
Subject: Re: structure information

Posted by [David Fanning](#) on Thu, 06 Sep 2001 17:06:27 GMT

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Markus Reichstein (markus.reichstein@uni-bayreuth.de) writes:

> can I get recursive information about structures in IDL? (In PV-WAVE
> you can do this with info, <varname>, /struct, /full) But in IDL I
> only get one hierarchical level.

Now here is contest material, for sure!

Who can write this so that the print-out has
the *names* of the fields listed, too?

Let's see, my usual prize when my kids do something
like this is a "hug and a kiss". But I've met a few
of you Maybe a handshake and the user group's
undying admiration.

Deadline is Monday, Sept 10th, so work productivity
doesn't push the world economy into a real recession.

Cheers,

David

--

David W. Fanning, Ph.D.

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Coyote's Guide to IDL Programming: <http://www.dfanning.com/>

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Subject: Re: structure information

Posted by [Todd Clements](#) on Thu, 06 Sep 2001 21:05:23 GMT

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> Who can write this so that the print-out has
> the *names* of the fields listed, too?
>
> Let's see, my usual prize when my kids do something
> like this is a "hug and a kiss". But I've met a few
> of you Maybe a handshake and the user group's
> undying admiration.
>
> Deadline is Monday, Sept 10th, so work productivity

> doesn't push the world economy into a real recession.
>

Here's my entry!

Todd

```
; ----- Begin code -----
pro test
  a = {struct1, x: fltarr(512), y: fltarr(512)}
  b = {struct2, z: fltarr(512), q: {struct1}}
  c = {struct3, a: {struct2}, b: {struct1}}
  d = {struct4, w: {struct3}, y: 4}

  result = s_info( d )
  for i=0l, n_elements(result)-1 do print, result[i]
end

function s_info, struct, recurse
  if( size(struct, /type ) ne 8 ) then return, "

  if( n_elements( recurse ) eq 0 ) then recurse = 0

  help, struct, /structure, out=out

  structLocations = strpos( out, '->' )

  ntags = n_tags( struct )

  if( recurse gt 0 ) then $
    spaces = string(replicate(byte(' '),3*recurse)) else spaces=""

  outString = spaces + out[0]

  for i=1, ntags do begin
    outString = [outString, spaces+out[i] ]
    if( structLocations[i] ne -1 ) then begin
      result = s_info(struct.(i-1), recurse+1)
      if( result[0] ne " ) then outString = [outString, result]
    endif
  endfor

  return, outString
end ;; s_info
; ----- End code -----
```

Result of running test:

```
** Structure STRUCT4, 2 tags, length=10244:
W      STRUCT  -> STRUCT3 Array[1]
** Structure STRUCT3, 2 tags, length=10240:
A      STRUCT  -> STRUCT2 Array[1]
** Structure STRUCT2, 2 tags, length=6144:
Z      FLOAT   Array[512]
Q      STRUCT  -> STRUCT1 Array[1]
** Structure STRUCT1, 2 tags, length=4096:
X      FLOAT   Array[512]
Y      FLOAT   Array[512]
B      STRUCT  -> STRUCT1 Array[1]
** Structure STRUCT1, 2 tags, length=4096:
X      FLOAT   Array[512]
Y      FLOAT   Array[512]
Y      INT      4
```

Subject: Re: structure information

Posted by [David Fanning](#) on Thu, 06 Sep 2001 21:33:18 GMT

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Todd Clements (mole6e23@hotmail.com) writes:

> Here's my entry!

Oh, shoot! Now that I don't have anything to do in that huge slot of time I blocked out on the weekend, I'll probably have to do the yard work I've been putting off. :-(

But nice job, Todd. A hug and a kiss for sure, next time I see you. :-)

Cheers,

David

P.S. Let's just say if the invitations ever get back from the discount engravers, you might get an invite to the big IDL Expert Programmers Association bash this October. Rumor has it that the entertainment is somebody BIG!

--

David W. Fanning, Ph.D.
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Subject: Re: structure information
Posted by [Mark Hadfield](#) on Fri, 07 Sep 2001 03:46:01 GMT
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> But nice job, Todd. A hug and a kiss for sure,
> next time I see you. :-)

And the group's undying admiration!

As someone used to say, "For that and \$1 you could buy a cup of coffee."

Mark Hadfield
m.hadfield@niwa.cri.nz <http://katipo.niwa.cri.nz/~hadfield>
National Institute for Water and Atmospheric Research

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Posted from clam.niwa.cri.nz [202.36.29.1]
via Mailgate.ORG Server - <http://www.Mailgate.ORG>

Subject: Re: structure information
Posted by [Phillip David](#) on Fri, 07 Sep 2001 21:10:40 GMT
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David Fanning wrote:

> ... you might get
> an invite to the big IDL Expert Programmers Association
> bash this October. Rumor has it that the entertainment
> is somebody BIG!

How big? I know one person who might do it. Last I checked, he weighed over 500 lbs. :-)
