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Subject: Re: get IDL to issue warning or throw error for mismatched arrays

Posted by [Bill Nel](#) on Thu, 05 Jan 2017 23:12:52 GMT

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On Thursday, June 16, 2016 at 10:59:02 AM UTC-4, Markus Schmassmann wrote:

> is there any way to get IDL to issue a warning or throw an error in for  
> mismatched arrays like those below?  
>  
> indgen(2,2)+indgen(3,3)

I call the following routine, if there's any doubt about the size of the arrays I'm using:

```
;+  
*****  
;  
FUNCTION ArrayTruncation, a, b, c, d  
*****  
;  
;~ Detects whether array operations on a set of variables causes silent truncation. [Programming]  
;  
; IDL silently truncates the results of array operations to the smaller of the  
; array operands. This is almost never what I want! It's particularly insidious  
; when one of the operands is a one-element array produced by something like where().  
;  
; This routine detects such array truncation. It may be called with two, three or four arguments.  
;  
; Examples  
; IDL> print, ArrayTruncation( [1,2,3], 4)  
; 0  
; IDL> print, ArrayTruncation( [1,2,3], [4])  
; 1  
; IDL> print, ArrayTruncation( [1,2,3], [4,5,6], 7)  
; 0  
; IDL> print, ArrayTruncation( [1,2,3], [6], 7)  
; 1  
; IDL> print, ArrayTruncation( [1,2,3], [6], 7, [4,5,6])  
; 1  
;  
; Notes:  
; 1) The method is to check whether the sum of the arguments has the same number of elements  
as the  
; argument with the largest number of elements.  
;  
; See also:  
;-  
;  
; Modification history:  
;  
; Oct 30 2007 W. Rigby, original.  
; May 23 2008 changed oneliner category.
```

```
; Mar 11 2009 changed oneliner.  
; Jul 27 2011 added a fourth argument  
; Sep 16 2016 tweaked error messages
```

```
compile_opt DEFINT32, STRICTARRSUBS, STRICTARR
```

```
On_Error, !my_on_error
```

```
MsgPrefix = "[ArrayTruncation]"
```

```
case n_params() of
```

```
2: begin
```

```
    na = n_elements(a)
```

```
    nb = n_elements(b)
```

```
    if ((na EQ 0) || (nb EQ 0)) then Message, /noname, MsgPrefix + "One or more of the arguments is undefined"
```

```
    result = ( n_elements(a + b) NE max( [na, nb]))
```

```
end
```

```
3: begin
```

```
    na = n_elements(a)
```

```
    nb = n_elements(b)
```

```
    nc = n_elements(c)
```

```
    if ((na EQ 0) || (nb EQ 0) || (nc EQ 0)) then Message, /noname, MsgPrefix + "One or more of the arguments is undefined"
```

```
    result = ( n_elements(a + b + c) NE max( [na, nb, nc]))
```

```
end
```

```
4: begin
```

```
    na = n_elements(a)
```

```
    nb = n_elements(b)
```

```
    nc = n_elements(c)
```

```
    nd = n_elements(d)
```

```
    if ((na EQ 0) || (nb EQ 0) || (nc EQ 0) || (nd EQ 0)) then Message, /noname, MsgPrefix + "One or more of the arguments is undefined"
```

```
    result = ( n_elements(a + b + c + d) NE max( [na, nb, nc, nd]))
```

```
end
```

```
else: Message, /noname, "Usage: ArrayTruncation(a, b [c [d]])"
```

```
endcase
```

```
return, result
```

```
end
```