
Subject: Re: Curious Keywords

Posted by [davidf](#) on Thu, 27 Feb 1997 08:00:00 GMT

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JD Smith writes in a follow-up to this thread:

> The question is really about the mechanism of Keyword Checking for built-ins
> vs. non-built-ins. That is, if *I* wrote a routine that took the "THICK"
> keyword, a user could pass an undefined value through THICK and I would never
> know that he did. I could not use `n_elements()` or `keyword_set()` or any other
> mechanism I know of to discern in any way that he has used "THICK". And so,
> consequently, I would not be able to issue an error message in the case he
> passed an undefined variable. It is as if he never passed it at all! Not so
> for Plot and other built-in routines (for *some* of their keywords). They
> somehow "know" that I used e.g., "THICK", even when I pass them an undefined
> variable.

>

> My point was that this would be a useful feature to have (although it would
> possibly result in some subtle and harmful programmatic issues). For
> instance, if I pass a variable through a keyword into which I'd like to put
> the result of some calculation, I have to give that variable a value before
> passing it, in order to test whether to go through the bother of doing the
> calculation at all. There are, of course, other ways to do this (e.g.
> optional *parameters*), but I've found myself wishing for this particular
> mechanism on some occasions, when the other techniques had limitations.

JD is absolutely right about this. You cannot tell in an IDL procedure
if a keyword is *used* or not. You can only tell if the argument to the
keyword is *defined* or not.

(Most of the programs I look at, by the way, mistakenly think this
is what `KEYWORD_SET` is doing for them. Sigh...)

Since knowing if a keyword is *used* is often quite useful for
exactly the reasons JD mentions, I think it should be added to IDL.
Obviously IDL knows if the keyword is being used.

I think, if I remember correctly, that PV-Wave has a function
entitled `KEYWORD_USED` (or something like it) that does this very thing.

Cheers!

David

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