Subject: Arrays in structures; workarounds?
Posted by Craig Markwardt on Thu, 04 May 2000 07:00:00 GMT
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We've seen this one before, but it still astounds me that it stays around from version to version of IDL.

IDL routinely drops the last dimension if the length is 1. We know that and can deal with it for the most part. For example, we can ensure the dimensions by REFORMing the array. The thing that gets me is when a structure element is a one-element array, like this:

```
IDL> z1 = {x:reform(dblarr(1,1),1,1)}
IDL> help, /struct, z1
** Structure <40047208>, 1 tags, length=8, refs=1:
   X               DOUBLE    Array[1, 1]
```

Sure enough, it's a 1x1 element array, containing just one value of course. But when you try to extract that element, it comes out like this:

```
IDL> help, z1.x
<Expression>    DOUBLE    =       0.0000000
```

Huh? A scalar? This is worse than IDL dropping the last dimensions. It's dropping *all* the dimensions. This can be a problem, if for example, you will be passing the value to PLOT, which takes only arrays. And it aggravates me to h*ll!

Does anybody know a way to work around this? I've thought of some pretty wierd things to try, like passing the struct as _EXTRA. The only thing I can come up with is to parse the result of HELP, OUTPUT=out, but that seems like the crappiest solution ever.

Any ideas?

Craig

P.S. ... and it goes without saying that I don't necessarily know the tag name ahead of time.

P.P.S.

```
IDL> print, !version
{ alpha OSF unix 5.2 Oct 30 1998}
```

--

Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu

Subject: Re: Arrays in structures; workarounds?
Posted by Martin Schultz on Mon, 22 May 2000 07:00:00 GMT
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... although I agree with most of you that chopping of dimensions bears
more risks than virtues, here is an easy workaround:

help,

gives you the array back ;-)

Cheers,
Martin

Craig Markwardt wrote:
>
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> around from version to version of IDL.
>
> IDL routinely drops the last dimension if the length is 1. We know
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> P.P.S.
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>
> --
> -- --------------
> Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
> Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
> -- --------------

--
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Subject: Re: Arrays in structures; workarounds?
Posted by Craig Markwardt on Mon, 22 May 2000 07:00:00 GMT
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Martin Schultz <martin.schultz@dkrz.de> writes:
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> more risks than virtues, here is an easy workaround:
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> help,[z1.x]
>
> gives you the array back ;-)

Heh. Assumes you know that it's an array. :-)

Craig

--

-- --------------
Craig B. Markwardt, Ph.D. EMAIL: craigmnet@cow.physics.wisc.edu
Astrophysics, IDL, Finance, Derivatives | Remove "net" for better response
-- --------------

Subject: Re: Arrays in structures; workarounds?
Posted by Martin Schultz on Tue, 23 May 2000 07:00:00 GMT
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Craig Markwardt wrote:
>
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>>
>> help,
>>
>> gives you the array back ;-)
>
> Heh. Assumes you know that it's an array. :-)
>
> Craig
>
not quite: assumes only that you want an array ;-)

Martin

--
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