            00000000G  00         01  FB 02F18             CALLS   #1, LIB$SIGNAL                          ;
                       50         6A  3C 02F1F 638$:       MOVZWL  (R10), R0                               ; 4281
                       50    34   AE  C0 02F22             ADDL2   OUTPUT, R0                              ;
                                  60  94 02F26             CLRB    (R0)                                    ;
                                0096  31 02F28             BRW     645$                                    ; 4258
                       51         59  D0 02F2B 639$:       MOVL    R9, R1                                  ; 4286
                       50         5A  D0 02F2E             MOVL    R10, R0                                 ;
                      00000000G   00  16 02F31             JSB     LIB$SCOPY_DXDX6                         ;
                       6E         50  D0 02F37             MOVL    R0, STATUS                              ;
            00000000G  8F         6E  D1 02F3A             CMPL    STATUS, #LIB$_STRTRU                    ; 4287
                                  02  13 02F41             BEQL    640$                                    ;
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                                          15   11 02F43          BRB     641$                                   :
                              00000000G   00   DD 02F45 640$:    PUSHL   DBG$GL_OPCODE_NAME                     :
                                          01   DD 02F4B          PUSHL   #1                                     :
                              000286AB    8F   DD 02F4D          PUSHL   #165547                                :
                    00000000G  00         03   FB 02F53          CALLS   #3, LIB$SIGNAL                         :
                               7B         6E   E8 02F5A 641$:    BLBS    STATUS, 649$                           : 4288
                                          6E   DD 02F5D          PUSHL   STATUS                                 :
                    00000000G  00         01   FB 02F5F          CALLS   #1, LIB$SIGNAL                         :
                                          70   11 02F66 642$:    BRB     649$                                   : 4190
                               16         6B   91 02F68 643$:    CMPB    (R11), #22                             : 4294
                                          56   12 02F6B          BNEQ    646$                                   :
                    00000000'  EF     FD  AD   90 02F6D          MOVB    SRC_INFO+5, INPUT_STR                  : 4299
                               50 00000000'    EF   9A 02F75     MOVZBL  INPUT_STR, R0                          : 4300
        00000000'  EF      F9  BD         50   28 02F7C          MOVC3   R0, @SRC_INFO+1, INPUT_STR+1           :
                                      04  A9   DD 02F85          PUSHL   4(R9)                                  : 4301
                              00000000'   EF   9F 02F88          PUSHAB  OUTPUT_STR                             :
                              00000000'   EF   9F 02F8E          PUSHAB  INPUT_STR                              :
                    00000000G  00         03   FB 02F94          CALLS   #3, DBG$INS_ENCODE                     :
                               6E         50   D0 02F9B          MOVL    R0, STATUS                             :
                               09         6E   E8 02F9E          BLBS    STATUS, 644$                           : 4302
                                          6E   DD 02FA1          PUSHL   STATUS                                 :
                    00000000G  00         01   FB 02FA3          CALLS   #1, LIB$SIGNAL                         :
                               69 00000000'    EF   9B 02FAA 644$: MOVZBW OUTPUT_STR, (R9)                      : 4303
                               50 00000000'    EF   9A 02FB1     MOVZBL  OUTPUT_STR, R0                         : 4304
                 04    B9 00000000'   EF  50   28 02FB8          MOVC3   R0, OUTPUT_STR+1, @4(R9)               :
                                          15   11 02FC1 645$:    BRB     649$                                   : 4190
                              00000000'   EF   9F 02FC3 646$:    PUSHAB  P.AKK                                  : 4308
                                          01   DD 02FC9 647$:    PUSHL   #1                                     :
                              00028362    8F   DD 02FCB          PUSHL   #164706                                :
                    00000000G  00         03   FB 02FD1 648$:    CALLS   #3, LIB$SIGNAL                         :
                               0D     03  A9   91 02FD8 649$:    CMPB    3(R9), #13                             : 4317
                                          03   13 02FDC          BEQL    650$                                   :
                                        0090   31 02FDE          BRW     655$                                   :
                                          53   D4 02FE1 650$:    CLRL    SRC_POS                                : 4320
                               52     08  A9   D0 02FE3          MOVL    8(R9), DST_POS                         : 4321
                   29          01         6B   8F 02FE7          CASEB   (R11), #1, #41                         : 4322
   0088        0088        0088         006B      02FEB 651$:    .WORD   652$-651$,-                            :
   0088        0088        0088         0088      02FF3                  656$-651$,-                            :
   0088        0088        0088         0088      02FFB                  656$-651$,-                            :
   0088        0088        0088         0088      03003                  656$-651$,-                            :
   0088        0088        0088         0088      0300B                  656$-651$,-                            :
   0088        0088        0088         0088      03013                  656$-651$,-                            :
   0088        0088        0088         0088      0301B                  656$-651$,-                            :
   0088        0088        0088         0088      03023                  656$-651$,-                            :
   0088        0088        006B         0088      0302B                  656$-651$,-                            :
   006B        0088        0088         0088      03033                  656$-651$,-                            :
                           006B         006B      0303B                  656$-651$,-                            :
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                                                                         652$-651$                            :
                               00000000'  EF  9F 0303F           PUSHAB  P.AKL                                : 4349
                                          01  DD 03045           PUSHL   #1                                   :
                               00028362   8F  DD 03047           PUSHL   #164706                              :
                    00000000G  00         03  FB 0304D           CALLS   #3, LIB$SIGNAL                       :
                                          3B  11 03054           BRB     659$                                 :
                               54         69  3C 03056 652$:     MOVZWL  (R9), R4                             : 4330
                                          51  D4 03059           CLRL    I                                    : 4332
                                          10  11 0305B           BRB     654$                                 :
       50        34    BE      01         53  EF 0305D 653$:     EXTZV   SRC_POS, #1, @OUTPUT, R0             :
  20   BE              01      52         50  F0 03063           INSV    R0, DST_POS, #1, @DESTINATION_PTR    :
                                          52  D6 03069           INCL    DST_POS                              : 4333
                                          53  D6 0306B           INCL    SRC_POS                              : 4334
                       EC      51         54  F3 0306D 654$:     AOBLEQ  R4, I, 653$                          : 4330
                                          1E  11 03071 655$:     BRB     659$                                 : 4322
                               54         69  3C 03073 656$:     MOVZWL  (R9), R4                             : 4340
                                          51  D4 03076           CLRL    I                                    : 4342
                                        0012  31 03078           BRW     658$                                 :
       50        34    BE      08         53  EF 0307B 657$:     EXTZV   SRC_POS, #8, @OUTPUT, R0             :
  20   BE              08      52         50  F0 03081           INSV    R0, DST_POS, #8, @DESTINATION_PTR    :
                               52         08  C0 03087           ADDL2   #8, DST_POS                          : 4343
                               53         08  C0 0308A           ADDL2   #8, SRC_POS                          : 4344
                       EA      51         54  F3 0308D 658$:     AOBLEQ  R4, I, 657$                          : 4340
                               02         6C  91 03091 659$:     CMPB    (AP), #2                             : 4357
                                          05  1B 03094           BLEQU   660$                                 :
                    0C  BC         14     AE  B0 03096           MOVW    OUTPUT_STR_LEN, @OUTLEN              :
                                          04     0309B 660$:     RET                                          : 4359
                                        0000     0309C 661$:     .WORD   Save nothing                         : 1930
                                          7E  D4 0309E           CLRL    -(SP)                                :
                                          5E  DD 030A0           PUSHL   SP                                   :
                               7E  04     AC  7D 030A2           MOVQ    4(AP), -(SP)                         :
                    0000V  CF             03  FB 030A6           CALLS   #3, CVT_HANDLER                      :
                                          04     030AB           RET                                          :

; Routine Size:  12460 bytes,    Routine Base:  DBG$CODE + 02F0
```

```
1 ROUTINE CVT_HANDLER (SIG, MECH) =
1 !
1 ! FUNCTIONAL DESCRIPTION:
1 !
1 !       This handler will resignal opcode reserved to digital; it
1 !       otherwise translates system service signals to debug
1 !       error codes and resignals.
1 !
1 ! FORMAL PARAMETERS:
1 !
1 !       SIG.rr.r        A counted vector of parameters describing the condition.
1 !       MECH.rr.r       A counted vector of parameters from CHF.
1 !
1 ! IMPLICIT INPUTS:
1 !
1 !       NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !
1 !       NONE
1 !
1 ! COMPLETION STATUS: (or ROUTINE VALUE:)
1 !
1 !       SS$_RESIGNAL when opcode reserved to digital exception.  Any other case
1 !       will result in a debug condition being signalled.
1 !
1 ! SIDE EFFECTS:
1 !
1 !       NONE
1 !
2     BEGIN
2     MAP
2         SIG : REF VECTOR,
2         MECH : REF VECTOR;
2
2
2     !Translate error code if this is not an UNWIND, or opcode reserved to digital.
2     !Otherwise, signal debug error.
2     !
2     IF (LIB$MATCH_COND (SIG [1], %REF (SS$_UNWIND), %REF (SS$_OPCDEC))) GTR 0
2     THEN
2         RETURN (SS$_RESIGNAL);
2
2
2     !Translate all numeric exceptions to debug's facility code.
2     !Also, translate SS$_ROPRAND to DBG$_ROPRANDF.
2     !
2     SELECTONE .SIG[1] OF
2         SET
2         [SS$_INTOVF]:
2             SIGNAL (DBG$_IINTOVF, 1, .DBG$GL_OPCODE_NAME);
2         [SS$_DECOVF]:
2             SIGNAL (DBG$_DECOVF, 1, .DBG$GL_OPCODE_NAME);
2         [SS$_FLTOVF, SS$_FLTOVF_F]:
2             SIGNAL (DBG$_FLTOVF, 1, .DBG$GL_OPCODE_NAME);
2         [SS$_FLTUND, SS$_FLTUND_F]:
3             BEGIN
```

```
; 4313      4417 3              .SAVE_RESULT = 0;
; 4314      4418 3              SIGNAL (DBG$_IFLTUND, 1, .DBG$GL_OPCODE_NAME);
; 4315      4419 2              END;
; 4316      4420 2          [SS$_ROPRAND]:
; 4317      4421 3              BEGIN
; 4318      4422 3              IF .DECIMAL_CONVERT
; 4319      4423 3              THEN
; 4320      4424 3                  SIGNAL (DBG$_DECROPRAND)
; 4321      4425 3              ELSE
; 4322      4426 3                  SIGNAL (DBG$_ROPRANDF, 1, .DBG$GL_OPCODE_NAME);
; 4323      4427 2              END;
; 4324      4428 2          [OTHERWISE]:
; 4325      4429 2              RETURN (SS$_RESIGNAL);
; 4326      4430 2          TES;
; 4327      4431 2
; 4328      4432 2      SETUNWIND();
; 4329      4433 2      RETURN 0;
; 4330      4434 1      END;                                             ! End of CVT_HANDLER



                                        001C 00000 CVT_HANDLER:
                                                           .WORD    Save R2,R3,R4                             ; 4360
                 54 00000000G    00  9E 00002              MOVAB    LIB$SIGNAL, R4                            ;
                 53 00000000G    00  9E 00009              MOVAB    DBG$GL_OPCODE_NAME, R3                    ;
                 5E              08  C2 00010              SUBL2    #8, SP                                    ;
      04    AE         043C      8F  3C 00013              MOVZWL   #1084, 4(SP)                              ; 4399
                         04      AE  9F 00019              PUSHAB   4(SP)                                     ;
      04    AE         0920      8F  3C 0001C              MOVZWL   #2336, 4(SP)                              ;
                         04      AE  9F 00022              PUSHAB   4(SP)                                     ;
            52           04      AC  D0 00025              MOVL     SIG, R2                                   ;
                         04      A2  9F 00029              PUSHAB   4(R2)                                     ;
  00000000G 00                   03  FB 0002C              CALLS    #3, LIB$MATCH_COND                        ;
                                 50  D5 00033              TSTL     R0                                        ;
                                 77  14 00035              BGTR     7$                                        ;
            52           04      A2  D0 00037              MOVL     4(R2), R2                                 ; 4407
  0000047C  8F                   52  D1 0003B              CMPL     R2, #1148                                 ; 4409
                                 0C  12 00042              BNEQ     1$                                        ;
                                 63  DD 00044              PUSHL    DBG$GL_OPCODE_NAME                        ; 4410
                                 01  DD 00046              PUSHL    #1                                        ;
                  000286A3       8F  DD 00048              PUSHL    #165539                                   ;
                                 7C  11 0004E              BRB      9$                                        ;
  000004A4  8F                   52  D1 00050 1$:          CMPL     R2, #1188                                 ; 4411
                                 0C  12 00057              BNEQ     2$                                        ;
                                 63  DD 00059              PUSHL    DBG$GL_OPCODE_NAME                        ; 4412
                                 01  DD 0005B              PUSHL    #1                                        ;
                  00028A3A       8F  DD 0005D              PUSHL    #166458                                   ;
                                 67  11 00063              BRB      9$                                        ;
  0000048C  8F                   52  D1 00065 2$:          CMPL     R2, #1164                                 ; 4413
                                 09  13 0006C              BEQL     3$                                        ;
  000004B4  8F                   52  D1 0006E              CMPL     R2, #1204                                 ;
                                 0C  12 00075              BNEQ     4$                                        ;
                                 63  DD 00077 3$:          PUSHL    DBG$GL_OPCODE_NAME                        ; 4414
                                 01  DD 00079              PUSHL    #1                                        ;
                  00028A02       8F  DD 0007B              PUSHL    #166402                                   ;
```

```
                                      49  11 00081           BRB     9$                                          ;
              0000049C   8F           52  D1 00083 4$:       CMPL    R2, #1180                                   ; 4415
                                      09  13 0008A           BEQL    5$                                          ;
              000004C4   8F           52  D1 0008C           CMPL    R2, #1220                                   ;
                                      12  12 00093           BNEQ    6$                                          ;
                         00000000'    FF  D4 00095 5$:       CLRL    @SAVE_RESULT                                ; 4417
                                      63  DD 0009B           PUSHL   DBG$GL_OPCODE_NAME                          ; 4418
                                      01  DD 0009D           PUSHL   #1                                          ;
                         0002869B     8F  DD 0009F           PUSHL   #165531                                     ;
                                      25  11 000A5           BRB     9$                                          ;
              00000454   8F           52  D1 000A7 6$:       CMPL    R2, #1108                                   ; 4420
                                      21  12 000AE 7$:       BNEQ    10$                                         ;
                      0B 00000000'    EF  E9 000B0           BLBC    DECIMAL_CONVERT, 8$                         ; 4422
                         00028A42     8F  DD 000B7           PUSHL   #166466                                     ; 4424
                         64           01  FB 000BD           CALLS   #1, LIB$SIGNAL                              ;
                                      15  11 000C0           BRB     11$                                         ;
                                      63  DD 000C2 8$:       PUSHL   DBG$GL_OPCODE_NAME                          ; 4426
                                      01  DD 000C4           PUSHL   #1                                          ;
                         00028A0A     8F  DD 000C6           PUSHL   #166410                                     ;
                         64           03  FB 000CC 9$:       CALLS   #3, LIB$SIGNAL                              ;
                                      06  11 000CF           BRB     11$                                         ; 4407
                         50      0918 8F  3C 000D1 10$:      MOVZWL  #2328, R0                                   ; 4429
                                          04 000D6           RET                                                 ;
                                      7E  7C 000D7 11$:      CLRQ    -(SP)                                       ; 4432
              00000000G  00           02  FB 000D9           CALLS   #2, SYS$UNWIND                              ;
                                      50  D4 000E0           CLRL    R0                                          ; 4433
                                          04 000E2           RET                                                 ; 4434

