Subject: Re: forcing variable definition in IDL?
Posted by Liam E. Gumley on Tue, 01 May 2001 18:19:53 GMT
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William Daffer wrote:
>
> davidf@dfanning.com (David Fanning) writes:
> [...]
>
>> Don't bother. IDL scalars *are* single element arrays:
>>
>> IDL> a=5
>> IDL> a[0] = 6 & Print, a
>>
>
> Um... Not true.
>
> IDL> a=['foo|bar']
> IDL> print,strsplit(a,'|',/extract)
> % STRTOK: Expression must be a scalar in this context: STRING.
> % Execution halted at: STRSPLIT 24
> /usr/local/rsi/idl_5.3/lib/strsplit.pro
> % $MAIN$
> IDL> retall
> IDL> print,strsplit(a[0],'|',/extract)
> foo bar
> IDL>
>
> There are some other RSI supplied code where one sees this behavior.
>
> By the way, this is idl 5.3. I haven't checked idl 5.4.

An array with one element is an *array*, i.e., it has one dimension:

```
IDL> a = [25]
IDL> help, a
A               INT       = Array[1]
IDL> print, size(a, /n_dimensions)
          1
```

A single subscripted array element is a *scalar expression*, i.e., it
has no dimensions:

```
IDL> a = [1, 2, 3, 4, 5]
IDL> help, a[0]
<Expression>    INT       =        1
IDL> print, size(a[0], /n_dimensions)
          0
```

A scalar may be treated as though it were a single subscripted array element. However, as shown above, a scalar expression has no dimensions:

```
IDL> a = 100
IDL> help, a
A               INT       =      100
IDL> help, a[0]
<Expression>    INT       =      100
IDL> print, size(a, /n_dimensions)
          0
IDL> print, size(a[0], /n_dimensions)
          0
```

The implementer of STRTOK (which is called by STRSPLIT) is therefore checking for an input argument which has no dimensions.

Cheers,
Liam.
http://cimss.ssec.wisc.edu/~gumley/
