
Subject: Re: What are the rules for automatic removal of singleton dimensions, and can I have a way of disabling them, please?

Posted by [David Fanning](#) on Sun, 23 Dec 2012 23:37:04 GMT

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Tom Grydeland writes:

> Is there a way to disable this stripping of singleton dimensions?

After 25 years? I don't think so. :-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

Coyote's Guide to IDL Programming: <http://www.idlcoyote.com/>

Sepore ma de ni thue. ("Perhaps thou speakest truth.")

Subject: Re: What are the rules for automatic removal of singleton dimensions, and can I have a way of disabling them, please?

Posted by [Jeremy Bailin](#) on Mon, 24 Dec 2012 04:25:56 GMT

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On 12/23/12 6:01 PM, Tom Grydeland wrote:

> Hello all,

>

> I was trying to visualize subsections of a windowing function when this bit me.

>

> I was creating piecewise results in an array `res[ix, iy, ii, jj]`, where the partial results were sums up to some value in the final two indices

>

> for `ii = 0, Kx-1` do begin

> for `jj = 0, Ky-1` do begin

> visualize, total(total(`res[*,*;0:ii,0:jj]`), 4), 3)

> endfor

> endfor

>

> but the problem is that IDL (arbitrarily, IMO) discards trailing singleton dimensions on my indexing, so that `res[*,*;0:ii,0:jj]` ends up as a two-dimensional array when both `ii` and `jj` are zero, and a three-dimensional index on subsequent cases of `jj` being zero, which again causes the calls to 'total' to fail. The innermost portion of these loops become extraordinarily messy if trying to fix this problem.

>
> I've fixed my program by reordering the indices (to [ii, jj, ix, iy]), but I am still miffed that this should be necessary.
>
> Similarly, when I concatenate arrays of dimensions [x, j] and [y, j], I expect a result with dimensions [x+y, j], even when j is equal to 1. I'm trying to write programs independent of the actual value of j, but these arbitrary removals of singleton dimensions make my task that much harder.
>
> Is there a way to disable this stripping of singleton dimensions?
>
> --Tom Grydeland
>

I would give my full support to having a `compile_opt` to do this (Chris?)... as David says, there's no way in hell that's ever going to be the default behaviour, but I would kill to not have to worry about these cases in some of my more dimension-juggling code!

-Jeremy.

Subject: Re: What are the rules for automatic removal of singleton dimensions, and can I have a way of disabling them, please?

Posted by [tom.grydeland](#) on Tue, 25 Dec 2012 23:45:44 GMT

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On Monday, December 24, 2012 5:25:56 AM UTC+1, Jeremy Bailin wrote:

>> I would give my full support to having a `compile_opt` to do this

For sure I meant a `compile_opt`, I understand that default behavior cannot be changed for something like this.

> -Jeremy.

--T
