Subject: Re: Referencing elements of array expressions
Posted by steinhh on Mon, 06 Feb 1995 02:10:18 GMT
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In article <3guag9$nqn@marsupial.jpl.nasa.gov>, "Evan F. Fishbein" <eff@tugh.jpl.nasa.gov> writes:
|>
|> A simple question -- Is is possible to reference elements
|> of array expressions. For example, can the last two lines of
|> the following code:
|>
|> x=findgen(40)/10.0
|> y=cos(2.0*!pi*x)
|> i=where(abs(y) lt 1.0e-5)
|> i=i(0:1)+[-1,1]
|>
|> be combined into one line by accessing the first
|> element of the expression "where(abs(y) lt 1.0e-5)"
|> without placing the vector result in a dumy array variable?
|>

Yes, it's possible:

 i = (where(abs(y) lt 1.0e-5))(0:1)+[-1,1]

and in general, you can reference elements of arrays in expressions
by adding parentheses around the array expression, and then the index
in another pair of parentheses:

  sub_array = (my_arrayfunc(0.5))(0:5)

I wouldn't recommend it in your example, though, because WHERE might
return a scalar long if no elements match the test, but I often use
it with e.g. N_DIMENSIONS = (SIZE(a))(0)

Stein Vidar

Subject: Re: Referencing elements of array expressions
Posted by velt on Mon, 06 Feb 1995 16:18:24 GMT
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This is a simple trick-question, isn't it? The where finds no elements satisfying the condition, so the last statement will generate an error.

However, in general you can index expressions by surrounding it with parentheses and indexing that:

```
IDL> result = (expression) (elements)
```

For example, the last two lines above can be written:

```
IDL> i=( where(abs(y) lt 1.0E-5) ) (0:1) + [-1,1]
```

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