Subject: Re: Creating pointer in structure
Posted by Paul van Delst on Thu, 01 Nov 2001 15:07:28 GMT
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"K. Bowman" wrote:
>
> If I need to define a structure containing a pointer before I know the
> characteristics of the associated heap variable, which of the following
> is preferable? Does it make any difference, or is it simply a matter
> of programming taste?

This is an interesting question.

My personal opinion is that it's a little bit of taste, but more how you design the code. Choosing which method might depend on how you use the result of PTR_VALID():

```
IDL> a = {point: PTR_NEW()}
IDL> print, ptr_valid(a.point)
  0
IDL> b = {point: PTR_NEW(/ALLOCATE_HEAP)}
IDL> print, ptr_valid(b.point)
  1
```

I prefer the former option because the PTR_VALID() result tells me that the pointer is definitely not associated with a target (and I like to start with everything nullified). The second does not without some further checking. This may or may not be an issue in your initialisation or cleanup routines.

But I think either is fine as long as you're consistent (or not... :o) IDL is more forgiving than most when freeing a disassociated pointer:

```
IDL> ptr_free,a.point
IDL> ptr_free,b.point
IDL> print, ptr_valid(a.point)
  0
IDL> print, ptr_valid(b.point)
  0
```

My only other experience with pointers is in Fortran 90 where the initial status of a pointer is undefined and testing the status of an undefined pointer is an error - i.e. you have to explicitly nullify or allocate the pointer before you can test its status (fortunately, Fortran 95 introduced the ability to nullify pointers when they're declared.)

paulv

>
> For example:
>

> a = {point: PTR_NEW()} ;Create struct w/ null pointer
> ... figure out what n is
> a.point = PTR_NEW(FINDGEN(n)) ;Replace null pointer
>
> or
>
> b = {point: PTR_NEW(/ALLOCATE_HEAP)} ;Create struct w/ pointer->undef
> ... figure out what n is
> *b.point = FINDGEN(n) ;Define heap var
>
> Thanks, Ken

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Paul van Delst Religious and cultural
CIMSS @ NOAA/NCEP purity is a fundamentalist
Ph: (301)763-8000 x7274 fantasy
Fax:(301)763-8545 V.S.Naipaul