
Subject: Keyword_Set vs N_Elements Re: Problems with CW_FSLIDER

Posted by [davidf](#) on Sun, 28 Jun 1998 07:00:00 GMT

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Alex Schuster (alex@rosa.mpin-koeln.mpg.de) writes:

> It works with any value except for 0.0. Looks like... right, again RSI
> uses KEYWORD_SET instead of N_ELEMENTS to check for parameters. Hello
> RSI, this sucks!!
>
> Our cw_fslider.pro of IDL 4 has this line in it:
> IF NOT (KEYWORD_SET(val)) THEN val = 3D min
>
> In IDL 5, it is:
> IF N_ELEMENTS(val) EQ 0 THEN val = 3D min
>
> We are using IDL 5.03, so I guess RSI fixed this in this update. Of
> course they don't tell us in the modification history of the source
> code.

Here is the portion of the code in CW_FSLIDER (IDL 5.1) that checks for keywords:

```
IF NOT (KEYWORD_SET(drag)) THEN drag = 0
IF NOT (KEYWORD_SET(edit)) THEN edit = 0
IF NOT (KEYWORD_SET(frame)) THEN frame = 0
IF N_ELEMENTS(max) EQ 0 THEN max = 100.0
IF N_ELEMENTS(min) EQ 0 THEN min = 0.0
IF NOT (KEYWORD_SET(scroll)) THEN scroll = 10000 ELSE $
scroll = ABS(LONG((float(scroll) / (max - min)) * 1000000))
IF NOT (KEYWORD_SET(sup)) THEN sup = 0
IF NOT (KEYWORD_SET(title)) THEN title = ""
IF NOT (KEYWORD_SET(uval)) THEN uval = 0
IF N_ELEMENTS(val) EQ 0 THEN val = min
IF NOT KEYWORD_SET(format) THEN format = '(G13.6)'
```

Only the frame, sup, title, uval, and format keyword are incorrectly checked with KEYWORD_SET instead of N_ELEMENTS. :-)

But, to be fair, RSI is not alone in this. I would say about 30 percent of the people I teach IDL to don't even realize you *have* to check keyword parameters. And well over half of the rest use KEYWORD_SET incorrectly.

My personal view of this is that it is a documentation and routine naming problem more than anything else. When you have a function named KEYWORD_SET, you think you are supposed to use it to check keywords. The fact

that it doesn't (at least in the way the majority of people **think** it does) is about as unfortunate as the fact that the function ARG_PRESENT doesn't really check for the presence of an argument.

And to be honest, who in their right mind would be looking at the documentation for N_ELEMENTS to see if their keyword was **defined** or not unless someone let them in on this little secret?

In the spirit of helpfulness, I offer this IS_DEFINED function. Perhaps we can get RSI to use it:

```
FUNCTION IS_DEFINED, variable  
  RETURN, Keyword_Set(N_Elements(variable))  
END
```

Cheers,

David

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