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Subject: Re: calling a structure tag as a variable?

Posted by [Paul Van Delst\[1\]](#) on Mon, 27 Feb 2012 16:52:16 GMT

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desertdryad wrote:

> Hi folks -

>

> I have a set of structure variables I use in a suite of programs. I

> need to run the same procedure on several different fields within that

> structure; where the only difference in how the procedure is used is

> the particular field it operates on. But I don't want to do them 'all

> at once' either. I would like to be able to call the procedure in

> question by somehow making the tag name to operate on in the procedure

> a variable. But I don't think there is a way to do that in IDL?

>

> (did I explain my question understandably?)

How about something like:

```
PRO process_mystructure, $
```

```
    mystructure, $ ; The structure
```

```
    tag           ; The tag name on which to operate
```

```
    tag_idx = WHERE(TAG_NAMES(mystructure) EQ tag, count)
```

```
    IF ( count NE 1 ) THEN MESSAGE, 'Invalid input tag'
```

```
    ; Pull out data to operate on
```

```
    data = mystructure.(tag_idx[0])
```

```
    ....operate on data...calling separate, generic procedure?
```

```
    ; Stick it back in the structure
```

```
    mystructure.(tag_idx[0]) = data
```

```
END
```

??

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Subject: Re: calling a structure tag as a variable?

Posted by [Lajos Foldy](#) on Mon, 27 Feb 2012 16:55:07 GMT

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On Feb 27, 5:36 pm, desertdryad <dry...@gmail.com> wrote:

> Hi folks -

>  
> I have a set of structure variables I use in a suite of programs. I  
> need to run the same procedure on several different fields within that  
> structure; where the only difference in how the procedure is used is  
> the particular field it operates on. But I don't want to do them 'all  
> at once' either. I would like to be able to call the procedure in  
> question by somehow making the tag name to operate on in the procedure  
> a variable. But I don't think there is a way to do that in IDL?  
>  
> (did I explain my question understandably?)

You can access structure fields by tag numbers, too:

```
IDL> s={s, i:0, l:0l, f:0.0}  
IDL> tagnum=1  
IDL> help, s.(tagnum)  
<Expression>  LONG      =      0
```

regards,  
Lajos

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Subject: Re: calling a structure tag as a variable?  
Posted by [David Fanning](#) on Mon, 27 Feb 2012 16:58:33 GMT  
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Paul van Delst writes:

> How about something like:  
>  
>  
> PRO process\_mystructure, \$  
> mystructure, \$ ; The structure  
> tag ; The tag name on which to operate  
>  
> tag\_idx = WHERE(TAG\_NAMES(mystructure) EQ tag, count)  
> IF ( count NE 1 ) THEN MESSAGE, 'Invalid input tag'  
>  
> ; Pull out data to operate on  
> data = mystructure.(tag\_idx[0])  
>  
> ....operate on data...calling separate, generic procedure?  
>  
> ; Stick it back in the structure  
> mystructure.(tag\_idx[0]) = data  
>  
> END

I'd remember to make that tag UPPERCASE or you are \*never\* going to find it! ;-)

Cheers,

David

--

David Fanning, Ph.D.

Fanning Software Consulting, Inc.

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

Sepore ma de ni thui. ("Perhaps thou speakest truth.")

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Subject: Re: calling a structure tag as a variable?

Posted by [Paul Van Delst\[1\]](#) on Mon, 27 Feb 2012 17:06:43 GMT

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David Fanning wrote:

> Paul van Delst writes:

>

>> How about something like:

>>

>>

>> PRO process\_mystructure, \$

>>     mystructure, \$ ; The structure

>>     tag           ; The tag name on which to operate

>>

>>     tag\_idx = WHERE(TAG\_NAMES(mystructure) EQ tag, count)

>>     IF ( count NE 1 ) THEN MESSAGE, 'Invalid input tag'

>>

>>     ; Pull out data to operate on

>>     data = mystructure.(tag\_idx[0])

>>

>>     ....operate on data...calling separate, generic procedure?

>>

>>     ; Stick it back in the structure

>>     mystructure.(tag\_idx[0]) = data

>>

>> END

>

> I'd remember to make that tag UPPERCASE or you

> are \*never\* going to find it! ;-)

Good point.

tag\_idx = WHERE(TAG\_NAMES(mystructure) EQ STRUPCASE(tag), count)

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Subject: Re: calling a structure tag as a variable?  
Posted by [desertryad](#) on Mon, 27 Feb 2012 19:28:58 GMT  
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Ah, yes. Thanks so much, guys! I went via Paul's method.

On Feb 27, 10:06 am, Paul van Delst <paul.vande...@noaa.gov> wrote:

```
> David Fanning wrote:
>> Paul van Delst writes:
>
>>> How about something like:
>
>>> PRO process_mystructure, $
>>>     mystructure, $ ; The structure
>>>     tag           ; The tag name on which to operate
>
>>> tag_idx = WHERE(TAG_NAMES(mystructure) EQ tag, count)
>>> IF ( count NE 1 ) THEN MESSAGE, 'Invalid input tag'
>
>>> ; Pull out data to operate on
>>> data = mystructure.(tag_idx[0])
>
>>> ....operate on data...calling separate, generic procedure?
>
>>> ; Stick it back in the structure
>>> mystructure.(tag_idx[0]) = data
>
>>> END
>
>> I'd remember to make that tag UPPERCASE or you
>> are *never* going to find it! ;-)
>
> Good point.
>
> tag_idx = WHERE(TAG_NAMES(mystructure) EQ STRUPCASE(tag), count)
```

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