; Routine Size:  227 bytes,    Routine Base:  DBG$CODE + 339C
```

```
ROUTINE FIND_CVT_PATH (SOURCE, DESTINATION, SRC_INFO, DST_INFO, CVT_PATH) =
!
! FUNCTION
!       This routine is called by DBG$CVT_DX_DX, and has the following four
!       functions:
!
!               a.  It finds any errors concerning the class and data type of the source
!                   and destination descriptors.  These errors can be invalid class,
!                   invalid data type, or invalid combination of a class and data type.
!                   It can also tell which descriptors are supported by this
!                   routine.
!
!               b.  It figures out what the conversion path is; ie,
!                   class,dtype --> class,dtype.  These paths are given names such
!                   as K_SMLINT_DEC, which reads ''from small integer to decimal''
!                   (categories defined later).
!
!               c.  Converts the source data to an intermediate data.  The strategy
!                   used to select the appropriate intermediate data is explained later.
!
!               d.  Puts whatever information is needed about the source and destination
!                   descriptor in two structures passed by DBG$CVT_DX_DX.  These
!                   two structures, SRC_INFO and DST_INFO, contain the kind of
!                   information that can only be visible when the class and data
!                   type of the source and destination descriptors are being
!                   manipulated.  These two structures can be expanded to contain
!                   more information as new class, and dta types may require it.
!
!       This routine is comprised of a Deterministic Finite Automaton, defined
!       as a 5 tuple:
!       States            : There is a state for each CLASS, and CLASS, DATA TYPE
!                           combination.
!       Alphabet          : Classes and Data types.
!       Mappings          : M(CLASS_S , DTYPE_B) := CLASS_S_DTYPE_B
!                           . . . . . . . . . . . . . . . . . . . . .
!                           . . . . . . . . . . . . . . . . . . . . .
!                           M(CLASS_D , DTYPE_W) := error
!                           . . . . . . . . . . . . . . . . . . . . .
!                           . . . . . . . . . . . . . . . . . . . . .
!       Start state       :
!       Final states      : All possible combinations of CLASS, DTYPE.
!                           Some of these combinations are allowed, others
!                           are not. The error combinations are denoted by
!                           negative numbers as states.
!
!
! MAINTENANCE OF THIS ROUTINE:
!
! This routine knows about all classes and data types of Appendix C V8.3.
! (You may want to update the above line everytime a change is made)
! To make an already existing CLASS, DATA TYPE combination a valid one, as
! opposed to an error you must:
!       1. Insert the symbol for that data type in DTYPE_TABLE in place of the
!          error state.
!       2. Define a FINAL_STATE for this combination.
!       3. Give it an action routine.
!
```

```
1 ! To add a new data type you must:
1 !       1. Increment K_MAX_DATA_TYPES.
1 !       2. Set K_MAX_DTYPE_STA to value of the new data type.
1 !       3. Does any of the following need to be changed?
1 !               a. K_SMLFINSTA
1 !               b. K_LRGFINSTA
1 !               c. K_TOP_SD
1 !               d. K_BOTTOM_SD
1 !       4. Define a new FINAL_STATE.
1 !       5. Each category in DTYPE_TABLE must have a new entry for the data type.
1 !          Note that the position (starting at 0) of each entry in each category is equivalent
1 !          to the data type value.
1 !       6. Add the new lable into the action routines CASE statement and
1 !          the sub-CASE statements in DBG$CVT_DX_DX will need to be modified to
1 !          include this new data type.
1 !
1 ! To add a new class you must:
1 !       1. Increment K_MAX_CLASSES
1 !       2. Set K_MAX_CLASS_STA to value of the new class.
1 !       3. Increment K_ACTUAL_CLASSES.
1 !       4. Make a new K_STATEx_CLASS_y, where x is class value and y is the
1 !          symbol of the class.
1 !       5. Make a new FINAL_STATE.
1 !       6. Add a new category to the STATES structure at the end, with a index
1 !          value of one higher than the last category.
1 !       7. Make a new entry in CLASS_TABLE.
1 !       8. Make a new category in DTYPE_TABLE.
1 !       9. Make a new lable in the action routine CASE statement.
1 !
1 !
1 ! CALLING SEQUENCE:
1 !       ret_status.wlc.v = FIND_CVT_PATH (SOURCE.rx.dx,
1 !                                         DESTINATION.rx.dx,
1 !                                         SRC_INFO.wr.r,
1 !                                         DST_INFO.wr.r,
1 !                                         CVT_PATH.wlu.r)
1 !
1 ! FORMAL PARAMETERS:
1 !       SOURCE          Address of source descriptor passed to DBG$CVT_DX_DX.
1 !       DESTINATION     Address of destination descriptor passed to DBG$CVT_DX_DX.
1 !       SRC_INFO        Address of a record in DBG$CVT_DX_DX.  Source information goes here.
1 !       DST_INFO        Address of a record in DBG$CVT_DX_DX.  Destination info goes here.
1 !       CVT_PATH        Address of a longword in DBG$CVT_DX_DX.  This code will determine which
1 !                       CASE label is taken in DBG$CVT_DX_DX.
1 !
1 ! IMPLICIT INPUTS:
1 !       NONE
1 !
1 ! IMPLICIT OUTPUTS:
1 !       NONE
1 !
1 ! COMPLETION STATUS: (or ROUTINE VALUE:)
1 !       K_UNSCLAROU             : -1 Unsupported CLASS by routine.
1 !       K_UNSDTYROU             : -2 Unsupported DTYPE by routine.
1 !       K_UNSDESROU             : -3 Unsupported descriptor by routine.
1 !       K_UNSDESSTA             : -4 Unsupported descriptor by standard.
1 !       K_UNSCLASTA             : -5 Unsupported CLASS by standard.
```

```
1 !             K_UNSDTYSTA                 : -6 Unsupported DTYPE by standard.
1 !             K_INVNBDS                   : -7 Invalid NBDS because array size is greater
1 !                                              than WU or dimension is not one.
1 !             K_SUPPORTED                 :  1 This descriptor is supported.
1 !
1 ! SIDE EFFECTS:
1 !       Caller of DBG$CVT_DX_DX must have LIB$EMULATE as a handler, if the
1 !       source or destination descriptor explicitely ask for G, H, O conversions.
1 !
2     BEGIN
2     LOCAL
2         STATUS,                                       ! Status of this routine
2         STATE,                                        ! State
2         CLASS,                                        ! Current CLASS being looked at
2         DTYPE,                                        ! Current DTYPE being looked at
2         TOKEN,                                        ! The value of each data type supported
2         LEFT_CVT : VECTOR [1],                        ! Left side of conversion index.
2         RIGHT_CVT : VECTOR [1],                       ! Right side of conversion index.
2         LEFT_OR_RIGHT_CVT : REF VECTOR,               ! Left or right side of conversion index.
2         SRC_OR_DST_INFO : REF BLOCK [, BYTE],         ! Source or destination info.
2         SRC_OR_DST : REF BLOCK [, BYTE],              ! Source or destination.
2         TEMP_BUF : BLOCK [K_INTMED_DATA_LENGTH, BYTE];  ! Temporary buffer for reshuffling things.
2
2     MAP
2         SOURCE : REF BLOCK [, BYTE],
2         DESTINATION : REF BLOCK [, BYTE],
2         SRC_INFO : REF BLOCK [, BYTE] FIELD (SRC_INFO_FIELDS),
2         DST_INFO : REF BLOCK [, BYTE] FIELD (DST_INFO_FIELDS);
2
2
2 ! Traverse through the state table twice, once for source, and once for
2 ! the destination descriptor.  Each time through, it determines a an
2 ! intermediate type; ie, an intermediate type for the source and an
2 ! intermediate type for the destination.  Eg.  SMLINT or LRGFLTCMPLX.
2 ! The action routines also build SRC_INFO, and DST_INFO, and they
2 ! convert the source to its intermediate value.
2 ! After determining the intermediate mappings for both the source and
2 ! destination descriptors, a formula maps both intermediate states into
2 ! one final state, eg. K_SMLINT_LRGFLTCMPLX.  This final result is used
2 ! as the main CASE index in DBG$CVT_DX_DX.
2 !
2 ! The loop goes from 0 to 3:  once for source, once for destination; if it makes
2 ! it to .TURN EQL 2, then it exits the loop with a successful status.
2 ! If the state table indicates an error (eg. invalid dtype-class combination),
2 ! or an error is detected in an action routine (eg. size of array cannot fit in WU),
2 ! then the routine exits the loop with an error code.
2 !
3     BEGIN
4     STATUS = (INCRU TURN FROM 0 TO 3 DO
5         BEGIN
5
5
5         ! Determine CLASS and DTYPE of this go around, also set up LEFT_OR_RIGHT_CVT,
5         ! and SRC_OR_DST, and SRC_OR_DST_INFO.
5         ! If this is the third time through this loop, we are finished.
5         !
5         CASE .TURN FROM 0 TO 2 OF
```

```
5          SET
5          [0]:
6              BEGIN
6              CLASS = .SOURCE [DSC$B_CLASS];
6              DTYPE = .SOURCE [DSC$B_DTYPE];
6              SRC_OR_DST = .SOURCE;
6              SRC_OR_DST_INFO = .SRC_INFO;
6              LEFT_OR_RIGHT_CVT = LEFT_CVT;
5              END;
5          [1]:
6              BEGIN
6              CLASS = .DESTINATION [DSC$B_CLASS];
6              DTYPE = .DESTINATION [DSC$B_DTYPE];
6              SRC_OR_DST = .DESTINATION;
6              SRC_OR_DST_INFO = .DST_INFO;
6              LEFT_OR_RIGHT_CVT = RIGHT_CVT;
5              END;
5          [2]:
5              EXITLOOP K_SUPPORTED;
5          TES;
5
5      ! Filter out the out-of-range CLASS and DTYPE.
5      !
5      IF .CLASS GTRU K_MAX_CLASS_STA THEN EXITLOOP K_UNSCLASTA;
5      IF .DTYPE GTRU K_MAX_DTYPE_STA THEN EXITLOOP K_UNSDTYSTA;
5
5
5      ! Crank up the finite state machine. start looking in the start state.
5      !
5      STATE = .CLASS_TABLE [.CLASS];
5
5
5      ! Action code for each state that results from the start state.
5      !
5      CASE .STATE FROM K_MSTNEGERR TO K_LRGCLSSUP OF
5          SET
5          [K_INVNBDS TO K_UNSCLAROU] :
5
5
5              ! Exit the INCR with the error resulting from the
5              ! start state.
5              !
5              EXITLOOP .STATE;
5          [K_SMLCLSSUP TO K_LRGCLSSUP] :
6              BEGIN
6
6
6              ! This is a final state, but some constants need to be
6              ! applied to it yet.  This is just a data type, or a
6              ! negative number if error.
6              !
6              TOKEN = .DTYPE_TABLE [.STATE, .DTYPE];
6
6
6              ! Exit INCR with the error resulting in a final state.
6              !
```

```
6                   IF .TOKEN LSS 0 THEN EXITLOOP .TOKEN;
6
6
6                   ! Find the final state.
6                   !
6                   STATE = FINAL_STATE (.STATE, .TOKEN);
5                   END;
5               [INRANGE, OUTRANGE] :
5                   $DBG_ERROR ('DBGCVTDX\FIND_CVT_PATH:  invalid state');
5               TES;
5
5           ! This CASE statement contains the action code for each final state other than
5           ! the error states.
5           ! The caller of this routine has set up the pointer and length of SRC_INFO
5           ! to be the intermediate data area (INTMED_DATA); in the CASE below we change
5           ! the pointer and length if needed (e.g. any NBDS), otherwise we never
5           ! touch it.
5           ! If .TURN is 0 then we are processing the left side of the conversion, when
5           ! it is 1 we are processing the right side of the conversion. In other words,
5           ! if .TURN is 0 we are looking at the CLASS, DATA TYPE of source; if .TURN
5           ! is 1 we are looking at CLASS, DATA TYPE of destination.
5           ! These action codes determine which category (e.g. K_SMLINT or K_DEC as
5           ! described in DBG$CVT_DX_DX documentation) the source or destination data type
5           ! falls into.  They also convert the source data type to an intermediate
5           ! data type.  For more detail refer to the functional description of
5           ! DBG$CVT_DX_DX.
5           !
5           CASE .STATE FROM K_SMLFINSTA TO K_LRGFINSTA OF
5               SET
5
5               [K_S_BU, K_SD_BU, K_UBS_BU]:
6                   BEGIN
6                   .LEFT_OR_RIGHT_CVT = K_SMLINT;
6                   IF .STATE EQL K_SD_BU THEN
7                       BEGIN
7                       SRC_OR_DST_INFO [M_SCALE] =
7                           .SRC_OR_DST [DSC$B_SCALE];
7                       SRC_OR_DST_INFO [M_BIN_SCALE] =
7                           .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                       END;
6                   IF .TURN EQL 0
6                   THEN
6                       .SRC_INFO [S_POINTER] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 8, 0;,
6                           BYTE];
5                   END;
5
5               [K_S_WU, K_SD_WU, K_UBS_WU]:
6                   BEGIN
6                   .LEFT_OR_RIGHT_CVT = K_SMLINT;
6                   IF .STATE EQL K_SD_WU THEN
7                       BEGIN
7                       SRC_OR_DST_INFO [M_SCALE] =
7                           .SRC_OR_DST [DSC$B_SCALE];
7                       SRC_OR_DST_INFO [M_BIN_SCALE] =
7                           .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                       END;
6                   IF .TURN EQL 0
```

```
6                       THEN
6                           .SRC_INFO [S_POINTER] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 16, 0;,
6                               BYTE];
5                       END;
5
5                   [K_S_LU, K_SD_LU, K_UBS_LU]:
6                       BEGIN
6                       .LEFT_OR_RIGHT_CVT = K_LRGINT;
6                       IF .STATE EQL K_SD_LU THEN
7                           BEGIN
7                           SRC_OR_DST_INFO [M_SCALE] =
7                               .SRC_OR_DST [DSC$B_SCALE];
7                           SRC_OR_DST_INFO [M_BIN_SCALE] =
7                               .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                           END;
6                       IF .TURN EQL 0
6                       THEN
6                           .SRC_INFO [S_POINTER] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 32, 0;,
6                               BYTE];
5                       END;
5
5                   [K_S_B, K_SD_B, K_UBS_B]:
6                       BEGIN
6                       .LEFT_OR_RIGHT_CVT = K_SMLINT;
6                       IF .STATE EQL K_SD_B THEN
7                           BEGIN
7                           SRC_OR_DST_INFO [M_SCALE] =
7                               .SRC_OR_DST [DSC$B_SCALE];
7                           SRC_OR_DST_INFO [M_BIN_SCALE] =
7                               .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                           END;
6                       IF .TURN EQL 0
6                       THEN
6                           .SRC_INFO [S_POINTER] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 8, 1;,
6                               BYTE];
5                       END;
5
5                   [K_S_W, K_SD_W, K_UBS_W]:
6                       BEGIN
6                       .LEFT_OR_RIGHT_CVT = K_SMLINT;
6                       IF .STATE EQL K_SD_W THEN
7                           BEGIN
7                           SRC_OR_DST_INFO [M_SCALE] =
7                               .SRC_OR_DST [DSC$B_SCALE];
7                           SRC_OR_DST_INFO [M_BIN_SCALE] =
7                               .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                           END;
6                       IF .TURN EQL 0
6                       THEN
6                           .SRC_INFO [S_POINTER] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 16, 1;,
6                               BYTE];
5                       END;
5
5                   [K_S_L, K_SD_L, K_UBS_L]:
6                       BEGIN
6                       .LEFT_OR_RIGHT_CVT = K_SMLINT;
6                       IF .STATE EQL K_SD_L THEN
```

