Subject: Re: OOB array indexing with an array gives no error message
Posted by Liam Gumley on Fri, 04 Jun 1999 07:00:00 GMT
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Bobstrosity wrote:
> Array indexing is always a popular thread!
> It seems that you can index an array with a "bad value"
> if that bad value is an array rather than a scaler.
[examples removed]

This behavior is described in the IDL 5.2 online book 'Building IDL Applications', in the section entitled 'Subscripts':

---begin quote---
If an attempt is made to reference a nonexistent element of an array using a scalar subscript (a subscript that is negative or larger than the size of the dimension minus 1), an error occurs and program execution stops.

If an element of the subscript array is less than or equal to zero, the first element of the subscripted variable is selected. If an element of the subscript is greater than or equal to the last subscript in the subscripted variable (N, above), the last element is selected.
---begin quote---

In addition, regarding the use of trailing zero dimensions:

---begin quote---
When creating arrays, IDL eliminates all size 1, or "degenerate", trailing dimensions. Thus, the statements

A = INTARR(10, 1)

HELP, A

print the following:

A INT = Array(10)

This removal of superfluous dimensions is usually convenient, but it can cause problems when attempting to write fully general procedures and functions. Therefore, IDL allows you to specify "extra" dimensions for an array as long as the extra dimensions are all zero. For example, consider a vector defined as follows:

ARR = INDGEN(10)

The following are all valid references to the sixth element of
ARR:

X = ARR[5]

X = ARR[5, 0]

X = ARR[5, 0, 0, *, 0]

Thus, the automatic removal of degenerate trailing dimensions
does not cause problems for routines that attempt to access the
resulting array.
---begin quote---

I guess the documentation is there for a reason after all. For those who
prefer a book made of paper, printable PDF versions of all the IDL
manuals are available at ftp://ftp.rsinc.com/pub/idl/info/docs/

Cheers,
Liam.

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