
Subject: Re: Structure field concatenation

Posted by [Amara Graps](#) on Mon, 11 Sep 2000 11:04:06 GMT

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Hi folks,

I want to thank all of you for your help on this topic. After trying the suggestions, I was successful at performing a flexible concatenation of an array of structures with elements that are pointers. I append the following small program that demonstrates how to do this, in case anyone else is interested.

Thanks again!

Amara

;=====cut here=====

;Program testpointer.pro

;PURPOSE: This IDL program is an example of an array of anonymous
;structures of fields including a pointer field. Here we don't know how
;many structures we want in our array of structures, nor do we know the
;data definition of our pointer. This program is one way to create an
;array of structures on the fly, with data that is not defined
beforehand.

;Note: tested on IDL Version 5.3 (sunos sparc)

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;Amara Graps 9 September 2000

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;STEP 1

;Create an anonymous structure

thisstruc = {orbit:"",freq:PTR_NEW()}

;Create a 1-element array of anonymous structure (we will concatenate
it,

;to make a longer array, when we need it).

periodcube = REPLICATE(thisstruc,1)

;Assign the structure values: Gal orbit G2, index array of length 100

periodcube[0].orbit = 'G2'

CASE 1 OF

 PTR_VALID(periodcube[0].freq):

*periodcube[0].freq=DINDGEN(100)

 ELSE: BEGIN

 ;Make it a valid pointer and fill it

 periodcube[0].freq = PTR_NEW(DINDGEN(100))

```
END
ENDCASE
```

```
;set a variable to the pointer, if we want to play with it
test1 = *periodcube[0].freq
;Take a look
help, test1
```

```
;STEP 2
;Update the structure by creating a temporary structure like the
;original, and then concatenating
temppperiod = thisstruc
```

```
;Assign the structure values, Gal orbit C3, index array of length 50
temppperiod.orbit = 'C3'
```

```
CASE 1 OF
    PTR_VALID(temppperiod.freq): *temppperiod.freq=DINDGEN(50)+50
    ELSE: BEGIN
        ;Make it a valid pointer and fill it
        temppperiod.freq = PTR_NEW(DINDGEN(50)+50)
    END
ENDCASE
```

```
;Set a variable to the pointer, if we want to play with it
test2 = *temppperiod.freq
;Take a look
help, test2
```

```
;Concatenating
new = [periodcube,temppperiod]
```

```
;Set variables to the pointers in the structure
;in order to perform more manipulation
freq1 = *new[0].freq
freq2 = *new[1].freq
```

```
;Take a look (These are OK)
help, freq1, freq2
help, *new[0].freq,*new[1].freq
help, new[0].orbit, new[1].orbit
```

```
;To concatenate indefinitely, rename and repeat STEP 2
periodcube = new
```

```
STOP, 'look at structure periodcube'
```

```
END ;of program testpointer.pro
```

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"Never fight an inanimate object." - P. J. O'Rourke