```
7                       BEGIN
7                       SRC_OR_DST_INFO [M_SCALE] =
7                           .SRC_OR_DST [DSC$B_SCALE];
7                       SRC_OR_DST_INFO [M_BIN_SCALE] =
7                           .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                       END;
6                   IF .TURN EQL 0
6                   THEN
6                       .SRC_INFO [S_POINTER] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 32, 1;,
6                           BYTE];
5                   END;
5
5               [K_S_V, K_S_SV, K_S_TF, K_UBS_VU, K_UBS_SVU, K_UBS_TF]:
6                   BEGIN
6                   .LEFT_OR_RIGHT_CVT = K_SMLINT;
6                   SRC_OR_DST_INFO[M_LEN] = .SRC_OR_DST[DSC$W_LENGTH];
6                   IF .TURN EQL 0
6                   THEN
7                       BEGIN
7                       LOCAL
7                           BITPOS, SRC_PTR;
7
7                       IF .SOURCE[DSC$B_CLASS] EQL DSC$K_CLASS_UBS
7                       THEN
7                           BITPOS = .SOURCE[DSC$L_POS]
7                       ELSE
7                           BITPOS = 0;
7                       SRC_PTR = .SOURCE[DSC$A_BASE];
7                       IF .STATE EQL K_S_SV OR .STATE EQL K_UBS_SVU
7                       THEN
7                           .SRC_INFO[S_POINTER] = .(.SRC_PTR)<.BITPOS, .SOURCE[DSC$W_LENGTH], 1>
7                       ELSE
8                           BEGIN
8                           .SRC_INFO[S_POINTER] = .(.SRC_PTR)<.BITPOS, .SOURCE[DSC$W_LENGTH], 0>;
8                           IF .BLOCK [.SRC_INFO[S_POINTER], 0, 31, 1, 0;, BYTE]
8                           THEN
8                               .LEFT_OR_RIGHT_CVT = K_LRGINT;
7                           END;
6                       END;
5                   END;
5
5               [K_S_Q, K_SD_Q, K_UBS_Q, K_S_QU, K_SD_QU, K_UBS_QU]:
6                   BEGIN
6                   .LEFT_OR_RIGHT_CVT = K_LRGINT;
6                   IF .STATE EQL K_SD_Q OR .STATE EQL K_SD_QU
6                   THEN
7                       BEGIN
7                       SRC_OR_DST_INFO [M_SCALE] =
7                           .SRC_OR_DST [DSC$B_SCALE];
7                       SRC_OR_DST_INFO [M_BIN_SCALE] =
7                           .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                       END;
6                   IF .TURN EQL 0
6                   THEN
7                       BEGIN
7                       .SRC_INFO [S_POINTER] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 32, 0;, BYTE];
7                       (.SRC_INFO [S_POINTER] + 4) = .BLOCK [.SOURCE [DSC$A_POINTER] + 4, 0, 0, 32, 0;, BYTE];
```

```
7                       IF .BLOCK [.SRC_INFO [S_POINTER], 4, 31, 1, 0;, BYTE]
7                       THEN
8                           BEGIN
8                           .SRC_INFO [S_POINTER] = ..SRC_INFO [S_POINTER] XOR %X'FFFFFFFF';
8                           .SRC_INFO [S_POINTER] + 4 = .(.SRC_INFO [S_POINTER] + 4) XOR %X'FFFFFFFF';
8                           IF ..SRC_INFO [S_POINTER] EQLU K_LRGST_LU
8                           THEN
9                               BEGIN
9                               .SRC_INFO [S_POINTER] = 0;
9                               .SRC_INFO [S_POINTER] + 4 = .(.SRC_INFO [S_POINTER] + 4) + 1;
9                               END
8                           ELSE
8                               .SRC_INFO [S_POINTER] = ..SRC_INFO [S_POINTER] + 1;
8                           SRC_INFO [S_SIGN] = 1;
7                           END;
6                       END;
5                   END;
5
5           [K_S_O, K_SD_O, K_UBS_O]:
6               BEGIN
6               .LEFT_OR_RIGHT_CVT = K_LRGINT;
6               IF .STATE EQL K_SD_O THEN
7                   BEGIN
7                   SRC_OR_DST_INFO [M_SCALE] =
7                       .SRC_OR_DST [DSC$B_SCALE];
7                   SRC_OR_DST_INFO [M_BIN_SCALE] =
7                       .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                   END;
6               IF .TURN EQL 0
6               THEN
7                   BEGIN
7                   CH$MOVE (16, .SOURCE[DSC$A_POINTER], .SRC_INFO[S_POINTER]);
7                   IF .BLOCK [.SRC_INFO [S_POINTER], 12, 31, 1, 0;, BYTE]
7                   THEN
8                       BEGIN
8                       INCR I FROM 0 TO 12 BY 4 DO
8                           .SRC_INFO[S_POINTER] + .I = .(.SRC_INFO[S_POINTER] + .I) XOR %X'FFFFFFFF';
8                       IF ..SRC_INFO [S_POINTER] EQLU K_LRGST_LU
8                       THEN
9                           BEGIN
9                           .SRC_INFO [S_POINTER] = 0;
9                           INCR I FROM 4 TO 12 BY 4 DO
9                               .SRC_INFO [S_POINTER] + .I = .(.SRC_INFO [S_POINTER] + .I) + 1;
9                           END
8                       ELSE
8                           .SRC_INFO [S_POINTER] = ..SRC_INFO [S_POINTER] + 1;
8                       SRC_INFO [S_SIGN] = 1;
7                       END;
6                   END;
5               END;
5
5           [K_S_F, K_SD_F, K_UBS_F]:
6               BEGIN
6               .LEFT_OR_RIGHT_CVT = K_SMLFLT_CMPLX;
6               IF .STATE EQL K_SD_F THEN
7                   BEGIN
7                   SRC_OR_DST_INFO [M_SCALE] =
7                           .SRC_OR_DST [DSC$B_SCALE];
7                   SRC_OR_DST_INFO [M_BIN_SCALE] =
7                           .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                   END;
6           IF .TURN EQL 0
6           THEN
6                   .SRC_INFO [S_POINTER] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 32, 0;, BYTE];
5           END;
5
5       [K_S_FC, K_SD_FC, K_UBS_FC]:
6           BEGIN
6           .LEFT_OR_RIGHT_CVT = K_SMLFLT_CMPLX;
6           IF .STATE EQL K_SD_FC THEN
7                   BEGIN
7                   SRC_OR_DST_INFO [M_SCALE] =
7                           .SRC_OR_DST [DSC$B_SCALE];
7                   SRC_OR_DST_INFO [M_BIN_SCALE] =
7                           .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                   END;
6           IF .TURN EQL 0
6           THEN
7                   BEGIN
7                   .SRC_INFO [S_POINTER] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 32, 0;, BYTE];
7
7                   ! Intermediate data type is double complex.
7                   !
7                   (.SRC_INFO [S_POINTER] + 8) = .BLOCK [.SOURCE [DSC$A_POINTER] + 4, 0, 0, 32, 0;, BYTE];
6                   END;
5           END;
5
5       [K_S_D, K_SD_D, K_UBS_D]:
6           BEGIN
6           .LEFT_OR_RIGHT_CVT = K_SMLFLT_CMPLX;
6           IF .STATE EQL K_SD_D THEN
7                   BEGIN
7                   SRC_OR_DST_INFO [M_SCALE] =
7                           .SRC_OR_DST [DSC$B_SCALE];
7                   SRC_OR_DST_INFO [M_BIN_SCALE] =
7                           .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                   END;
6           IF .TURN EQL 0
6           THEN
7                   BEGIN
7
7
7                   ! The intermediate data buffer is initialized to zero, so
7                   ! don't have to worry about filling i[illegible]inary part.
7                   ! (Intermediate data type is double complex).
7                   !
7                   .SRC_INFO [S_POINTER] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 32, 0;, BYTE];
7                   (.SRC_INFO [S_POINTER] + 4) = .BLOCK [.SOURCE [DSC$A_POINTER] + 4, 0, 0, 32, 0;, BYTE];
6                   END;
5           END;
5
5       [K_S_DC, K_SD_DC, K_UBS_DC]:
6           BEGIN
```

```
6              .LEFT_OR_RIGHT_CVT = K_SMLFLT_CMPLX;
6              IF .STATE EQL K_SD_D THEN
7                   BEGIN
7                   SRC_OR_DST_INFO [M_SCALE] =
7                        .SRC_OR_DST [DSC$B_SCALE];
7                   SRC_OR_DST_INFO [M_BIN_SCALE] =
7                        .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                   END;
6              IF .TURN EQL 0
6              THEN
6                   CH$MOVE (16, .SOURCE[DSC$A_POINTER], .SRC_INFO[S_POINTER]);
5              END;
5
5         [K_S_G, K_SD_G, K_UBS_G]:
6              BEGIN
6              .LEFT_OR_RIGHT_CVT = K_LRGFLT_CMPLX;
6              IF .STATE EQL K_SD_G THEN
7                   BEGIN
7                   SRC_OR_DST_INFO [M_SCALE] =
7                        .SRC_OR_DST [DSC$B_SCALE];
7                   SRC_OR_DST_INFO [M_BIN_SCALE] =
7                        .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                   END;
6              IF .TURN EQL 0
6              THEN
7                   BEGIN
7                   .SRC_INFO [S_POINTER] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 32, 0;, BYTE];
7                   (.SRC_INFO [S_POINTER] + 4) = .BLOCK [.SOURCE [DSC$A_POINTER] + 4, 0, 0, 32, 0;, BYTE];
6                   END;
5              END;
5
5         [K_S_GC, K_SD_GC, K_UBS_GC]:
6              BEGIN
6              .LEFT_OR_RIGHT_CVT = K_LRGFLT_CMPLX;
6              IF .STATE EQL K_SD_GC THEN
7                   BEGIN
7                   SRC_OR_DST_INFO [M_SCALE] =
7                        .SRC_OR_DST [DSC$B_SCALE];
7                   SRC_OR_DST_INFO [M_BIN_SCALE] =
7                        .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                   END;
6              IF .TURN EQL 0
6              THEN
6                   CH$MOVE (16, .SOURCE[DSC$A_POINTER], .SRC_INFO[S_POINTER]);
5              END;
5
5         [K_S_H, K_SD_H, K_UBS_H]:
6              BEGIN
6              .LEFT_OR_RIGHT_CVT = K_LRGFLT_CMPLX;
6              IF .STATE EQL K_SD_H THEN
7                   BEGIN
7                   SRC_OR_DST_INFO [M_SCALE] =
7                        .SRC_OR_DST [DSC$B_SCALE];
7                   SRC_OR_DST_INFO [M_BIN_SCALE] =
7                        .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                   END;
6              IF .TURN EQL 0 THEN CH$MOVE (16, .SOURCE [DSC$A_POINTER], .SRC_INFO [S_POINTER]);
```

```
5                   END;
5
5           [K_S_HC, K_SD_HC, K_UBS_HC]:
6               BEGIN
6               .LEFT_OR_RIGHT_CVT = K_LRGFLT_CMPLX;
6               IF .STATE EQL K_SD_HC THEN
7                   BEGIN
7                   SRC_OR_DST_INFO [M_SCALE] =
7                       .SRC_OR_DST [DSC$B_SCALE];
7                   SRC_OR_DST_INFO [M_BIN_SCALE] =
7                       .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                   END;
6               IF .TURN EQL 0
6               THEN
6                   CH$MOVE (32, .SOURCE [DSC$A_POINTER], .SRC_INFO [S_POINTER]);
5               END;
5
5           [K_S_T, K_SD_T, K_UBS_T]:
6               BEGIN
6               .LEFT_OR_RIGHT_CVT = K_NBDS;
6               SRC_OR_DST_INFO [M_LEN] = .SRC_OR_DST [DSC$W_LENGTH];
6               IF .STATE EQL K_SD_T THEN
7                   BEGIN
7                   SRC_OR_DST_INFO [M_SCALE] =
7                       .SRC_OR_DST [DSC$B_SCALE];
7                   SRC_OR_DST_INFO [M_BIN_SCALE] =
7                       .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                   END;
6               IF .TURN EQL 0
6               THEN
7                   BEGIN
7                   SRC_INFO [S_POINTER] = .SOURCE [DSC$A_POINTER];
6                   END;
5               END;
5
5           [K_S_NU, K_SD_NU]:
6               BEGIN
6               .LEFT_OR_RIGHT_CVT = K_DEC;
6               IF .STATE EQL K_SD_NU THEN
7                   BEGIN
7                   SRC_OR_DST_INFO [M_SCALE] =
7                       .SRC_OR_DST [DSC$B_SCALE];
7                   SRC_OR_DST_INFO [M_BIN_SCALE] =
7                       .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                   END;
6               IF .TURN EQL 0
6               THEN
7                   BEGIN
7                   SRC_INFO [S_LEN] = 31;
7                   CVTTP (SOURCE [DSC$W_LENGTH], .SOURCE [DSC$A_POINTER], LIB$AB_CVTTP_U,
7                       SRC_INFO [S_LEN], .SRC_INFO [S_POINTER]);
6                   END;
5               END;
5
5           [K_S_NL, K_SD_NL]:
6               BEGIN
6               .LEFT_OR_RIGHT_CVT = K_DEC;
```

```
6                   IF .STATE EQL K_SD_NL THEN
7                       BEGIN
7                       SRC_OR_DST_INFO [M_SCALE] =
7                           .SRC_OR_DST [DSC$B_SCALE];
7                       SRC_OR_DST_INFO [M_BIN_SCALE] =
7                           .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                       END;
6                   IF .TURN EQL 0
6                   THEN
7                       BEGIN
7                       SRC_INFO [S_LEN] = 31;
7                       CVTSP (%REF (
7                               IF .SOURCE [DSC$W_LENGTH] EQL 0 THEN 0 ELSE .SOURCE [DSC$W_LENGTH] - 1),
7                           .SOURCE [DSC$A_POINTER], SRC_INFO [S_LEN], .SRC_INFO [S_POINTER]);
6                       END;
5                   END;
5
5               [K_S_NLO, K_SD_NLO]:
6                   BEGIN
6                   .LEFT_OR_RIGHT_CVT = K_DEC;
6                   IF .STATE EQL K_SD_NLO THEN
7                       BEGIN
7                       SRC_OR_DST_INFO [M_SCALE] =
7                           .SRC_OR_DST [DSC$B_SCALE];
7                       SRC_OR_DST_INFO [M_BIN_SCALE] =
7                           .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                       END;
6                   IF .TURN EQL 0
6                   THEN
7                       BEGIN
7                       LOCAL
7                           LF_SIGN:  REF VECTOR[, BYTE],
7                           RT_SIGN:  REF VECTOR[, BYTE],
7                           ZERO_FLAG,
7                           SIGN_FLAG,
7                           PACK_ZERO: VECTOR [1];
7                       PACK_ZERO = UPLIT (%P'+0');
7                       SRC_INFO [S_LEN] = 31;
7 !                     CH$TRANSLATE (LIB$AB_CVT_O_U, .SOURCE [DSC$W_LENGTH], .SOURCE [DSC$A_POINTER], 0,
7 !                         .SOURCE [DSC$W_LENGTH], TEMP_BUF);
7 !                     CVTTP (SOURCE [DSC$W_LENGTH], TEMP_BUF, LIB$AB_CVTTP_U, SRC_INFO [S_LEN],
7 !                         .SRC_INFO [S_POINTER]);
7 !
7 ! Orignal code turns negative NLO type into positive NLO.  If the negative
7 ! type comes into this piece of code without CH$TRANSLATE gives Reserved
7 ! Operand fault.  What I did here is to move the left overpunched sign
7 ! to the right overpunched sign then performs the conversion.  After the
7 ! conversion, put the sign back to where it belonged.
7 !
7                       RT_SIGN = .SOURCE [DSC$A_POINTER] + .SOURCE [DSC$W_LENGTH] - 1;
7                       LF_SIGN = .SOURCE [DSC$A_POINTER];
7                       ZERO_FLAG = FALSE;
7                       SELECTONE .LF_SIGN[0] OF
7                           SET
7
7                           ! Positive 1 -- 9
7                           !
```

