Subject: Two new tools Posted by Martin Schultz on Fri, 27 Mar 1998 08:00:00 GMT View Forum Message <> Reply to Message

Howdy,

today I finally got around improving my concept of displaying help information on self-written (and library!) routines. Please find attached

function routine name.pro - which returns the name of the caller routine and

procedure usage.pro - which displays the "user-relevant" portion of the IDL program header (with minor modifications).

The idea of these routines is to prevent wrist injury from too much double typing in constructs like:

if (keyword_set(help)) then begin print; all the stuff that's in the header anyway endif

Now, what you can do is:

if (keyword_set(help)) then usage,routine_name() and you will get a significant portion from the program header [at least if your routine is stored in a file with the same name]. You can also use usage to get help from the command line: usage, 'my_routine_with_too_many_parameters'

Hope you'll find this useful, Martin.

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: NAME:

ROUTINE NAME (function)

PURPOSE:

return the name of the routine which calls this function.

CATEGORY

Tools

CALLING SEQUENCE:

rname = ROUTINE_NAME()

INPUTS:

none

KEYWORD PARAMETERS:

none

OUTPUTS:

The name of the caller routine is returned in lowercase characters (can be used to construct a filename by adding ".pro")

SUBROUTINES:

REQUIREMENTS:

NOTES:

EXAMPLE:

From the command line: print,routine_name() results in \$main\$

Very useful in conjunction with USAGE.PRO: usage,routine_name() displays help information on the current routine.

MODIFICATION HISTORY:

mgs, 27 Mar 1998: VERSION 1.00

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```
; with subject "IDL routine routine_name"
   ......
function routine_name
 ; extract the name of the current routine from the caller stack
 ; the first element will always be ROUTINE_NAME ;-)
 help,call=c
 thisroutine = str_sep(c(1), "")
return, strlowcase (this routine (0))
end
; NAME:
     USAGE
 PURPOSE:
     Display help information on any routine in the IDL path
     that has a (more or less) standard header.
 CATEGORY:
     Tools
 CALLING SEQUENCE:
     USAGE, routinename
 INPUTS:
     ROUTINENAME -> (string) name of the routine for which help information
        shall be provided. Tip: to get help for the current routine use
        function routine_name().
 KEYWORD PARAMETERS:
     /PRINTALL -> prints complete header information. Normally, only
        "user relevant" information is displayed.
 OUTPUTS:
     prints usage information on the screen.
 SUBROUTINES:
 REQUIREMENTS:
```

```
NOTES:
     This routine is meant to replace /HELP constructs etc.
 EXAMPLE:
     Error checking:
        if (n_params() ne 2) then begin
           print, 'Invalid number of arguments!'
           usage, routine name()
        endif
     Get the idea what to type from the command line:
        usage, 'my_routine_with_too_many_arguments'
 MODIFICATION HISTORY:
     mgs, 27 Mar 1998: VERSION 1.00
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with subject "IDL routine usage"
pro usage,rname,printall=printall
  ; extract header information from current routine and print it
  ; restrict to CALLING_SEQUENCE, INPUTS, KEYWORDS, OUTPUTS and
  ; EXAMPLE(s)
  : This requires that the routine name is identical with the
  ; filename (lowercase) and that the file contains a standard
  ; header (i.e. mgs standard).
  ON_ERROR,2; return to caller
  ; routine name must be provided!
  if (n_params() eq 0) then $
    message, 'pro USAGE: must provide routinename!'
  ; check if pro file exists
  rfile = rname + '.pro'
```

```
if (not(file exist(rfile,path=!PATH,full=full))) then $
    message, 'pro USAGE: Cannot find program file for '+rname+'!'
  ; open file and read in header (read until line is ";-" or EOF)
  ilun = -1
  ON_IOERROR,badfile
  openr,ilun,full,/get_lun
  line = "
  if (keyword_set(PRINTALL)) then printit = 1 else printit = 0
  print, strupcase (rname), ':'
  print
  while (not (eof(ilun) OR line eq ';-') ) do begin
     readf,ilun,line
     ; determine whether to switch printing on or off
     teststr = strupcase(line)
     if (strpos(teststr, 'CALLING SEQUENCE') ge 0 OR $
       strpos(teststr, 'EXAMPLE') ge 0) then printit = 1
     if (strpos(teststr, 'SUBROUTINE') ge 0 OR $
       strpos(teststr, 'MODIFICATION') ge 0) then $
       if (not keyword_set(PRINTALL)) then printit = 0
     ; output header line if requested
     if (printit) then print, line
  endwhile
  close,ilun
return
badfile:
  if (ilun ge 0) then close, ilun
print,!error,' ',!err_string
  message, 'pro USAGE: File error in '+rfile+'!'
end
File Attachments
1) routine name.pro, downloaded 103 times
2) usage.pro, downloaded 105 times
```