

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

DCX Private Structure Definitions

Version 'V04-000'

```
*****
* COPYRIGHT (c) 1978, 1980, 1982, 1984 BY
* DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.
* ALL RIGHTS RESERVED.
*
```

```
* THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED
* ONLY IN ACCORDANCE WITH THE TERMS OF SUCH LICENSE AND WITH THE
* INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR ANY OTHER
* COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY
* OTHER PERSON. NO TITLE TO AND OWNERSHIP OF THE SOFTWARE IS HEREBY
* TRANSFERRED.
*
```

```
* THE INFORMATION IN THIS SOFTWARE IS SUBJECT TO CHANGE WITHOUT NOTICE
* AND SHOULD NOT BE CONSTRUED AS A COMMITMENT BY DIGITAL EQUIPMENT
* CORPORATION.
*
```

```
* DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE OR RELIABILITY OF ITS
* SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.
*
```

MODIFIED BY:

```
V03-001 DWT0078      David W. Thiel      22-Feb-1983
      Add ANLSL_RATIO_NUM and ANLSL_RATIO_DENOM fields to
      the ANL structure.
```

```
$STRUCT DCXPRV
C      <DCX
      EOR,256          : End of record character
      CHARS,257        : Number of distinct characters
      MAX_CHAR,256     : Highest character value
      ANL_MAXDEP,8     : Maximum analysis tree depth
      MAX_SEGS,1024    : Maximum analysis segments
      >
E
```

DCX internal context control block

```
$STRUCT CTX
F      SIZE,L         : Length of context block
F      TYPE,B         : Block type
C      <
      ANLYZ           : Data analysis context
      CMPRS           : Data compression context
      EXPND           : Data expansion context
```

```

>
F      .B,3           ; Spare
FC     VERSION,W     ; Version number
C      <
       VERSION,0     ; Current version
>
F      .W           ; Spare
FC     SANITY,L      ; Sanity check word
C      <
       SANITY,1328643173 ; Sanity check value
>
F      MAP           ; Address of map
LF     FIXED_LEN     ; Fixed length
FE     SPECIFIC,L    ; Beginning of type specific area

$STRUCT ANL
F      OPTIONS,L     ; Options from caller
V      <
       BOUNDED       ; Only analyzed data can be compressed
       ONE_PASS      ; Only one analysis pass allowed
       EST_BYTES     ; Estimated Data Bytes specified
       EST_RECS      ; Estimated Data Records specified
>
F      D_BYTES,L    ; Data Bytes
FF     D_RECS,L     ; Data Records
FF     EST_D_BYTES,L ; Estimated Data Bytes
FF     EST_D_RECS,L ; Estimated Data Records
FF     DEPTH,B      ; Depth of tree
FF     .B           ; Spare
FF     NSEGS,W      ; Number of segments allocated
FS     QUEUE,Q      ; Segment queue header
SS     FLINK,,L     ; Address of first queue entry
SS     BLINK,,L     ; Address of last queue entry
FF     RATIO_NUM,L  ; Numerator of observed to actual data ratio
FF     RATIO_DENOM,L ; Denominator of observed to actual data ratio
LE     LENGTH       ; Data analysis context length

$STRUCT ANLSEG
F      QUEUE,Q       ; Queue entry -- list of segments
S      FLINK,,L     ; Forward link in list of segments
S      BLINK,,L     ; Backward link in list of segments
FF     SIZE,L       ; Length of segment
FF     ID,W         ; Segment ID number
FF     CHAR,W       ; Character preceding this segment
FF     ACTIVE,W     ; Number of unique characters seen
FF     ACTIVE_R,W   ; Above, excluding end-of-record char
FF     DEPTH,B      ; Depth of this segment
FF     MIN_CHAR,B   ; Smallest character seen
FF     MAX_CHAR,B   ; Largest character seen
FF     ESCAPE,B     ; Escape character
FF     FLAGS,B      ; Segment flags
V      <
       TENT         ; Tentative segment
       SOLID        ; Solid segment

```

```

REPEAT          : Repeated character case
ESCAPE         : Escape cell valid
BASE           : Base segment
UNBOUNDED      : Unbounded encoding
>
F              : Spare
F              : Maximum code length
F              : Number of sub-segments
F              : Map segment size
F              : Pointer to parent segment
F              : Bits of compressed data
F              : Adjusted bits of compressed data
F              : Total characters counted here
F              : Encoded string
F              : Character frequency array
C              : Length of count array
C              : Next segment pointer array
C              : Length of next segment array
L              : Segment length
E

$STRUCT CMP
F              : Segment queue header
S              : Forward link in segment queue
S              : Backward link in segment queue
L              : Data compression context length
E

$STRUCT CMPSEG
F              : Queue entry
S              : Forward link in queue
S              : Backward link in queue
F              : Length of segment
F              : Pointer to map segment
F              : Next segment pointers
C              : Length of next segment array
F              : Addresses of encoding strings
C              : Length of encoding strings array
L              : Segment fixed length
E

$STRUCT EXP
F              : Pointer to array of map segment addresses
L              : Data expansion specific length
E

```