```
7               [%X'41' TO %X'49']: SIGN_FLAG = TRUE;
7
7               ! Negative 1 -- 9
7               !
7               [%X'4A' TO %X'52']: SIGN_FLAG = FALSE;
7
7               ! Positive 0
7               !
7               [%X'7B']:
8                   BEGIN
8                   SIGN_FLAG = TRUE;
8                   ZERO_FLAG = TRUE;
8                   LF_SIGN[0] = %X'30';
8                   IF .RT_SIGN[0] EQL %X'30'
8                   THEN
8                       RT_SIGN[0] = %X'7B'
8                   ELSE
8                       RT_SIGN[0] = .RT_SIGN[0] + %X'10';
7                   END;
7
7               ! Negative 0
7               !
7               [%X'7D']:
8                   BEGIN
8                   SIGN_FLAG = FALSE;
8                   ZERO_FLAG = TRUE;
8                   LF_SIGN[0] = %X'30';
8                   IF .RT_SIGN[0] EQL %X'30'
8                   THEN
8                       RT_SIGN[0] = %X'7D'
8                   ELSE
8                       RT_SIGN[0] = .RT_SIGN[0] + %X'19';
7                   END;
7
7               [OTHERWISE]: $DBG_ERROR('DBGCVTDX\FIND_CVT_PATH');
7               TES;
7
7           IF NOT .ZERO_FLAG
7           THEN
8               BEGIN
8               IF .SIGN_FLAG
8               THEN
9                   BEGIN
9                   LF_SIGN[0] = .LF_SIGN[0] - %X'10';
9                   IF .RT_SIGN[0] EQL %X'30'
9                   THEN
9                       RT_SIGN[0] = %X'7B'
9                   ELSE
9                       RT_SIGN[0] = .RT_SIGN[0] + %X'10';
9                   END
9
8               ELSE
9                   BEGIN
9                   LF_SIGN[0] = .LF_SIGN[0] - %X'19';
9                   IF .RT_SIGN[0] EQL %X'30'
9                   THEN
9                       RT_SIGN[0] = %X'7D'
```

```
; 5073          5176  9                             ELSE
; 5074          5177  9                                 RT_SIGN[0] = .RT_SIGN[0] + %X'19';
; 5075          5178  8                             END;
; 5076          5179  8
; 5077          5180  7                         END;
; 5078          5181  7
; 5079          5182  7                     CVTTP (SOURCE [DSC$W_LENGTH], .SOURCE [DSC$A_POINTER], LIB$AB_CVTTP_O,
; 5080          5183  7                                 SRC_INFO [S_LEN], .SRC_INFO [S_POINTER]);
; 5081          5184  7
; 5082          5185  7                     ! Now put the sign back.
; 5083          5186  7                     !
; 5084          5187  7                     IF .SIGN_FLAG
; 5085          5188  7                     THEN
; 5086          5189  8                         BEGIN
; 5087          5190  8                         IF .RT_SIGN[0] EQL %X'7B'
; 5088          5191  8                         THEN
; 5089          5192  8                             RT_SIGN[0] = %X'30'
; 5090          5193  8                         ELSE
; 5091          5194  8                             RT_SIGN[0] = .RT_SIGN[0] - %X'10';
; 5092          5195  8
; 5093          5196  8                         IF .LF_SIGN[0] EQL %X'30'
; 5094          5197  8                         THEN
; 5095          5198  8                             LF_SIGN[0] = %X'7B'
; 5096          5199  8                         ELSE
; 5097          5200  8                             LF_SIGN[0] = .LF_SIGN[0] + %X'10';
; 5098          5201  8
; 5099          5202  8                         END
; 5100          5203  8
; 5101          5204  7                     ELSE
; 5102          5205  8                         BEGIN
; 5103          5206  8                         IF .RT_SIGN[0] EQL %X'7D'
; 5104          5207  8                         THEN
; 5105          5208  8                             RT_SIGN[0] = %X'30'
; 5106          5209  8                         ELSE
; 5107          5210  8                             RT_SIGN[0] = .RT_SIGN[0] - %X'19';
; 5108          5211  8
; 5109          5212  8                         IF .LF_SIGN[0] EQL %X'30'
; 5110          5213  8                         THEN
; 5111          5214  8                             LF_SIGN[0] = %X'7D'
; 5112          5215  8                         ELSE
; 5113          5216  8                             LF_SIGN[0] = .LF_SIGN[0] + %X'19';
; 5114          5217  8
; 5115          5218  7                         END;
; 5116          5219  7
; 5117          5220  7                     IF CMPP (SRC_INFO [S_LEN], .SRC_INFO [S_POINTER], %REF (1), .PACK_ZERO) EQLU 0
; 5118          5221  7                     THEN
; 5119          5222  7                         BLOCK [.SRC_INFO [S_POINTER] + .SRC_INFO [S_LEN]/2, 0, 0, 4, 0;, BYTE] = .BLOCK [
; 5120          5223  7                             .LIB$AB_CVTTP_O + .SOURCE [DSC$A_POINTER], 0, 0, 4, 0;, BYTE];
; 5121          5224  6                     END;
; 5122          5225  5                 END;
; 5123          5226  5
; 5124          5227  5             [K_S_NR, K_SD_NR]:
; 5125          5228  6                 BEGIN
; 5126          5229  6                 .LEFT_OR_RIGHT_CVT = K_DEC;
; 5127          5230  6                 IF .STATE EQL K_SD_NR THEN
; 5128          5231  7                     BEGIN
; 5129          5232  7                     SRC_OR_DST_INFO [M_SCALE] =
7                     .SRC_OR_DST [DSC$B_SCALE];
7                 SRC_OR_DST_INFO [M_BIN_SCALE] =
7                     .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                 END;
6             IF .TURN EQL 0
6             THEN
7                 BEGIN
7                 LOCAL
7                     SOU_LEN;
7                 SOU_LEN =
8                 BEGIN
8                 IF .SOURCE [DSC$W_LENGTH] EQL 0 THEN 0 ELSE .SOURCE [DSC$W_LENGTH] - 1
7                 END;
7                 TEMP_BUF [0, 0, 8, 0] = .BLOCK [.SOURCE [DSC$A_POINTER] + .SOU_LEN, 0, 0, 8, 0;, BYTE];
7                 CH$MOVE (.SOU_LEN, .SOURCE [DSC$A_POINTER], TEMP_BUF + 1);
7                 SRC_INFO [S_LEN] = 31;
7                 CVTSP (SOU_LEN, TEMP_BUF, SRC_INFO [S_LEN], .SRC_INFO [S_POINTER]);
6                 END;
5             END;
5
5         [K_S_NRO, K_SD_NRO]:
6             BEGIN
6             .LEFT_OR_RIGHT_CVT = K_DEC;
6             IF .STATE EQL K_SD_NRO THEN
7                 BEGIN
7                 SRC_OR_DST_INFO [M_SCALE] =
7                     .SRC_OR_DST [DSC$B_SCALE];
7                 SRC_OR_DST_INFO [M_BIN_SCALE] =
7                     .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                 END;
6             IF .TURN EQL 0
6             THEN
7                 BEGIN
7                 SRC_INFO [S_LEN] = 31;
7                 CVTTP (SOURCE [DSC$W_LENGTH], .SOURCE [DSC$A_POINTER], LIB$AB_CVTTP_O,
7                     SRC_INFO [S_LEN], .SRC_INFO [S_POINTER]);
6                 END;
5             END;
5
5         [K_S_NZ, K_SD_NZ]:
6             BEGIN
6             .LEFT_OR_RIGHT_CVT = K_DEC;
6             IF .STATE EQL K_SD_NZ THEN
7                 BEGIN
7                 SRC_OR_DST_INFO [M_SCALE] =
7                     .SRC_OR_DST [DSC$B_SCALE];
7                 SRC_OR_DST_INFO [M_BIN_SCALE] =
7                     .SRC_OR_DST[DSC$V_FL_BINSCALE];
6                 END;
6             IF .TURN EQL 0
6             THEN
7                 BEGIN
7                 SRC_INFO [S_LEN] = 31;
7                 CVTTP (SOURCE [DSC$W_LENGTH], .SOURCE [DSC$A_POINTER], LIB$AB_CVTTP_Z,
7                     SRC_INFO [S_LEN], .SRC_INFO [S_POINTER]);
6                 END;
5             END;
```

```
        [K_S_P, K_SD_P]:
            BEGIN
            .LEFT_OR_RIGHT_CVT = K_DEC;
            IF .STATE EQL K_SD_P THEN
                BEGIN
                SRC_OR_DST_INFO [M_SCALE] =
                    .SRC_OR_DST [DSC$B_SCALE];
                SRC_OR_DST_INFO [M_BIN_SCALE] =
                    .SRC_OR_DST[DSC$V_FL_BINSCALE];
                END;
            IF .TURN EQL 0
            THEN
                BEGIN
                CVTPS (SOURCE [DSC$W_LENGTH], .SOURCE [DSC$A_POINTER], %REF (31), TEMP_BUF);
                CVTSP (%REF (31), TEMP_BUF, %REF (31), .SRC_INFO [S_POINTER]);
                SRC_INFO [S_LEN] = 31;
                END;
            END;

        [K_S_ZI]:
            .LEFT_OR_RIGHT_CVT = K_NBDS;

        [K_D_T]:
            BEGIN
            .LEFT_OR_RIGHT_CVT = K_NBDS;
            SRC_OR_DST_INFO [M_LEN] = .SRC_OR_DST [DSC$W_LENGTH];
            IF .TURN EQL 0
            THEN
                BEGIN
                SRC_INFO [S_POINTER] = .SOURCE [DSC$A_POINTER];
                END;
            END;

        [K_A_BU, K_A_T, K_NCA_BU, K_NCA_T]:
            BEGIN
            .LEFT_OR_RIGHT_CVT = K_NBDS;
            IF (.SRC_OR_DST [DSC$L_ARSIZE] GTR K_LRGST_WU OR .SRC_OR_DST [DSC$B_DIMCT] NEQ 1 OR
                .SRC_OR_DST [DSC$W_LENGTH] NEQ 1)
            THEN
                EXITLOOP K_INVNBDS;
            IF (.STATE EQL K_NCA_BU OR .STATE EQL K_NCA_T)
            THEN
                BEGIN
                IF .SRC_OR_DST [DSC$L_S1] NEQ 1 THEN EXITLOOP K_INVNBDS;
                END;
            SRC_OR_DST_INFO [M_SCALE] = .SRC_OR_DST [DSC$B_SCALE];
            SRC_OR_DST_INFO [M_BIN_SCALE] = .SRC_OR_DST [DSC$V_FL_BINSCALE];
            SRC_OR_DST_INFO [M_LEN] = .SRC_OR_DST [DSC$L_ARSIZE];
            IF .TURN EQL 0
            THEN
                BEGIN
                SRC_INFO [S_POINTER] = .SOURCE [DSC$A_POINTER];
                END;
            END;

        [K_VS_T, K_VS_VT]:
```

```
6               BEGIN
6               .LEFT_OR_RIGHT_CVT = K_NBDS;
6               IF .TURN EQL 0
6               THEN
7                   BEGIN
7                   SRC_INFO [S_POINTER] = .SOURCE [DSC$A_POINTER] + 2;
7                   SRC_INFO [S_LEN] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 16, 0;, BYTE];
7                   END
6               ELSE
6                   DST_INFO [D_LEN] = .DESTINATION [DSC$W_LENGTH];
5               END;
5
5           [K_VS_AC]:
6               BEGIN
6               .LEFT_OR_RIGHT_CVT = K_NBDS;
6               IF .TURN EQL 0
6               THEN
7                   BEGIN
7                   SRC_INFO [S_POINTER] = .SOURCE [DSC$A_POINTER] + 1;
7                   SRC_INFO [S_LEN] = .BLOCK [.SOURCE [DSC$A_POINTER], 0, 0, 8, 0;, BYTE];
7                   END
6               ELSE
6                   DST_INFO [D_LEN] = .DESTINATION [DSC$W_LENGTH];
5               END;
5
5           [K_VS_AZ]:
6               BEGIN
6               .LEFT_OR_RIGHT_CVT = K_NBDS;
6               IF .TURN EQL 0
6               THEN
7                   BEGIN
7                   LOCAL
7                       SRC_PTR:  REF VECTOR[, BYTE],
7                       COUNT;
7                   COUNT = 0;
7                   SRC_PTR = .SOURCE[DSC$A_POINTER];
7                   WHILE .SRC_PTR[.COUNT] NEQ 0 DO
7                       COUNT = .COUNT + 1;
7                   SRC_INFO[S_LEN] = .COUNT;
7                   SRC_INFO [S_POINTER] = .SOURCE [DSC$A_POINTER];
7                   END
6               ELSE
6                   DST_INFO [D_LEN] = .DESTINATION [DSC$W_LENGTH];
5               END;
5
5           [INRANGE, OUTRANGE]:
5               $DBG_ERROR ('DBGCVTDX\FIND_CVT_PATH:  invalid final state');
5           TES;
5       END
4   )                                           ! End of INCRU, with a EXITLOOP value.
2   END;                                        ! End of STATUS.
2
2
2   ! Map the left and right of the conversion, (i.e. if the conversion is
2   ! K_SMLINT_LRGFLTCMPLX, then LEFT_CVT is SMLINT and RIGHT_CVT is LRGFLTCMPLX)
2   ! into a final conversion index and return with the status of this routine.
2   !
```

```
; 5301          5404  2      .CVT_PATH = (.LEFT_CVT - 1)*K_TOT_CAT + .RIGHT_CVT;
; 5302          5405  2      RETURN .STATUS;
; 5303          5406  1      END;                                        ! End of routine FIND_CVT_PATH
; INFO#250                L1:5404
; Referenced LOCAL symbol LEFT_CVT is probably not initialized
; INFO#250                L1:5404
; Referenced LOCAL symbol RIGHT_CVT is probably not initialized



