Subject: Re: Top 10 IDL Requests
Posted by Craig Markwardt on Tue, 25 Jul 2000 07:00:00 GMT
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davidf@dfanning.com (David Fanning) writes:

> Craig Markwardt (craigmnet@cow.physics.wisc.edu) writes:
>
>> davidf@dfanning.com (David Fanning) writes:
>>> Vinay L. Kashyap (kashyap@head-cfa.harvard.edu) writes:
>>>> 2. _EXTRA
>>>>
>>>> Please consider having all built-in commands accept _EXTRA as a keyword.
>>>
>>> Uh, this is the way it works. :-)
>>
>> Uh, not quite. There are some built in commands that don't accept any
>> keywords at all. The _EXTRA keyword doesn't work for them, *even* if
>> the value passed is empty!
>>
>> Why is this important? Makes it a pain to write a wrapper procedure
>> or function.
>
> Alright, I must be obtuse today, but I can't figure out why
> it would be hard to write wrapper routines for commands that
> don't take keywords. Surely in writing the wrapper you give
> at least *some* thought to what keywords you might expect
> to be passed. Adding an _Extra to such a command seems
> excessively anal at the very least, and certainly unnecessary. :-)
>
> And what commands did you have in mind? I've never encountered
> a built-in command that didn't accept this keyword mechanism.

Hrmm. The moment I need to find an example, and I can't find it.
Arghh. An example of a built-in command that doesn't take keywords is
EMPTY, but I agree that it's a pretty lame example. I actually would
hope that *all* procedures and functions could be called with _EXTRA,
whether or not they actually accept keywords. For, example, this
statement

```
call_procedure, 'EMPTY', _EXTRA=null
```

will fail no matter what, even if null is an undefined variable.
Shouldn't IDL be smart enough to test whether the _EXTRA value is
undefined before it crashes?

I'm always looking for ways to avoid special cases in wrapper
routines. Real world examples of such unavoidable abominations are

given below.

Craig

```
(from XFWINDOW in XFWINDOW_CALL_PROCEDURE)
  sz = size(key)
  if sz(sz(0)+1) EQ 8 then begin ;; Keywords are present
     xfwindow_rekey, key
     case n_args of
        0: call_procedure, cmd, _extra=key
        1: call_procedure, cmd, x0, _extra=key
        2: call_procedure, cmd, x0, x1, _extra=key
        3: call_procedure, cmd, x0, x1, x2, _extra=key
        4: call_procedure, cmd, x0, x1, x2, x3, _extra=key
        5: call_procedure, cmd, x0, x1, x2, x3, x4, _extra=key
     endcase
  endif else begin              ;; No keywords are present
     case n_args of
        0: call_procedure, cmd
        1: call_procedure, cmd, x0
        2: call_procedure, cmd, x0, x1
        3: call_procedure, cmd, x0, x1, x2
        4: call_procedure, cmd, x0, x1, x2, x3
        5: call_procedure, cmd, x0, x1, x2, x3, x4
     endcase
  endelse

(from MPFIT in MPFIT_CALL)
  if proc then begin
     if n_params() EQ 3 then begin
        if n_elements(extra) GT 0 then $
          call_procedure, fcn, x, f, fjac, _EXTRA=extra $
        else $
          call_procedure, fcn, x, f, fjac
     endif else begin
        if n_elements(extra) GT 0 then $
          call_procedure, fcn, x, f, _EXTRA=extra $
        else $
          call_procedure, fcn, x, f
     endelse
  endif else begin
     if n_params() EQ 3 then begin
        if n_elements(extra) GT 0 then $
          f = call_function(fcn, x, fjac, _EXTRA=extra) $
        else $
          f = call_function(fcn, x, fjac)
     endif else begin
```

```
        if n_elements(extra) GT 0 then $
          f = call_function(fcn, x, _EXTRA=extra) $
        else $
          f = call_function(fcn, x)
      endelse
  endelse
```

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