Subject: system routines
Posted by Martin Schultz on Fri, 14 Jan 2000 08:00:00 GMT
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Hi all,

   while waiting for the fortran compiler to finish this model (ahgrr - the
next error ...) I played a little with IDL. On my backburner I have
plans to revise my IDL library and create a website with my routines and
others which shall be much more comfortable than what I had before
(Reimar will know what I have in mind ;-). Of course, the building
process has to be automated...

   One neat feature that I would like to implement is a list of
procedure or function dependencies. This is where I started playing
today. Please find attached routines.pro which contains
   create_routines : will produce IDL_ROUTINES-<release> listing all
system procedures   and functions
   routines : call as routines,filename - will search the file filename
and print all
              occurences of system procedures and functions
   While I am pretty sure to catch all procedures (trick is they must be
at the beginning of a line), there are certainly some more involved
issues with functions which I want to deal with later. Right now, what
interests me is if someone knows a good way to get the reserved words in
IDL other than copying and pasting from the online help. If not, then
that's what I will have to do hoping that there weren't too many changes
over the last century ;-)

Enjoy!
Martin

PS: if the shareware experiment will achieve some success, I might
distribute the complete webpage generator in this form. Sounds appealing
if you sit on the author's side ;-)

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; program to create list of system routines and

```
; small test program to detect system routines in user code
; Martin Schultz, 14 Jan 2000


pro create_routines

  ; will search for all system procedures and functions and store them
  ; as IDL_ROUTINES-<release>
  listname = 'IDL_ROUTINES-'+!version.release
  open_file,listname,llun,/WRITE
  if llun le 0 then begin
    message,'Cannot open output file '+listname,/Continue
    return
  endif

  printf,llun,'# list of internal procedures and functions in IDL ' + $
      !version.release
  printf,llun,'# obtained with routine_info(/SYSTEM [,/FUNCTIONS])'
  printf,llun,'[PROCEDURES]'
  n = routine_info(/SYSTEM)
  for i=0L,n_elements(n)-1 do printf,llun,n[i]
  printf,llun,'[FUNCTIONS]'
  n = routine_info(/SYSTEM,/FUNCTIONS)
  for i=0L,n_elements(n)-1 do printf,llun,n[i]
  free_lun,llun

  print,'Done.'
return
end


pro routines,filename

  MAXNAMES = 2000
  pnames = strarr(MAXNAMES)
  fnames = strarr(MAXNAMES)

  ; get list of IDL routines and functions first
  listname = 'IDL_ROUTINES-'+!version.release
  open_file,listname,llun
  if llun le 0 then begin
    message,'Cannot open routine list '+listname,/Continue
    return
  endif

  np = 0L
  nf = 0L
  s = ''
```

```
  state = 0    ; 1 = proc, 2 = func
  while (not eof(llun) AND np lt MAXNAMES  $
       AND nf lt MAXNAMES) do begin
    readf,llun,s
    s = strtrim(s,2)
    if s eq '[PROCEDURES]' then state=1
    if s eq '[FUNCTIONS]' then state=2
    if strpos('#[!',strmid(s,0,1) ) lt 0 then begin
      case state of
        1 : begin
          pnames[np] = s
          np = np + 1
          end
        2 : begin
          fnames[nf] = s
          nf = nf + 1
          end
        else :
      endcase
    endif
  endwhile
  free_lun,llun
  pnames = pnames[0:np-1]
  fnames = fnames[0:nf-1]
help,pnames,fnames


  open_file,filename,ilun

  if ilun le 0 then return

  s = ''
  while not eof(ilun) do begin
    readf,ilun,s
    ; trim blanks for procedure names always start on new line
    s = strcompress(s,/remove_all)
    ; look for name of procedure [perhaps followed by ',']
    test = strupcase( (str_sep(s,','))[0] )
    found = where(pnames eq test)
    if found[0] ge 0 then print,'** found ',pnames[found[0]]  $
    else begin
      ; look for function after '='  (assuming there is no line break)
      ; make sure it's not commented out
      p = strpos(s,'=')
      pc = strpos(s,';')
      if (p gt 0 AND p gt pc) then begin
        p1 = strpos(s,'(',p+1)
        if p1 ge p then begin
```

```
          test = strupcase(strmid(s,p+1,p1-p-1))
; print,test
            found = where(fnames eq test)
            if found[0] ge 0 then print,'## found ',fnames[found[0]]
        endif   ; else could be a '$' or ';' following ...
      endif
    endelse


  endwhile

  free_lun,ilun

return
end
```

File Attachments