                                                                           .PSECT  DBG$PLIT,NOWRT,  SHR,  PIC,0

76  6E  69  20  20  3A  58  44  54  56  43  47  42  44  18  019B0 P.AKM:   .ASCII  <24>\DBGCVTDX:  invalid class\                ;
                    73  73  61  6C  63  20  64  69  6C  61  019BF
76  6E  69  20  20  3A  58  44  54  56  43  47  42  44  18  019C9 P.AKN:   .ASCII  <24>\DBGCVTDX:  invalid class\                ;
                    73  73  61  6C  63  20  64  69  6C  61  019D8
5F  44  4E  49  46  5C  58  44  54  56  43  47  42  44  26  019E2 P.AKO:   .ASCII  \&DBGCVTDX\<92>\FIND_CVT_PATH:  invalid \     ;
61  76  6E  69  20  20  3A  48  54  41  50  5F  54  56  43  019F1                                                              ;
                                            20  64  69  6C  01A00                                                              ;
                                        65  74  61  74  73  01A04          .ASCII  \state\                                      ;
                                                            01A09          .BLKB   3
                                            00  00  00  0C  01A0C P.AKP:   .ASCII  <12><0><0><0>                                ;
5F  44  4E  49  46  5C  58  44  54  56  43  47  42  44  16  01A10 P.AKQ:   .ASCII  <22>\DBGCVTDX\<92>\FIND_CVT_PATH\            ;
                                48  54  41  50  5F  54  56  43  01A1F                                                          ;
5F  44  4E  49  46  5C  58  44  54  56  43  47  42  44  2C  01A27 P.AKR:   .ASCII  \,DBGCVTDX\<92>\FIND_CVT_PATH:  invalid \     ;
61  76  6E  69  20  20  3A  48  54  41  50  5F  54  56  43  01A36                                                              ;
                                            20  64  69  6C  01A45                                                              ;
                    65  74  61  74  73  20  6C  61  6E  69  66  01A49          .ASCII  \final state\                                ;



                                                                           .PSECT  DBG$CODE,NOWRT,  SHR,  PIC,0

                                                      0FFC 00000 FIND_CVT_PATH:
                                                                           .WORD   Save R2,R3,R4,R5,R6,R7,R8,R9,R10,R11        ; 4435
                                   5E         C0   AE   9E 00002           MOVAB   -64(SP), SP                                 ;
                                              0C   AE   D4 00006           CLRL    TURN                                        ; 4597
                      02           00         0C   AE   CF 00009 1$:       CASEL   TURN, #0, #2                                ; 4605
                    003C         0021            0006      0000E 2$:       .WORD   3$-2$,-                                     ;
                                                                                   4$-2$,-                                     ;
                                                                                   5$-2$                                       ;
                                   50         04   AC   D0 00014 3$:       MOVL    SOURCE, R0                                  ; 4609
                             04    AE         03   A0   9A 00018           MOVZBL  3(R0), CLASS                                ;
                                   6E         02   A0   9A 0001D           MOVZBL  2(R0), DTYPE                                ; 4610
                                   59              50   D0 00021           MOVL    R0, SRC_OR_DST                              ; 4611
                                   5A         0C   AC   D0 00024           MOVL    SRC_INFO, SRC_OR_DST_INFO                   ; 4612
                             08    AE         18   AE   9E 00028           MOVAB   LEFT_CVT, LEFT_OR_RIGHT_CVT                 ; 4613
                                                   20   11 0002D           BRB     6$                                          ; 4605
                                   50         08   AC   D0 0002F 4$:       MOVL    DESTINATION, R0                             ; 4617
                             04    AE         03   A0   9A 00033           MOVZBL  3(R0), CLASS                                ;
                                   6E         02   A0   9A 00038           MOVZBL  2(R0), DTYPE                                ; 4618
                                   59              50   D0 0003C           MOVL    R0, SRC_OR_DST                              ; 4619
                                   5A         10   AC   D0 0003F           MOVL    DST_INFO, SRC_OR_DST_INFO                   ; 4620
                             08    AE         1C   AE   9E 00043           MOVAB   RIGHT_CVT, LEFT_OR_RIGHT_CVT                ; 4621
                                                   05   11 00048           BRB     6$                                          ; 4605
                                   50              01   D0 0004A 5$:       MOVL    #1, STATUS                                  ; 4624
                                                   6E   11 0004D           BRB     12$                                         ;
```

```
                        0E          04   AE   D1 0004F 6$:      CMPL    CLASS, #14                              ; 4630
                                         05   1B 00053          BLEQU   7$                                      ;
                        50               05   CE 00055          MNEGL   #5, STATUS                              ;
                                         63   11 00058          BRB     12$                                     ;
                        2A               6E   D1 0005A 7$:      CMPL    DTYPE, #42                              ; 4631
                                         05   1B 0005D          BLEQU   8$                                      ;
                        50               06   CE 0005F          MNEGL   #6, STATUS                              ;
                                         59   11 00062          BRB     12$                                     ;
                        50          04   AE   D0 00064 8$:      MOVL    CLASS, R0                               ; 4636
                        56  00000000'EF40     98 00068          CVTBL   CLASS_TABLE[R0], STATE                  ;
             14 FFFFFFF9  8F             56   CF 00070          CASEL   STATE, #-7, #20                         ; 4641
0042         0042         0042         0042      00078 9$:      .WORD   11$-9$,-                                ;
002A         0042         0042         0042      00080                  11$-9$,-                                ;
0047         0047         0047         0047      00088                  11$-9$,-                                ;
0047         0047         0047         0047      00090                  11$-9$,-                                ;
0047         0047         0047         0047      00098                  11$-9$,-                                ;
                                       0047      000A0                  11$-9$,-                                ;
                                                                        11$-9$,-                                ;
                                                                        10$-9$,-                                ;
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                                                                        13$-9$,-                                ;
                                                                        13$-9$,-                                ;
                                                                        13$-9$                                  ;
                              00000000'  EF   9F 000A2 10$:     PUSHAB  P.AKO                                   ; 4671
                                         01   DD 000A8          PUSHL   #1                                      ;
                              00028362   8F   DD 000AA          PUSHL   #164706                                 ;
                   00000000G  00         03   FB 000B0          CALLS   #3, LIB$SIGNAL                          ;
                                       00CC   31 000B7          BRW     36$                                     ;
                        50               56   D0 000BA 11$:     MOVL    STATE, STATUS                           ; 4649
                                         68   11 000BD 12$:     BRB     24$                                     ;
                        0C          01   56   CF 000BF 13$:     CASEL   STATE, #1, #12                          ; 4658
0038         001A         0033         002F      000C3 14$:     .WORD   16$-14$,-                               ;
001A         001A         001A         001A      000CB                  17$-14$,-                               ;
001A         0047         0042         003D      000D3                  15$-14$,-                               ;
                                       004C      000DB                  18$-14$,-                               ;
                                                                        15$-14$,-                               ;
                                                                        15$-14$,-                               ;
                                                                        15$-14$,-                               ;
                                                                        15$-14$,-                               ;
                                                                        19$-14$,-                               ;
                                                                        20$-14$,-                               ;
                                                                        21$-14$,-                               ;
                                                                        15$-14$,-                               ;
                                                                        22$-14$                                 ;
                              00000000'  EF   9F 000DD 15$:     PUSHAB  P.AKM                                   ;
                                         01   DD 000E3          PUSHL   #1                                      ;
                              00028362   8F   DD 000E5          PUSHL   #164706                                 ;
                   00000000G  00         03   FB 000EB          CALLS   #3, LIB$SIGNAL                          ;
```

```
                                                   50 D4 000F2 16$:    CLRL   R0
                                                   1C 11 000F4         BRB    23$
                                     50            01 D0 000F6 17$:    MOVL   #1, R0
                                                   17 11 000F9         BRB    23$
                                     50            02 D0 000FB 18$:    MOVL   #2, R0
                                                   12 11 000FE         BRB    23$
                                     50            03 D0 00100 19$:    MOVL   #3, R0
                                                   0D 11 00103         BRB    23$
                                     50            04 D0 00105 20$:    MOVL   #4, R0
                                                   08 11 00108         BRB    23$
                                     50            05 D0 0010A 21$:    MOVL   #5, R0
                                                   03 11 0010D         BRB    23$
                                     50            06 D0 0010F 22$:    MOVL   #6, R0
                                     50            2B C4 00112 23$:    MULL2  #43, R0
                                     50 00000000'EF40 9E 00115         MOVAB  DTYPE_TABLE[R0], R0
                                     57       00 BE40 98 0011D         CVTBL  @DTYPE[R0], TOKEN
                                                   06 18 00122         BGEQ   25$                                ; 4663
                                     50            57 D0 00124         MOVL   TOKEN, STATUS
                                                 0A03 31 00127 24$:    BRW    167$
                        0C           01            56 CF 0012A 25$:    CASEL  STATE, #1, #12                     ; 4668
         0021         003A         001C          004F    0012E 26$:    .WORD  34$-26$,-
         003A         003A         003A          003A    00136                27$-26$,-
         003A         0030         002B          0026    0013E                33$-26$,-
                                                 0035    00146                28$-26$,-
                                                                              33$-26$,-
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                                                                              30$-26$,-
                                                                              31$-26$,-
                                                                              33$-26$,-
                                                                              32$-26$
                                                   33 11 00148         BRB    34$
                                     50            01 D0 0014A 27$:    MOVL   #1, R0
                                                   30 11 0014D         BRB    35$
                                     50            02 D0 0014F 28$:    MOVL   #2, R0
                                                   2B 11 00152         BRB    35$
                                     50            03 D0 00154 29$:    MOVL   #3, R0
                                                   26 11 00157         BRB    35$
                                     50            04 D0 00159 30$:    MOVL   #4, R0
                                                   21 11 0015C         BRB    35$
                                     50            05 D0 0015E 31$:    MOVL   #5, R0
                                                   1C 11 00161         BRB    35$
                                     50            06 D0 00163 32$:    MOVL   #6, R0
                                                   17 11 00166         BRB    35$
                                        00000000'  EF 9F 00168 33$:    PUSHAB P.AKN
                                                   01 DD 0016E         PUSHL  #1
                                        00028362   8F DD 00170         PUSHL  #164706
                          00000000G  00            03 FB 00176         CALLS  #3, LIB$SIGNAL
                                                   50 D4 0017D 34$:    CLRL   R0
                                     50            2B C4 0017F 35$:    MULL2  #43, R0
                        56           50            57 C1 00182         ADDL3  TOKEN, R0, STATE
              0000012B  8F           01            56 CF 00186 36$:    CASEL  STATE, #1, #299                    ; 4690
         02D1         02A0         026F          0353    0018E 37$:    .WORD  56$-37$,-
         0346         0315         02E4          039E    00196                39$-37$,-
         04A0         04DC         046F          039E    0019E                41$-37$,-
```

```
     0603      05C6      05A2      04EB   001A6           44$-37$,-
     0835      07F8      07A7      0649   001AE           64$-37$,-
     0258      0258      08B0      0872   001B6           47$-37$,-
     053E      04FA      0403      0258   001BE           51$-37$,-
     0258      0258      0570      0531   001C6           55$-37$,-
     0258      0258      0258      0258   001CE           64$-37$,-
     0353      0258      0258      0258   001D6           80$-37$,-
     0258      0258      0258      0353   001DE           87$-37$,-
     0258      0258      0258      0258   001E6           84$-37$,-
     0258      0258      0258      0258   001EE           88$-37$,-
     0258      0258      0258      0258   001F6           102$-37$,-
     0258      0258      0258      08B6   001FE           104$-37$,-
     0258      0258      0258      0258   00206           107$-37$,-
     0258      0258      0258      0258   0020E           113$-37$,-
     0258      0258      0258      0258   00216           135$-37$,-
     0258      0258      0258      0258   0021E           140$-37$,-
     0258      0258      0258      0258   00226           143$-37$,-
     0258      0258      0258      0258   0022E           146$-37$,-
     08C0      0258      0258      0258   00236           149$-37$,-
     0258      0258      0258      0258   0023E           38$-37$,-
     0258      0258      0258      0258   00246           38$-37$,-
     08C0      0258      0258      0258   0024E           38$-37$,-
     0258      0258      0258      0258   00256           71$-37$,-
     0258      0258      0258      0258   0025E           90$-37$,-
     0258      0258      0258      0258   00266           95$-37$,-
     0258      0258      0258      0258   0026E           94$-37$,-
     0258      0258      0258      0258   00276           98$-37$,-
     0258      0258      0258      0258   0027E           38$-37$,-
     0258      0258      0258      0258   00286           38$-37$,-
     02A0      026F      0258      0258   0028E           38$-37$,-
     0315      02E4      039E      02D1   00296           38$-37$,-
     04DC      046F      039E      0346   0029E           38$-37$,-
     05C6      05A2      04EB      04A0   002A6           38$-37$,-
     07F8      07A7      0649      0603   002AE           38$-37$,-
     0258      0258      0872      0835   002B6           38$-37$,-
     04FA      0403      0258      0258   002BE           38$-37$,-
     0258      0570      0531      053E   002C6           56$-37$,-
     0258      0258      0258      0258   002CE           56$-37$,-
     0258      0258      0258      0258   002D6           38$-37$,-
     0258      0258      0258      0258   002DE           38$-37$,-
     0258      0258      08C0      0258   002E6           38$-37$,-
     0258      0258      0258      0258   002EE           38$-37$,-
     0258      0258      0258      0258   002F6           38$-37$,-
     0258      0258      08C0      0258   002FE           38$-37$,-
     0258      0258      0258      0258   00306           38$-37$,-
     0258      0258      0258      0258   0030E           38$-37$,-
     0258      0258      0258      0258   00316           38$-37$,-
     0258      0258      0258      0258   0031E           38$-37$,-
     0258      0258      0258      0258   00326           38$-37$,-
     0258      0258      0258      0258   0032E           38$-37$,-
     0258      0258      0258      0258   00336           38$-37$,-
     0258      0258      0258      0258   0033E           38$-37$,-
     0258      0258      0258      0258   00346           38$-37$,-
     0258      0258      0258      0258   0034E           151$-37$,-
     0258      0258      0258      0920   00356           38$-37$,-
     0258      0258      0258      0258   0035E           38$-37$,-
     0258      0258      0258      0258   00366           38$-37$,-
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      0258      0258      0258      0258   0036E          38$-37$,-                              ;
      0258      0258      0258      0258   00376          38$-37$,-                              ;
      0920      0258      0258      0258   0037E          38$-37$,-                              ;
      0258      0258      095C      093E   00386          38$-37$,-                              ;
      026F      0258      0258      0258   0038E          38$-37$,-                              ;
      02E4      039E      02D1      02A0   00396          38$-37$,-                              ;
      046F      039E      0346      0315   0039E          38$-37$,-                              ;
      05A2      04EB      04A0      04DC   003A6          38$-37$,-                              ;
      0258      0258      0258      0258   003AE          38$-37$,-                              ;
      0258      0258      0258      0258   003B6          38$-37$,-                              ;
      0403      0258      0258      0258   003BE          38$-37$,-                              ;
      0570      0531      053E      04FA   003C6          38$-37$,-                              ;
      0353      0258      0258      0258   003CE          38$-37$,-                              ;
      0258      0258      0258      0258   003D6          38$-37$,-                              ;
      0353      0258      0353      0258   003DE          38$-37$,-                              ;
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                                                                                  56$-37$,-                        ;
                                                                                  38$-37$,-                        ;
                                                                                  38$-37$,-                        ;
                                                                                  38$-37$,-                        ;
                                                                                  38$-37$,-                        ;
                                                                                  38$-37$,-                        ;
                                                                                  56$-37$,-                        ;
                                                                                  38$-37$,-                        ;
                                                                                  56$-37$                          ;
                              00000000'   EF   9F 003E6 38$:     PUSHAB  P.AKR                                    ; 5393
                                          01   DD 003EC          PUSHL   #1                                       ;
                              00028362    8F   DD 003EE          PUSHL   #164706                                  ;
                00000000G  00             03   FB 003F4          CALLS   #3, LIB$SIGNAL                           ;
                                          60   11 003FB          BRB     43$                                      ;
                       08  BE             01   D0 003FD 39$:     MOVL    #1, @LEFT_OR_RIGHT_CVT                   ; 4695
                00000083   8F             56   D1 00401          CMPL    STATE, #131                              ; 4696
                                          10   12 00408          BNEQ    40$                                      ;
                           6A       08    A9   90 0040A          MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)         ; 4699
     50          0A   A9   01             03   EF 0040E          EXTZV   #3, #T, TO(SRC_OR_DST), R0               ; 4701
07   AA               01   01             50   F0 00414          INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)           ;
                                    0C    AE   D5 0041A 40$:     TSTL    TURN                                     ; 4703
                                          73   12 0041D          BNEQ    49$                                      ;
                           51       0C    AC   D0 0041F          MOVL    SRC_INFO, R1                             ; 4705
                           50       04    AC   D0 00423          MOVL    SOURCE, R0                               ;
                       01  B1       04    B0   9A 00427          MOVZBL  @4(R0), @1(R1)                           ;
                                          73   11 0042C          BRB     50$                                      ; 4690
                       08  BE             01   D0 0042E 41$:     MOVL    #1, @LEFT_OR_RIGHT_CVT                   ; 4711
                00000084   8F             56   D1 00432          CMPL    STATE, #132                              ; 4712
                                          10   12 00439          BNEQ    42$                                      ;
                           6A       08    A9   90 0043B          MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)         ; 4715
     50          0A   A9   01             03   EF 0043F          EXTZV   #3, #T, TO(SRC_OR_DST), R0               ; 4717
07   AA               01   01             50   F0 00445          INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)           ;
                                    0C    AE   D5 0044B 42$:     TSTL    TURN                                     ; 4719
                                          73   12 0044E          BNEQ    53$                                      ;
                           51       0C    AC   D0 00450          MOVL    SRC_INFO, R1                             ; 4721
                           50       04    AC   D0 00454          MOVL    SOURCE, R0                               ;
                       01  B1       04    B0   3C 00458          MOVZWL  @4(R0), @1(R1)                           ;
                                          73   11 0045D 43$:     BRB     54$                                      ; 4690
                       08  BE             02   D0 0045F 44$:     MOVL    #2, @LEFT_OR_RIGHT_CVT                   ; 4727
                00000085   8F             56   D1 00463          CMPL    STATE, #133                              ; 4728
                                          03   13 0046A 45$:     BEQL    46$                                      ;
                                        01AB   31 0046C          BRW     82$                                      ;
                                        0198   31 0046F 46$:     BRW     81$                                      ;
                       08  BE             01   D0 00472 47$:     MOVL    #1, @LEFT_OR_RIGHT_CVT                   ; 4743
                00000087   8F             56   D1 00476          CMPL    STATE, #135                              ; 4744
                                          10   12 0047D          BNEQ    48$                                      ;
                           6A       08    A9   90 0047F          MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)         ; 4747
     50          0A   A9   01             03   EF 00483          EXTZV   #3, #T, TO(SRC_OR_DST), R0               ; 4749
07   AA               01   01             50   F0 00489          INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)           ;
                                    0C    AE   D5 0048F 48$:     TSTL    TURN                                     ; 4751
                                          58   12 00492 49$:     BNEQ    57$                                      ;
                           51       0C    AC   D0 00494          MOVL    SRC_INFO, R1                             ; 4753
                           50       04    AC   D0 00498          MOVL    SOURCE, R0                               ;
                       01  B1       04    B0   98 0049C          CVTBL   @4(R0), @1(R1)                           ;
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                                                   M  1
DBGCVTDX                                   15-Sep-1984 23:57:30    VAX-11 Bliss-32 V4.0-742                    Page 196
V04-000                                    14-Sep-1984 12:16:44    [DEBUG.SRC]DBGCVTDX.B32;1                      (31)

