

DDDDDDDDDDDD		CCCCCCCCCCCC	XXX		XXX
DDDDDDDDDDDD		CCCCCCCCCCCC	XXX		XXX
DDDDDDDDDDDD		CCCCCCCCCCCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDD	DDD	CCC	XXX		XXX
DDDDDDDDDDDD		CCCCCCCCCCCC	XXX		XXX
DDDDDDDDDDDD		CCCCCCCCCCCC	XXX		XXX
DDDDDDDDDDDD		CCCCCCCCCCCC	XXX		XXX

```

PPPPPPPP  RRRRRRRR  EEEEEEEEEE  FFFFFFFFFF  IIIIII  XX  XX
PPPPPPPP  RRRRRRRR  EEEEEEEEEE  FFFFFFFFFF  IIIIII  XX  XX
PP  PP  RR  RR  EE  FF  II  XX  XX
PP  PP  RR  RR  EE  FF  II  XX  XX
PP  PP  RR  RR  EE  FF  II  XX  XX
PP  PP  RR  RR  EE  FF  II  XX  XX
PPPPPPPP  RRRRRRRR  EEEEEEEE  FFFFFFFF  II  XX  XX
PPPPPPPP  RRRRRRRR  EEEEEEEE  FFFFFFFF  II  XX  XX
PP  RR  RR  EE  FF  II  XX  XX
PP  RR  RR  EE  FF  II  XX  XX
PP  RR  RR  EE  FF  II  XX  XX
PP  RR  RR  EE  FFFFFFFF  II  XX  XX
PP  RR  RR  EEEEEEEEEE  FF  IIIIII  XX  XX
PP  RR  RR  EEEEEEEEEE  FF  IIIIII  XX  XX

```

```

RRRRRRRR  EEEEEEEEEE  QQQQQQ
RRRRRRRR  EEEEEEEEEE  QQQQQQ
RR  RR  EE  QQ  QQ
RR  RR  EE  QQ  QQ
RR  RR  EE  QQ  QQ
RRRRRRRR  EEEEEEEEEE  QQ  QQ
RRRRRRRR  EEEEEEEEEE  QQ  QQ
RR  RR  EE  QQ  QQ
RR  RR  EE  QQ  QQ
RR  RR  EE  QQ  QQ
RR  RR  EE  QQ  QQ
RR  RR  EEEEEEEEEE  QQQQ  QQ
RR  RR  EEEEEEEEEE  QQQQ  QQ

```

Require file for DCX - Data Compression / Expansion Facility

Version: 'V04-000'

```

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FACILITY:

DCX -- Data Compression / Expansion Facility

ABSTRACT:

The Data Compression / Expansion procedures provide a general method for reducing the storage requirement for a arbitrary data.

ENVIRONMENT:

VAX native, user mode.

--

AUTHOR: David Thiel

CREATION DATE: July, 1982

MODIFIED BY:

--

Common built-in functions

BUILTIN
insque,
remque;

Define VMS block structures

MACRO
BBLOCK = \$BBLOCK%; ! use common definition

Define routine linkages

LINKAGE
lkg_ctx_check =
JSB (REGISTER = 0, REGISTER = 1) :
NOPRESERVE (0, 1) NOTUSED (2, 3, 4, 5, 6, 7, 8, 9, 10, 11),
lkg_do =
CALL (; REGISTER = 0, REGISTER = 1),
lkg_long_move =
JSB (REGISTER = 0, REGISTER = 1, REGISTER = 2) :
NOPRESERVE (0, 1, 2) PRESERVE (3, 4, 5, 6) NOTUSED (7, 8, 9, 10, 11),
lkg_map_check =
JSB (REGISTER = 0) :
NOPRESERVE (0, 1) NOTUSED (2, 3, 4, 5, 6, 7, 8, 9, 10, 11);

Linkage to LIB\$ANALYZE_SDESC_R2

LINKAGE
jsb_analyze_sdesc_r2 =
JSB (REGISTER = 0; REGISTER = 0, REGISTER = 1, REGISTER = 2) :
NOPRESERVE (0, 1, 2) NOTUSED (3, 4, 5, 6, 7, 8, 9, 10, 11);

EXTERNAL ROUTINE

lib\$analyze_sdesc_r2 :
jsb_analyze_sdesc_r2
NOVALUE
ADDRESSING_MODE (GENERAL);

Useful macros

MACRO

Macro to generate a pointer to a counted string

cstring (string) = UPLIT (%ASCIC string)%,

Macro to describe a string

stringdesc (string) = %CHARCOUNT (string), UPLIT (%ASCII string)%,

```
! Macro to generate a quadword string descriptor
! descriptor (string) = BBLOCK [dsc$sc_s_bln] INITIAL (stringdesc (string))%,
! Macro to generate a counted string
! countedstring (string) = VECTOR [%CHARCOUNT (string)+1, BYTE] INITIAL (BYTE (%CHARCOUNT(string), %ASCII string ))%,
! Macro to execute a given sequence of commands and return if any error
perform [] =
  BEGIN
  LOCAL
    status;
  status = (%REMAINING);
  IF NOT .status                ! If error detected,
  THEN                          ! then return with error
    RETURN .status;            ! Otherwise, status is block value
  .status
  END%;

! Macros to ease typing
MACRO
  short = UNSIGNED (6)%,      ! Short attribute
  bytlit = UNSIGNED (8)%,    ! Unsigned byte attribute
  wordlit = UNSIGNED (16)%;  ! Unsigned word attribute

! Equated symbols
LITERAL
  true      =      1,      ! Boolean TRUE
  false     =      0;     ! Boolean FALSE
```

