
Subject: Re: Oh No...

Posted by [Foldy Lajos](#) on Wed, 18 Apr 2007 18:44:03 GMT

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On Wed, 18 Apr 2007, mgalloy@gmail.com wrote:

> On Apr 18, 7:45 am, Paolo Grigis <pgri...@astro.phys.ethz.ch> wrote:

>> FÖLDY Lajos wrote:

>>

>>> No, invalid code, with undefined result :-)

>

> I don't think it invalid or undefined (very confusing, yes). a is
> created and used to index itself following the "normal" rules of
> indexing in IDL.

>

> Remember that it is valid to use an index array that has indices out
> of range, they are simply brought back into range:

>

> IDL> b = findgen(10)

> IDL> b[[-1, 20]] = 1

> IDL> print, b

> 1.00000 1.00000 2.00000 3.00000 4.00000

> 5.00000 6.00000

> 7.00000 8.00000 1.00000

>

> You can turn this behavior off with COMPILE_OPT:

>

> IDL> compile_opt strictarrsubs

> IDL> a[(a=2*findgen(10))]=1

> % Array used to subscript array contains out of range subscript: A.

> % Execution halted at: \$MAIN\$

>

Indexing is OK, but the result of writing to a memory location twice in a single expression is undefined.

This was the original example:

IDL> a[(a=2*findgen(10))]=1 ;agreed, this is a bit crazy, but hold on

IDL> print,a

1.00000 1.00000 1.00000 6.00000 8.00000

10.0000 1.00000 14.0000 1.00000 1.00000

This is the result in IDL 5.3 sun sparcs:

IDL> a[(a=2*findgen(10))]=1 & print, a

1.00000 2.00000 1.00000 6.00000 1.00000

10.0000 1.00000 14.0000 1.00000 1.00000

Which is the correct answer? The well-defined version gives the latter:

```
IDL> a=(b=2*findgen(10)) & a[b]=1 & print, a
  1.00000  2.00000  1.00000  6.00000  1.00000
 10.0000  1.00000  14.0000  1.00000  1.00000
```

You can send a bug report to ITTVIS, and see their opinion.

regards,
lajos