                                                   79  11 004A1 50$:   BRB     61$                                          ; 4690
                                 08  BE            01  D0 004A3 51$:   MOVL    #1, @LEFT_OR_RIGHT_CVT                       ; 4759
                           00000088  8F            56  D1 004A7        CMPL    STATE, #136                                  ; 4760
                                                   10  12 004AE        BNEQ    52$                                          ;
                                     6A     08     A9  90 004B0        MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)             ; 4763
           50     0A    A9                  01     03  EF 004B4        EXTZV   #3, #1, 10(SRC_OR_DST), R0                   ; 4765
    07     AA           01                  01     50  F0 004BA        INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)               ;
                                            0C     AE  D5 004C0 52$:   TSTL    TURN                                         ; 4767
                                                   65  12 004C3 53$:   BNEQ    63$                                          ;
                                     51     0C     AC  D0 004C5        MOVL    SRC_INFO, R1                                 ; 4769
                                     50     04     AC  D0 004C9        MOVL    SOURCE, R0                                   ;
                                 01  B1     04     B0  32 004CD        CVTWL   @4(R0), @1(R1)                               ;
                                                   56  11 004D2 54$:   BRB     63$                                          ; 4690
                                 08  BE            01  D0 004D4 55$:   MOVL    #1, @LEFT_OR_RIGHT_CVT                       ; 4775
                           00000089  8F            56  D1 004D8        CMPL    STATE, #137                                  ; 4776
                                                   89  11 004DF        BRB     45$                                          ;
                                 08  BE            01  D0 004E1 56$:   MOVL    #1, @LEFT_OR_RIGHT_CVT                       ; 4791
                                 05  AA            69  B0 004E5        MOVW    (SRC_OR_DST), 5(SRC_OR_DST_INFO)             ; 4792
                                            0C     AE  D5 004E9        TSTL    TURN                                         ; 4793
                                                   67  12 004EC 57$:   BNEQ    67$                                          ;
                                     51     04     AC  D0 004EE        MOVL    SOURCE, R1                                   ; 4799
                                     0D     03     A1  91 004F2        CMPB    3(R1), #13                                   ;
                                                   06  12 004F6        BNEQ    58$                                          ;
                                     52     08     A1  D0 004F8        MOVL    8(R1), BITPOS                                ; 4801
                                                   02  11 004FC        BRB     59$                                          ;
                                                   52  D4 004FE 58$:   CLRL    BITPOS                                       ; 4803
                                     53     04     A1  D0 00500 59$:   MOVL    4(R1), SRC_PTR                               ; 4804
                                     50     0C     AC  D0 00504        MOVL    SRC_INFO, R0                                 ; 4807
                                     29            56  D1 00508        CMPL    STATE, #41                                   ; 4805
                                                   09  13 0050B        BEQL    60$                                          ;
                           0000012C  8F            56  D1 0050D        CMPL    STATE, #300                                  ;
                                                   08  12 00514        BNEQ    62$                                          ;
    01     B0           63           61            52  EE 00516 60$:   EXTV    BITPOS, (R1), (SRC_PTR), @1(R0)              ; 4807
                                                   71  11 0051C 61$:   BRB     70$                                          ;
    01     B0           63           61            52  EF 0051E 62$:   EXTZV   BITPOS, (R1), (SRC_PTR), @1(R0)              ; 4810
                                                   69  18 00524        BGEQ    70$                                          ; 4811
                                 08  BE            02  D0 00526        MOVL    #2, @LEFT_OR_RIGHT_CVT                       ; 4813
                                                   63  11 0052A 63$:   BRB     70$                                          ; 4793
                                 08  BE            02  D0 0052C 64$:   MOVL    #2, @LEFT_OR_RIGHT_CVT                       ; 4820
                           0000008A  8F            56  D1 00530        CMPL    STATE, #138                                  ; 4821
                                                   09  13 00537        BEQL    65$                                          ;
                           00000086  8F            56  D1 00539        CMPL    STATE, #134                                  ;
                                                   10  12 00540        BNEQ    66$                                          ;
                                     6A     08     A9  90 00542 65$:   MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)             ; 4825
           50     0A    A9                  01     03  EF 00546        EXTZV   #3, #1, 10(SRC_OR_DST), R0                   ; 4827
    07     AA           01                  01     50  F0 0054C        INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)               ;
                                            0C     AE  D5 00552 66$:   TSTL    TURN                                         ; 4829
                                                   5A  12 00555 67$:   BNEQ    73$                                          ;
                                     53     0C     AC  D0 00557        MOVL    SRC_INFO, R3                                 ; 4832
                                     50     01     A3  D0 0055B        MOVL    1(R3), R0                                    ;
                                     51     04     AC  D0 0055F        MOVL    SOURCE, R1                                   ;
                                     52     04     A1  D0 00563        MOVL    4(R1), R2                                    ;
                                     60            62  D0 00567        MOVL    (R2), (R0)                                   ;
                                     51     04     A0  9E 0056A        MOVAB   4(R0), R1                                    ; 4833
                                     61     04     A2  D0 0056E        MOVL    4(R2), (R1)                                  ;
                                                   53  18 00572        BGEQ    74$                                          ; 4834
                                     60            60  D2 00574        MCOML   (R0), (R0)                                   ; 4837
                                 61          61 D2 00577        MCOML   (R1), (R1)                                  ; 4838
                       FFFFFFFF  8F          60 D1 0057A        CMPL    (R0), #-1                                   ; 4839
                                             06 12 00581        BNEQ    68$                                         ;
                                             60 D4 00583        CLRL    (R0)                                        ; 4842
                                             61 D6 00585        INCL    (R1)                                        ; 4843
                                             02 11 00587        BRB     69$                                         ; 4839
                                             60 D6 00589 68$:   INCL    (R0)                                        ; 4846
                             07  A3          01 88 0058B 69$:   BISB2   #1, 7(R3)                                   ; 4847
                                             6A 11 0058F 70$:   BRB     79$                                         ; 4690
                             08  BE          02 D0 00591 71$:   MOVL    #2, @LEFT_OR_RIGHT_CVT                      ; 4854
                       0000009B  8F          56 D1 00595        CMPL    STATE, #155                                 ; 4855
                                             10 12 0059C        BNEQ    72$                                         ;
                                 6A    08    A9 90 0059E        MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)            ; 4858
         50      0A    A9        01          03 EF 005A2        EXTZV   #3, #1, 10(SRC_OR_DST), R0                  ; 4860
     07  AA            01        01          50 F0 005A8        INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)              ;
                                       0C    AE D5 005AE 72$:   TSTL    TURN                                        ; 4862
                                             79 12 005B1 73$:   BNEQ    83$                                         ;
                                 50    04    AC D0 005B3        MOVL    SOURCE, R0                                  ; 4865
                                 5B    0C    AC D0 005B7        MOVL    SRC_INFO, R11                               ;
                                 58    01    AB D0 005BB        MOVL    1(R11), R8                                  ;
                       68    04  B0          10 28 005BF        MOVC3   #16, @4(R0), (R8)                           ;
                                       0F    A8 95 005C4        TSTB    15(R8)                                      ; 4866
                                             63 18 005C7 74$:   BGEQ    83$                                         ;
                                             50 D4 005C9        CLRL    I                                           ; 4869
                                           6048 9F 005CB 75$:   PUSHAB  (I)[R8]                                     ; 4870
                                           6048 9F 005CE        PUSHAB  (I)[R8]                                     ;
                                 9E          9E D2 005D1        MCOML   @(SP)+, @(SP)+                              ;
       FFF1            50        04          0C F1 005D4        ACBL    #12, #4, I, 75$                             ;
                       FFFFFFFF  8F          68 D1 005DA        CMPL    (R8), #-1                                   ; 4871
                                             12 12 005E1        BNEQ    77$                                         ;
                                             68 D4 005E3        CLRL    (R8)                                        ; 4874
                                 50          04 D0 005E5        MOVL    #4, I                                       ; 4875
                                           6048 9F 005E8 76$:   PUSHAB  (I)[R8]                                     ; 4876
                                             9E D6 005EB        INCL    @(SP)+                                      ;
       FFF5            50        04          0C F1 005ED        ACBL    #12, #4, I, 76$                             ;
                                             02 11 005F3        BRB     78$                                         ; 4871
                                             68 D6 005F5 77$:   INCL    (R8)                                        ; 4879
                             07  AB          01 88 005F7 78$:   BISB2   #1, 7(R11)                                  ; 4880
                                             6B 11 005FB 79$:   BRB     86$                                         ; 4690
                             08  BE          03 D0 005FD 80$:   MOVL    #3, @LEFT_OR_RIGHT_CVT                      ; 4887
                       0000008B  8F          56 D1 00601        CMPL    STATE, #139                                 ; 4888
                                             10 12 00608        BNEQ    82$                                         ;
                                 6A    08    A9 90 0060A 81$:   MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)            ; 4891
         50      0A    A9        01          03 EF 0060E        EXTZV   #3, #1, 10(SRC_OR_DST), R0                  ; 4893
     07  AA            01        01          50 F0 00614        INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)              ;
                                       0C    AE D5 0061A 82$:   TSTL    TURN                                        ; 4895
                                             49 12 0061D        BNEQ    86$                                         ;
                                 51    0C    AC D0 0061F        MOVL    SRC_INFO, R1                                ; 4897
                                 50    04    AC D0 00623        MOVL    SOURCE, R0                                  ;
                             01  B1    04    B0 D0 00627        MOVL    @4(R0), @1(R1)                              ;
                                             3A 11 0062C 83$:   BRB     86$                                         ; 4690
                             08  BE          03 D0 0062E 84$:   MOVL    #3, @LEFT_OR_RIGHT_CVT                      ; 4902
                       0000008D  8F          56 D1 00632        CMPL    STATE, #141                                 ; 4903
                                             10 12 00639        BNEQ    85$                                         ;
                                 6A    08    A9 90 0063B        MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)            ; 4906
         50      0A    A9        01          03 EF 0063F        EXTZV   #3, #1, 10(SRC_OR_DST), R0                  ; 4908
     07  AA            01        01          50 F0 00645        INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)              ;
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                                      0C    AE  D5 0064B 85$:     TSTL     TURN                                         ; 4910
                                            6D  12 0064E          BNEQ     93$                                          ;
                               50     0C    AC  D0 00650          MOVL     SRC_INFO, R0                                 ; 4913
                               51     01    A0  D0 00654          MOVL     1(R0), R1                                    ;
                               50     04    AC  D0 00658          MOVL     SOURCE, R0                                   ;
                               50     04    A0  D0 0065C          MOVL     4(R0), R0                                    ;
                               61           60  D0 00660          MOVL     (R0), (R1)                                   ;
                       08      A1     04    A0  D0 00663          MOVL     4(R0), 8(R1)                                 ; 4918
                                            53  11 00668 86$:     BRB      93$                                          ; 4690
                       08      BE           03  D0 0066A 87$:     MOVL     #3, @LEFT_OR_RIGHT_CVT                       ; 4924
                 0000008C      8F           56  D1 0066E          CMPL     STATE, #140                                  ; 4925
                                            1E  13 00675          BEQL     91$                                          ;
                                            2C  11 00677          BRB      92$                                          ; 4932
                       08      BE           03  D0 00679 88$:     MOVL     #3, @LEFT_OR_RIGHT_CVT                       ; 4948
                 0000008C      8F           56  D1 0067D          CMPL     STATE, #140                                  ; 4949
                                            53  13 00684 89$:     BEQL     96$                                          ;
                                            61  11 00686          BRB      97$                                          ; 4956
                       08      BE           04  D0 00688 90$:     MOVL     #4, @LEFT_OR_RIGHT_CVT                       ; 4963
                 0000009C      8F           56  D1 0068C          CMPL     STATE, #156                                  ; 4964
                                            10  12 00693          BNEQ     92$                                          ;
                               6A     08    A9  90 00695 91$:     MOVB     8(SRC_OR_DST), (SRC_OR_DST_INFO)             ; 4967
     50          0A     A9            01    03  EF 00699          EXTZV    #3, #1, 10(SRC_OR_DST), R0                   ; 4969
07   AA                 01            01    50  F0 0069F          INSV     R0, #1, #1, 7(SRC_OR_DST_INFO)               ;
                                      0C    AE  D5 006A5 92$:     TSTL     TURN                                         ; 4971
                                            74  12 006A8          BNEQ     100$                                         ;
                               50     0C    AC  D0 006AA          MOVL     SRC_INFO, R0                                 ; 4974
                               51     01    A0  D0 006AE          MOVL     1(R0), R1                                    ;
                               50     04    AC  D0 006B2          MOVL     SOURCE, R0                                   ;
                               50     04    A0  D0 006B6          MOVL     4(R0), R0                                    ;
                               61           60  7D 006BA          MOVQ     (R0), (R1)                                   ;
                                            6F  11 006BD 93$:     BRB      101$                                         ; 4690
                       08      BE           04  D0 006BF 94$:     MOVL     #4, @LEFT_OR_RIGHT_CVT                       ; 4981
                 0000009E      8F           56  D1 006C3          CMPL     STATE, #158                                  ; 4982
                                            B8  11 006CA          BRB      89$                                          ;
                       08      BE           04  D0 006CC 95$:     MOVL     #4, @LEFT_OR_RIGHT_CVT                       ; 4996
                 0000009D      8F           56  D1 006D0          CMPL     STATE, #157                                  ; 4997
                                            10  12 006D7          BNEQ     97$                                          ;
                               6A     08    A9  90 006D9 96$:     MOVB     8(SRC_OR_DST), (SRC_OR_DST_INFO)             ; 5000
     50          0A     A9            01    03  EF 006DD          EXTZV    #3, #1, 10(SRC_OR_DST), R0                   ; 5002
07   AA                 01            01    50  F0 006E3          INSV     R0, #1, #1, 7(SRC_OR_DST_INFO)               ;
                                      0C    AE  D5 006E9 97$:     TSTL     TURN                                         ; 5004
                                            40  12 006EC          BNEQ     101$                                         ;
                               51     04    AC  D0 006EE          MOVL     SOURCE, R1                                   ;
                               50     0C    AC  D0 006F2          MOVL     SRC_INFO, R0                                 ;
                 01     B0     04      B1   10  28 006F6          MOVC3    #16, @4(R1), @1(R0)                          ;
                                            30  11 006FC          BRB      101$                                         ; 4690
                       08      BE           04  D0 006FE 98$:     MOVL     #4, @LEFT_OR_RIGHT_CVT                       ; 5009
                 0000009F      8F           56  D1 00702          CMPL     STATE, #159                                  ; 5010
                                            10  12 00709          BNEQ     99$                                          ;
                               6A     08    A9  90 0070B          MOVB     8(SRC_OR_DST), (SRC_OR_DST_INFO)             ; 5013
     50          0A     A9            01    03  EF 0070F          EXTZV    #3, #1, 10(SRC_OR_DST), R0                   ; 5015
07   AA                 01            01    50  F0 00715          INSV     R0, #1, #1, 7(SRC_OR_DST_INFO)               ;
                                      0C    AE  D5 0071B 99$:     TSTL     TURN                                         ; 5017
                                            6F  12 0071E 100$:    BNEQ     106$                                         ;
                               51     04    AC  D0 00720          MOVL     SOURCE, R1                                   ; 5019
                               50     0C    AC  D0 00724          MOVL     SRC_INFO, R0                                 ;
                 01     B0     04      B1   20  28 00728          MOVC3    #32, @4(R1), @1(R0)                          ;
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                                              5F  11 0072E 101$:  BRB     106$                                      ; 4690
                           08  BE             06  D0 00730 102$:  MOVL    #6, @LEFT_OR_RIGHT_CVT                    ; 5024
                           05  AA             69  B0 00734        MOVW    (SRC_OR_DST), 5(SRC_OR_DST_INFO)          ; 5025
                     0000008F  8F             56  D1 00738        CMPL    STATE, #143                               ; 5026
                                              10  12 0073F        BNEQ    103$                                      ;
                               6A        08   A9  90 00741        MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)          ; 5029
   50         0A A9            01             03  EF 00745        EXTZV   #3, #1, 10(SRC_OR_DST), R0                ; 5031
07 AA            01            01             50  F0 0074B        INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)            ;
                                            0346  31 00751 103$:  BRW     156$                                      ; 5033
                           08  BE             05  D0 00754 104$:  MOVL    #5, @LEFT_OR_RIGHT_CVT                    ; 5042
                     00000090  8F             56  D1 00758        CMPL    STATE, #144                               ; 5043
                                              10  12 0075F        BNEQ    105$                                      ;
                               6A        08   A9  90 00761        MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)          ; 5046
   50         0A A9            01             03  EF 00765        EXTZV   #3, #1, 10(SRC_OR_DST), R0                ; 5048
07 AA            01            01             50  F0 0076B        INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)            ;
                                         0C   AE  D5 00771 105$:  TSTL    TURN                                      ; 5050
                                              3B  12 00774        BNEQ    109$                                      ;
                               50        0C   AC  D0 00776        MOVL    SRC_INFO, R0                              ; 5053
                           05  A0             1F  B0 0077A        MOVW    #31, 5(R0)                                ;
                               51        04   AC  D0 0077E        MOVL    SOURCE, R1                                ; 5054
05 A0  00000000G 00        04  B1             61  26 00782        CVTTP   (R1), @4(R1), LIB$AB_CVTTP_U, 5(R0), @1(R0) ; 5055
                                         01   B0     0078D                                                          ;
                                              43  11 0078F 106$:  BRB     112$                                      ; 4690
                           08  BE             05  D0 00791 107$:  MOVL    #5, @LEFT_OR_RIGHT_CVT                    ; 5061
                     00000091  8F             56  D1 00795        CMPL    STATE, #145                               ; 5062
                                              10  12 0079C        BNEQ    108$                                      ;
                               6A        08   A9  90 0079E        MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)          ; 5065
   50         0A A9            01             03  EF 007A2        EXTZV   #3, #1, 10(SRC_OR_DST), R0                ; 5067
07 AA            01            01             50  F0 007A8        INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)            ;
                                         0C   AE  D5 007AE 108$:  TSTL    TURN                                      ; 5069
                                              44  12 007B1 109$:  BNEQ    115$                                      ;
                               50        0C   AC  D0 007B3        MOVL    SRC_INFO, R0                              ; 5072
                           05  A0             1F  B0 007B7        MOVW    #31, 5(R0)                                ;
                               51        04   AC  D0 007BB        MOVL    SOURCE, R1                                ; 5074
                                              61  B5 007BF        TSTW    (R1)                                      ;
                                              04  12 007C1        BNEQ    110$                                      ;
                                              52  D4 007C3        CLRL    R2                                        ;
                                              05  11 007C5        BRB     111$                                      ;
                               52             61  3C 007C7 110$:  MOVZWL  (R1), R2                                  ;
                                              52  D7 007CA        DECL    R2                                        ;
01 B0         05 A0        04  B1             52  09 007CC 111$:  CVTSP   R2, @4(R1), 5(R0), @1(R0)                 ; 5075
                                            0347  31 007D4 112$:  BRW     165$                                      ; 4690
                           08  BE             05  D0 007D7 113$:  MOVL    #5, @LEFT_OR_RIGHT_CVT                    ; 5081
                     00000092  8F             56  D1 007DB        CMPL    STATE, #146                               ; 5082
                                              10  12 007E2        BNEQ    114$                                      ;
                               6A        08   A9  90 007E4        MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)          ; 5085
   50         0A A9            01             03  EF 007E8        EXTZV   #3, #1, 10(SRC_OR_DST), R0                ; 5087
07 AA            01            01             50  F0 007EE        INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)            ;
                                         0C   AE  D5 007F4 114$:  TSTL    TURN                                      ; 5089
                                              DB  12 007F7 115$:  BNEQ    112$                                      ;
                           14  AE 00000000'   EF  9E 007F9        MOVAB   P.AKP, PACK_ZERO                          ; 5098
                               55        0C   AC  D0 00801        MOVL    SRC_INFO, R5                              ; 5099
                           05  A5             1F  B0 00805        MOVW    #31, 5(R5)                                ;
                               5B        04   AC  D0 00809        MOVL    SOURCE, R11                               ; 5111
                               54             6B  3C 0080D        MOVZWL  (R11), R4                                 ;
                               54        04   AB  C0 00810        ADDL2   4(R11), R4                                ;
                                              54  D7 00814        DECL    RT_SIGN                                   ;
```

