
Subject: Re: Is it an IDL bug or feature?

Posted by [hahn](#) on Thu, 26 Oct 1995 07:00:00 GMT

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Liyun Wang <Liyun.Wang.1@gsfc.nasa.gov> wrote:

> Hi,

> In a process of debugging our IDL codes, we found an interesting case which you
> may want to be aware of. Consider this:

[snip]

> IDL> b = 1

> IDL> a = b([2],[1],[2])

[snip]

> What do you think IDL will respond? Will it issue a syntax error message?

> Wrong!

IDL works as described in the manual: User's manual p 5-5, formula
beginning with $V(S) =$

> As long as the subscript indices of a *scalar* variable, like b here,
> are arrays with the same dimension, IDL does not care nor complain, no matter
> how
> many array elements you give. Do you consider this to be a potential bug or a
> feature of IDL?

The reason for this feature is to save time when doing image
processing: Imagine a 512x512 array of luminance values and
use these to address a color lookup table. Some luminance
values may be missing or out of range in this example. Thus
you save lots of processing time (for subscript checking)
when the top and the bottom element of the lut are set to the color of
missing value.

> --

> =====
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Norbert Hahn

Subject: Re: Is it an IDL bug or feature?

Posted by [chase](#) on Thu, 26 Oct 1995 07:00:00 GMT

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>>>> > "Liyun" == Liyun Wang <Liyun.Wang.1@gssc.nasa.gov> writes:

Liyun> In a process of debugging our IDL codes, we found an
Liyun> interesting case which you may want to be aware of. Consider
Liyun> this:

```
IDL> b = 1  
IDL> a = b(1,2,1)
```

Liyun> IDL will complain about subscript being out of range. But watch this:

```
IDL> b = 1  
IDL> a = b([2],[1],[2])  
Liyun> or  
IDL> a = b([[2],[1],[10],[30]])  
Liyun> or even  
IDL> a = b([[2],[1],[10],[30]], [[20],[12],[70],[20]])
```

Liyun> What do you think IDL will respond? Will it issue a syntax
Liyun> error message? Wrong! As long as the subscript indices of a
Liyun> *scalar* variable, like b here, are arrays with the same
Liyun> dimension, IDL does not care nor complain, no matter how many
Liyun> array elements you give. Do you consider this to be a potential
Liyun> bug or a feature of IDL?

It is not a bug. The specific behaviors are clearly documented features in Chapter 5 of the "IDL User's Guide" (version 3.5 and version 4, perhaps earlier too) under the subsections "Subscript Examples" and "Array Subscripts".

It does seem unfortunate the behavior seems inconsistent. I find that both behaviors are useful.

Chris

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