
Subject: Re: Structure field concatenation
Posted by [Ben Tupper](#) on Mon, 11 Sep 2000 22:28:54 GMT
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Hello,

Geez, you post such great stuff. Thank you for taking the time to do so.

I hadn't thought that the empty list method I lean on was awkward until you mentioned it... now I'm all thumbs. I can see the utility in each method you outline.

I don't know how David deals with emptied lists, but here's how I usually do it.

In general, when a list must be emptied, I have employed the UNDEFINE procedure (available from David's or Martin's website.)

```
UNDEFINE, *myPtr
```

The UNDEFINE procedure calls the SIZE() function...

```
Sz = SIZE(TEMPORARY(*myPtr))
```

I test the emptiness of a pointer with N_ELEMENTS() before adding to the list...

```
If N_ELEMENTS(*Ptr) EQ 0 then *Ptr = NewValue Else *Ptr = [*Ptr, NewValue]
```

"J.D. Smith" wrote:

```
>
> Also, how is an undefined pointer created manually after the fact -- i.e., how
> do you "empty" an already filled list? Something awkward like:
>
> ptr_free, theValue
> theValue=ptr_new(/alloc)
>
> where I would only need the first line. To be fair to the advantages of the
> Undefined method... if changing the pointed-to value altogether, they need only:
>
> *theValue=newvalue
>
> whereas I require:
>
> if ptr_valid(theValue) then *theValue=newvalue else theValue=ptr_new(newvalue)
>
```

I was curious about the time it takes to run method 1 versus method 2.

Below is

a quick test of each method.

I did not use UNDEFINE procedure directly because it checks for arguments which

slows things down. I placed the `Sz = SIZE(TEMPORARY(*myPtr))` statement in its stead.

There doesn't seem to be any time difference, which makes suspicious that I don't

have a good test here. (BTW, the ratio is 2.2 if I call UNDEFINE, which I usually

do.) Here are the results:

```
IDL> list_ptr
```

```
Elapsed time to empty/fill list using method #1
```

```
0.066666603 seconds
```

```
Elapsed time to empty/fill list using method #2
```

```
0.066666603 seconds
```

```
Ratio of #2 / #1
```

```
1.0000000
```

Ben

```
;-----START
```

```
PRO LIST_PTR
```

```
X = Findgen(100)
```

```
A = PTR_NEW(X)
```

```
B = PTR_NEW(X)
```

```
Start1 = SysTime(/Seconds)
```

```
For i = 0L, 10000 Do Begin
```

```
Ptr_Free, B
```

```
If NOT Ptr_Valid(B) Then B = Ptr_NEW(X) Else *B = [*B, X]
```

```
EndFor
```

```
Fini1 = SysTime(/Seconds)
```

```
Print, 'Elapsed time to empty/fill list using method #1'
```

```
Print, Fini1-Start1, ' seconds'
```

```
Start2 = SysTime(/Seconds)
```

```
For i = 0L, 10000 Do begin
```

```
tempvar = SIZE(TEMPORARY(*A))
```

```
If N_elements(*A) EQ 0 Then *A = X Else *A = [*A,X]
EndFor
Fini2 = Systime(/Seconds)
```

```
Print, 'Elapsed time to empty/fill list using method #2'
Print, Fini2-Start2, ' seconds'
```

```
Print, 'Ratio of #2 / #1'
print, (Fini2-Start2)/(Fini1-Start1)
```

```
Ptr_Free, A, B
END
;-----END
```

--

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