```
                 58        04   AB  D0 00816         MOVL    4(R11), LF_SIGN                          ; 5112
                                52  D4 0081A         CLRL    ZERO_FLAG                                ; 5113
            41   8F             68  91 0081C         CMPB    (LF_SIGN), #65                           ; 5119
                                0C  1F 00820         BLSSU   116$                                     ;
            49   8F             68  91 00822         CMPB    (LF_SIGN), #73                           ;
                                06  1A 00826         BGTRU   116$                                     ;
            10   AE             01  D0 00828         MOVL    #1, SIGN_FLAG                            ;
                                65  11 0082C         BRB     122$                                     ;
            4A   8F             68  91 0082E 116$:   CMPB    (LF_SIGN), #74                           ; 5123
                                0B  1F 00832         BLSSU   117$                                     ;
            52   8F             68  91 00834         CMPB    (LF_SIGN), #82                           ;
                                05  1A 00838         BGTRU   117$                                     ;
                           10   AE  D4 0083A         CLRL    SIGN_FLAG                                ;
                                54  11 0083D         BRB     122$                                     ;
            7B   8F             68  91 0083F 117$:   CMPB    (LF_SIGN), #123                          ; 5127
                                1A  12 00843         BNEQ    119$                                     ;
            10   AE             01  D0 00845         MOVL    #1, SIGN_FLAG                            ; 5129
                 52             01  D0 00849         MOVL    #1, ZERO_FLAG                            ; 5130
                 68             30  90 0084C         MOVB    #48, (LF_SIGN)                           ; 5131
                 30             64  91 0084F         CMPB    (RT_SIGN), #48                           ; 5132
                                06  12 00852         BNEQ    118$                                     ;
                 64        7B   8F  90 00854         MOVB    #123, (RT_SIGN)                          ; 5134
                                39  11 00858         BRB     122$                                     ;
                 64             10  80 0085A 118$:   ADDB2   #16, (RT_SIGN)                           ; 5136
                                34  11 0085D         BRB     122$                                     ; 5114
            7D   8F             68  91 0085F 119$:   CMPB    (LF_SIGN), #125                          ; 5141
                                19  12 00863         BNEQ    121$                                     ;
                           10   AE  D4 00865         CLRL    SIGN_FLAG                                ; 5143
                 52             01  D0 00868         MOVL    #1, ZERO_FLAG                            ; 5144
                 68             30  90 0086B         MOVB    #48, (LF_SIGN)                           ; 5145
                 30             64  91 0086E         CMPB    (RT_SIGN), #48                           ; 5146
                                06  12 00871         BNEQ    120$                                     ;
                 64        7D   8F  90 00873         MOVB    #125, (RT_SIGN)                          ; 5148
                                1A  11 00877         BRB     122$                                     ;
                 64             19  80 00879 120$:   ADDB2   #25, (RT_SIGN)                           ; 5150
                                15  11 0087C         BRB     122$                                     ; 5114
                    00000000'   EF  9F 0087E 121$:   PUSHAB  P.AKQ                                    ; 5153
                                01  DD 00884         PUSHL   #1                                       ;
                    00028362    8F  DD 00886         PUSHL   #164706                                  ;
      00000000G  00             03  FB 0088C         CALLS   #3, LIB$SIGNAL                           ;
                 28             52  E8 00893 122$:   BLBS    ZERO_FLAG, 126$                          ; 5156
                 13        10   AE  E9 00896         BLBC    SIGN_FLAG, 124$                          ; 5159
                 68             10  82 0089A         SUBB2   #16, (LF_SIGN)                           ; 5162
                 30             64  91 0089D         CMPB    (RT_SIGN), #48                           ; 5163
                                06  12 008A0         BNEQ    123$                                     ;
                 64        7B   8F  90 008A2         MOVB    #123, (RT_SIGN)                          ; 5165
                                16  11 008A6         BRB     126$                                     ;
                 64             10  80 008A8 123$:   ADDB2   #16, (RT_SIGN)                           ; 5167
                                11  11 008AB         BRB     126$                                     ; 5159
                 68             19  82 008AD 124$:   SUBB2   #25, (LF_SIGN)                           ; 5172
                 30             64  91 008B0         CMPB    (RT_SIGN), #48                           ; 5173
                                06  12 008B3         BNEQ    125$                                     ;
                 64        7D   8F  90 008B5         MOVB    #125, (RT_SIGN)                          ; 5175
                                03  11 008B9         BRB     126$                                     ;
                 64             19  80 008BB 125$:   ADDB2   #25, (RT_SIGN)                           ; 5177
05   A5 00000000G  00      04   BB  6B  26 008BE 126$:   CVTTP   (R11), @4(R11), LIB$AB_CVTTP_O, 5(R5), -  ; 5183
                           01   B5     008C9                 @1(R5)                                   ;
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                                      1E      10  AE  E9 008CB          BLBC    SIGN_FLAG, 130$                                  ; 5187
                              7B      8F          64  91 008CF          CMPB    (RT_SIGN), #123                                  ; 5190
                                                  05  12 008D3          BNEQ    127$                                             ;
                                      64          30  90 008D5          MOVB    #48, (RT_SIGN)                                   ; 5192
                                                  03  11 008D8          BRB     128$                                             ;
                                      64          10  82 008DA 127$:    SUBB2   #16, (RT_SIGN)                                   ; 5194
                                      30          68  91 008DD 128$:    CMPB    (LF_SIGN), #48                                   ; 5196
                                                  06  12 008E0          BNEQ    129$                                             ;
                                      68      7B  8F  90 008E2          MOVB    #123, (LF_SIGN)                                  ; 5198
                                                  21  11 008E6          BRB     134$                                             ;
                                      68          10  80 008E8 129$:    ADDB2   #16, (LF_SIGN)                                   ; 5200
                                                  1C  11 008EB          BRB     134$                                             ; 5187
                              7D      8F          64  91 008ED 130$:    CMPB    (RT_SIGN), #125                                  ; 5206
                                                  05  12 008F1          BNEQ    131$                                             ;
                                      64          30  90 008F3          MOVB    #48, (RT_SIGN)                                   ; 5208
                                                  03  11 008F6          BRB     132$                                             ;
                                      64          19  82 008F8 131$:    SUBB2   #25, (RT_SIGN)                                   ; 5210
                                      30          68  91 008FB 132$:    CMPB    (LF_SIGN), #48                                   ; 5212
                                                  06  12 008FE          BNEQ    133$                                             ;
                                      68      7D  8F  90 00900          MOVB    #125, (LF_SIGN)                                  ; 5214
                                                  03  11 00904          BRB     134$                                             ;
                                      68          19  80 00906 133$:    ADDB2   #25, (LF_SIGN)                                   ; 5216
      14   BE         01      01      B5      05  A5  37 00909 134$:    CMPP4   5(R5), @T(R5), #1, @PACK_ZERO                    ; 5220
                                                  54  DC 00911          MOVPSL  R4                                               ;
           54         54              02          02  EF 00913          EXTZV   #2, #2, R4, R4                                   ;
                                                  54  D7 00918          DECL    R4                                               ;
                                                  68  12 0091A          BNEQ    139$                                             ;
                                      50      05  A5  3C 0091C          MOVZWL  5(R5), R0                                        ; 5222
                                      50          02  C6 00920          DIVL2   #2, R0                                           ;
                      51  00000000G   00      04  AB  C1 00923          ADDL3   4(R11), LIB$AB_CVTTP_O, R1                       ; 5223
      01 B540         04              00          61  F0 0092C          INSV    (R1), #0, #4, @1(R5)[R0]                         ; 5222
                                                  4F  11 00933          BRB     139$                                             ; 4690
                              08      BE          05  D0 00935 135$:    MOVL    #5, @LEFT_OR_RIGHT_CVT                           ; 5229
                        00000093      8F          56  D1 00939          CMPL    STATE, #147                                      ; 5230
                                                  10  12 00940          BNEQ    136$                                             ;
                                      6A      08  A9  90 00942          MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)                 ; 5233
           50         0A      A9      01          03  EF 00946          EXTZV   #3, #1, 10(SRC_OR_DST), R0                       ; 5235
      07   AA                 01      01          50  F0 0094C          INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)                   ;
                                              0C  AE  D5 00952 136$:    TSTL    TURN                                             ; 5237
                                                  6A  12 00955          BNEQ    142$                                             ;
                                      50      04  AC  D0 00957          MOVL    SOURCE, R0                                       ; 5244
                                                  60  B5 0095B          TSTW    (R0)                                             ;
                                                  04  12 0095D          BNEQ    137$                                             ;
                                                  5B  D4 0095F          CLRL    SOU_LEN                                          ;
                                                  05  11 00961          BRB     138$                                             ;
                                      5B          60  3C 00963 137$:    MOVZWL  (R0), SOU_LEN                                    ;
                                                  5B  D7 00966          DECL    SOU_LEN                                          ;
                              20      AE    04 B04B   90 00968 138$:    MOVB    @4(R0)[SOU_LEN], TEMP_BUF                        ; 5246
                      21      AE      04      B0  5B  28 0096E          MOVC3   SOU_LEN, @4(R0), TEMP_BUF+1                      ; 5247
                              50      0C      AC      D0 00974          MOVL    SRC_INFO, R0                                     ; 5248
                              05      A0          1F  B0 00978          MOVW    #31, 5(R0)                                       ;
      01   B0         05      A0      20      AE  5B  09 0097C          CVTSP   SOU_LEN, TEMP_BUF, 5(R0), @1(R0)                 ; 5249
                                                  78  11 00984 139$:    BRB     145$                                             ; 4690
                              08      BE          05  D0 00986 140$:    MOVL    #5, @LEFT_OR_RIGHT_CVT                           ; 5255
                        00000094      8F          56  D1 0098A          CMPL    STATE, #148                                      ; 5256
                                                  10  12 00991          BNEQ    141$                                             ;
                                      6A      08  A9  90 00993          MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)                 ; 5259
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     50        0A   A9        01        03  EF 00997       EXTZV   #3, #1, 10(SRC_OR_DST), R0                      ; 5261
07   AA             01        01        50  F0 0099D       INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)                  ;
                                   0C   AE  D5 009A3 141$: TSTL    TURN                                            ; 5263
                                        78  12 009A6       BNEQ    148$                                            ;
                              50   0C   AC  D0 009A8       MOVL    SRC_INFO, R0                                    ; 5266
                         05   A0        1F  B0 009AC       MOVW    #31, 5(R0)                                      ;
                              51   04   AC  D0 009B0       MOVL    SOURCE, R1                                      ; 5267
05   A0 00000000G   00   04   B1        61  26 009B4       CVTTP   (R1), @4(R1), LIB$AB_CVTTP_O, 5(R0), @1(R0)     ; 5268
                                   01   B0     009BF                                                           ;
                                        7F  11 009C1 142$: BRB     150$                                            ; 4690
                         08   BE        05  D0 009C3 143$: MOVL    #5, @LEFT_OR_RIGHT_CVT                          ; 5274
                   00000095   8F        56  D1 009C7       CMPL    STATE, #149                                     ; 5275
                                        10  12 009CE       BNEQ    144$                                            ;
                              6A   08   A9  90 009D0       MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)                ; 5278
     50        0A   A9        01        03  EF 009D4       EXTZV   #3, #1, 10(SRC_OR_DST), R0                      ; 5280
07   AA             01        01        50  F0 009DA       INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)                  ;
                                   0C   AE  D5 009E0 144$: TSTL    TURN                                            ; 5282
                                        5D  12 009E3       BNEQ    150$                                            ;
                              50   0C   AC  D0 009E5       MOVL    SRC_INFO, R0                                    ; 5285
                         05   A0        1F  B0 009E9       MOVW    #31, 5(R0)                                      ;
                              51   04   AC  D0 009ED       MOVL    SOURCE, R1                                      ; 5286
05   A0 00000000G   00   04   B1        61  26 009F1       CVTTP   (R1), @4(R1), LIB$AB_CVTTP_Z, 5(R0), @1(R0)     ; 5287
                                   01   B0     009FC                                                           ;
                                        42  11 009FE 145$: BRB     150$                                            ; 4690
                         08   BE        05  D0 00A00 146$: MOVL    #5, @LEFT_OR_RIGHT_CVT                          ; 5293
                   00000096   8F        56  D1 00A04       CMPL    STATE, #150                                     ; 5294
                                        10  12 00A0B       BNEQ    147$                                            ;
                              6A   08   A9  90 00A0D       MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)                ; 5297
     50        0A   A9        01        03  EF 00A11       EXTZV   #3, #1, 10(SRC_OR_DST), R0                      ; 5299
07   AA             01        01        50  F0 00A17       INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)                  ;
                                   0C   AE  D5 00A1D 147$: TSTL    TURN                                            ; 5301
                                        7B  12 00A20 148$: BNEQ    157$                                            ;
                              50   04   AC  D0 00A22       MOVL    SOURCE, R0                                      ; 5304
20   AE             1F   04   B0        60  08 00A26       CVTPS   (R0), @4(R0), #31, TEMP_BUF                     ;
                              54   0C   AC  D0 00A2D       MOVL    SRC_INFO, R4                                    ; 5305
01   B4             1F   20   AE        1F  09 00A31       CVTSP   #31, TEMP_BUF, #31, @1(R4)                      ;
                         05   A4        1F  B0 00A38       MOVW    #31, 5(R4)                                      ; 5306
                                        6E  11 00A3C       BRB     158$                                            ; 4690
                         08   BE        06  D0 00A3E 149$: MOVL    #6, @LEFT_OR_RIGHT_CVT                          ; 5311
                                        68  11 00A42 150$: BRB     158$                                            ;
                         08   BE        06  D0 00A44 151$: MOVL    #6, @LEFT_OR_RIGHT_CVT                          ; 5315
                         05   AA        69  B0 00A48       MOVW    (SRC_OR_DST), 5(SRC_OR_DST_INFO)                ; 5316
                                        4C  11 00A4C       BRB     156$                                            ; 5317
                         08   BE        06  D0 00A4E 152$: MOVL    #6, @LEFT_OR_RIGHT_CVT                          ; 5326
                   0000FFFF   8F   0C   A9  D1 00A52       CMPL    12(SRC_OR_DST), #65535                          ; 5327
                                        23  14 00A5A       BGTR    154$                                            ;
                              01   0B   A9  91 00A5C       CMPB    11(SRC_OR_DST), #1                              ;
                                        1D  12 00A60       BNEQ    154$                                            ;
                              01        69  B1 00A62       CMPW    (SRC_OR_DST), #1                                ; 5328
                                        18  12 00A65       BNEQ    154$                                            ;
                   000000AE   8F        56  D1 00A67       CMPL    STATE, #174                                     ; 5331
                                        09  13 00A6E       BEQL    153$                                            ;
                   000000BA   8F        56  D1 00A70       CMPL    STATE, #186                                     ;
                                        0C  12 00A77       BNEQ    155$                                            ;
                              01   14   A9  D1 00A79 153$: CMPL    20(SRC_OR_DST), #1                              ; 5334
                                        06  13 00A7D       BEQL    155$                                            ;
                              50        07  CE 00A7F 154$: MNEGL   #7, STATUS                                      ;
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                                    00A8  31 00A82            BRW     167$                                            ;
                    6A        08      A9  90 00A85  155$:     MOVB    8(SRC_OR_DST), (SRC_OR_DST_INFO)                ; 5336
        50      0A  A9        01      03  EF 00A89            EXTZV   #3, #T, TO(SRC_OR_DST), R0                      ; 5337
    07  AA          01        01      50  F0 00A8F            INSV    R0, #1, #1, 7(SRC_OR_DST_INFO)                  ;
                05  AA        0C      A9  B0 00A95            MOVW    12(SRC_OR_DST), 5(SRC_OR_DST_INFO)              ; 5338
                              0C      AE  D5 00A9A  156$:     TSTL    TURN                                            ; 5339
                                      7F  12 00A9D  157$:     BNEQ    165$                                            ;
                    51        0C      AC  D0 00A9F            MOVL    SRC_INFO, R1                                    ; 5342
                    50        04      AC  D0 00AA3            MOVL    SOURCE, R0                                      ;
                01  A1        04      A0  D0 00AA7            MOVL    4(R0), 1(R1)                                    ;
                                      70  11 00AAC  158$:     BRB     165$                                            ; 4690
                08  BE                06  D0 00AAE  159$:     MOVL    #6, @LEFT_OR_RIGHT_CVT                          ; 5348
                              0C      AE  D5 00AB2            TSTL    TURN                                            ; 5349
                                      5E  12 00AB5            BNEQ    164$                                            ;
                    50        0C      AC  D0 00AB7            MOVL    SRC_INFO, R0                                    ; 5352
                    51        04      AC  D0 00ABB            MOVL    SOURCE, R1                                      ;
            01  A0  04        A1      02  C1 00ABF            ADDL3   #2, 4(R1), 1(R0)                                ;
                05  A0        04      B1  B0 00AC5            MOVW    @4(R1), 5(R0)                                   ; 5353
                                      52  11 00ACA            BRB     165$                                            ; 5349
                08  BE                06  D0 00ACC  160$:     MOVL    #6, @LEFT_OR_RIGHT_CVT                          ; 5361
                              0C      AE  D5 00AD0            TSTL    TURN                                            ; 5362
                                      40  12 00AD3            BNEQ    164$                                            ;
                    50        0C      AC  D0 00AD5            MOVL    SRC_INFO, R0                                    ; 5365
                    51        04      AC  D0 00AD9            MOVL    SOURCE, R1                                      ;
            01  A0  04        A1      01  C1 00ADD            ADDL3   #1, 4(R1), 1(R0)                                ;
                05  A0        04      B1  9B 00AE3            MOVZBW  @4(R1), 5(R0)                                   ; 5366
                                      34  11 00AE8            BRB     165$                                            ; 5362
                08  BE                06  D0 00AEA  161$:     MOVL    #6, @LEFT_OR_RIGHT_CVT                          ; 5374
                              0C      AE  D5 00AEE            TSTL    TURN                                            ; 5375
                                      22  12 00AF1            BNEQ    164$                                            ;
                                      52  D4 00AF3            CLRL    COUNT                                           ; 5381
                    51        04      AC  D0 00AF5            MOVL    SOURCE, R1                                      ; 5382
                    50        04      A1  D0 00AF9            MOVL    4(R1), SRC_PTR                                  ;
                                    6240  95 00AFD  162$:     TSTB    (COUNT)[SRC_PTR]                                ; 5383
                                      04  13 00B00            BEQL    163$                                            ;
                                      52  D6 00B02            INCL    COUNT                                           ; 5384
                                      F7  11 00B04            BRB     162$                                            ;
                    50        0C      AC  D0 00B06  163$:     MOVL    SRC_INFO, R0                                    ; 5385
                05  A0                52  B0 00B0A            MOVW    COUNT, 5(R0)                                    ;
                01  A0        04      A1  D0 00B0E            MOVL    4(R1), 1(R0)                                    ; 5386
                                      09  11 00B13            BRB     165$                                            ; 5375
                    50        10      AC  D0 00B15  164$:     MOVL    DST_INFO, R0                                    ; 5389
                05  A0        08      BC  B0 00B19            MOVW    @DESTINATION, 5(R0)                             ;
                              0C      AE  D6 00B1E  165$:     INCL    TURN                                            ; 4597
                    03        0C      AE  D1 00B21            CMPL    TURN, #3                                        ;
                                      03  1A 00B25            BGTRU   166$                                            ;
                                    F4DF  31 00B27            BRW     1$                                              ;
                    50                01  CE 00B2A  166$:     MNEGL   #1, STATUS                                      ;
            51  18  AE                06  C5 00B2D  167$:     MULL3   #6, LEFT_CVT, R1                                ; 5404
                    51        1C      AE  C0 00B32            ADDL2   RIGHT_CVT, R1                                   ;
                14  BC        FA      A1  9E 00B36            MOVAB   -6(R1), @CVT_PATH                               ;
                                          04 00B3B            RET                                                     ; 5406

