
Subject: Problem with structures getting padded to multiples of 4-bytes

Posted by [zawodny](#) on Tue, 22 Feb 1994 16:24:58 GMT

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Howdy All,

I've come across something a bit odd with large structures. I'm running IDL Version 3.5.1 (OSF alpha) on a DECStation 3000 Model 400 AXP. I've used a lot of small structures that are a non-integer number of (4-byte) words in length with little problem, however, the following structure should be 2618 bytes in length but comes up 2620. When written to a file, the record is indeed 2620 bytes long and the last two (extra) bytes appear to be padded with zero's. Is this a known problem and are there work arounds for it? Rumor has it that this does not happen on a SUN SPARC-10 running whatever they run for an OS this week.

Thanks,

The structure:

```
;
; Make some temporary arrays
tmpf4 = fltarr(4)
tmpf8 = fltarr(8)
tmpf25 = fltarr(25)
tmpf70 = fltarr(70)
impf70 = intarr(70)

; Define the structure
ozn = {OZN_STR, $
;   Field      Type
DATE:      0.,  $
TIME:      0.,  $
LAT:       0.,  $
LON:       0.,  $
TYPE_INST: 0.,  $
TYPE_LOCAL: 0.,  $
BETA:      0.,  $
TIMEOFYR:  0.,  $
NMCTEMP:   tmpf25, $
NMCTERR:   tmpf25, $
NMCALT:    tmpf25, $
NMCDEN:    tmpf25, $
NMCDERR:   tmpf25, $
METCOR:    tmpf4,  $
MET_POINTER: 0.,  $
MET_CODE:  0.,  $
MET_REV_DATE: 0.,  $
```

```

PROC_LEVEL:  0.,  $
PROC_DATE:   0.,  $
PROC_TIME:   0.,  $
MEANSBTALT:  0.,  $
MIRROR_CAL:  0.,  $
QUALF600:    0.,  $
FILLVAL:     0.,  $
SBTNLAT:     tmpf8, $
SBTNLON:     tmpf8, $
TIMESPAN:    0.,  $
GEOALT:      tmpf70, $
PRESS:       tmpf70, $
TEMP:        tmpf70, $
O3ND:        tmpf70, $
O3MR:        tmpf70, $
O3NDE:       impf70, $
O3MRE:       impf70, $
ND_QUAL_FLAG: impf70, $
MR_QUAL_FLAG: impf70, $
INT_FILL:    0  }

```

Doing a help,/str,ozn yields:

** Structure OZN_STR, 37 tags, length=2620:

```

DATE          FLOAT      0.00000
TIME          FLOAT      0.00000
LAT           FLOAT      0.00000
LON           FLOAT      0.00000
TYPE_INST     FLOAT      0.00000
TYPE_LOCAL    FLOAT      0.00000
BETA          FLOAT      0.00000
TIMEOFYR      FLOAT      0.00000
NMCTEMP       FLOAT      Array(25)
NMCTERR       FLOAT      Array(25)
NMCALT        FLOAT      Array(25)
NMCDEN        FLOAT      Array(25)
NMCDERR       FLOAT      Array(25)
METCOR        FLOAT      Array(4)
MET_POINTER   FLOAT      0.00000
MET_CODE      FLOAT      0.00000
MET_REV_DATE  FLOAT      0.00000
PROC_LEVEL    FLOAT      0.00000
PROC_DATE     FLOAT      0.00000
PROC_TIME     FLOAT      0.00000
MEANSBTALT    FLOAT      0.00000
MIRROR_CAL    FLOAT      0.00000
QUALF600      FLOAT      0.00000

```

FILLVAL	FLOAT	0.00000
SBTNLAT	FLOAT	Array(8)
SBTNLON	FLOAT	Array(8)
TIMESPAN	FLOAT	0.00000
GEOALT	FLOAT	Array(70)
PRESS	FLOAT	Array(70)
TEMP	FLOAT	Array(70)
O3ND	FLOAT	Array(70)
O3MR	FLOAT	Array(70)
O3NDE	INT	Array(70)
O3MRE	INT	Array(70)
ND_QUAL_FLAG	INT	Array(70)
MR_QUAL_FLAG	INT	Array(70)
INT_FILL	INT	0

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