; Routine Size:  2876 bytes,    Routine Base:  DBG$CODE + 347F


; 5304          5407  1
; 5305          5408  1 END                                              ! End of module DBGCVTDX.
; 5306          5409  0 ELUDOM



                                                      .EXTRN  LIB$SIGNAL, SYS$UNWIND

;                              PSECT SUMMARY
;
;      Name                     Bytes                        Attributes
;
;   DBG$OWN                           208  NOVEC,  WRT,  RD ,NOEXE,NOSHR,  LCL,  REL,  CON,  PIC,ALIGN(2)
;   DBG$PLIT                         6740  NOVEC,NOWRT,  RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(0)
;   DBG$CODE                        16315  NOVEC,NOWRT,  RD ,  EXE,  SHR,  LCL,  REL,  CON,  PIC,ALIGN(0)



;                          Library Statistics
;
;                                          -------- Symbols --------       Pages       Processing
;      File                               Total    Loaded   Percent       Mapped      Time
;
;   _$255$DUA28:[SYSLIB]LIB.L32;1          18619        59         0        1000        00:01.8
;   _$255$DUA28:[DEBUG.OBJ]STRUCDEF.L32;1     32         0         0           7        00:00.1
;   _$255$DUA28:[DEBUG.OBJ]DBGLIB.L32;1     1545       101         6          97        00:02.0
;   _$255$DUA28:[DEBUG.OBJ]DSTRECRDS.L32;1
;                                            418         6         1          31        00:00.3
;   _$255$DUA28:[DEBUG.OBJ]DBGMSG.L32;1      386        18         4          22        00:00.3



; Information:   2
; Warnings:      0
; Errors:        0



;                              COMMAND QUALIFIERS

;      BLISS/CHECK=(FIELD,INITIAL,OPTIMIZE)/LIS=LIS$:DBGCVTDX/OBJ=OBJ$:DBGCVTDX MSRC$:DBGCVTDX/UPDATE=(ENH$:DBGCVTDX)

; Size:          16315 code + 6948 data bytes
; Run Time:         05:24.7
; Elapsed Time:     17:37.9
; Lines/CPU Min:      999
; Lexemes/CPU-Min: 14517
; Memory Used:   2755 pages
; Compilation Complete
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0078 AH-BT13A-SE
VAX/VMS V4.0

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DBGCALL
LIS

DBGCVTDX
LIS

0079 AH-BT13A-SE
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION
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[illegible]

DBGDPC
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DBGCVTMAC
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DBGDEFINE
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[illegible]