
Subject: Re: WHERE and pointers

Posted by [David Fanning](#) on Thu, 09 Jan 2003 06:16:32 GMT

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Sheryn Gillin (sheryn.gillin@cmr.uq.edu.au) writes:

> Hoping someone may be able to help. I know the beauty of the WHERE
> function, and the importance of pointers, however, I can't get the two
> to work together. For example...I use the ->GetValue('0000'x,
> '0000'x) to read a value from the DICOM header, and the result returns
> is a PtrHeap, but when I try to loop through this array using WHERE I
> get an error. Any hints?

Presumably the return value is a pointer to an array of
values. The syntax would then be something like this:

```
indices = Where( *ptr GT 5) ; or whatever
```

Is this what you are doing?

Cheers,

David

--

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

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Subject: Re: WHERE and pointers

Posted by [sheryn.gillin](#) on Thu, 09 Jan 2003 21:53:30 GMT

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> Presumably the return value is a pointer to an array of
> values. The syntax would then be something like this:
>
> indices = Where(*ptr GT 5) ; or whatever
>
> Is this what you are doing?

I don't have my full code here at work, but it basically looks like:

```
dicomdir = OBJ_NEW('IDLffDICOM', 'D:\dicomdir')  
PatientName = dicomdir->GetValue('0010'x, '0010'x)
```

So PatientName is an array of 'PtrHeapVariables', which I want to

compare with a user entered parameter to determine where to start reading the images/filenames.

What I tried was various combinations of:

StartOffset = WHERE(*PatientName EQ 'blah');

StartOffset = WHERE((*PatientName) EQ 'blah');

StartOffset = WHERE(*PatientName[*] EQ 'blah'); etc.

however, I only get error messages, so end up having to use a FOR loop to find the starting location.

Cheers

Sheryn

Subject: Re: WHERE and pointers

Posted by [David Fanning](#) on Fri, 10 Jan 2003 03:45:40 GMT

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Sheryn Gillin (sheryn.gillin@cmr.uq.edu.au) writes:

> I don't have my full code here at work, but it basically looks like:

>

> dicomdir = OBJ_NEW('IDLffDICOM', 'D:\dicomdir')

> PatientName = dicomdir->GetValue('0010'x, '0010'x)

>

> So PatientName is an array of 'PtrHeapVariables', which I want to

> compare with a user entered parameter to determine where to start

> reading the images/filenames.

>

> What I tried was various combinations of:

> StartOffset = WHERE(*PatientName EQ 'blah');

> StartOffset = WHERE((*PatientName) EQ 'blah');

> StartOffset = WHERE(*PatientName[*] EQ 'blah'); etc.

> however, I only get error messages, so end up having to use a FOR loop

> to find the starting location.

Ah, well. What apparently gets returned is an array of pointers. In the DICOM file I just opened there is only a single pointer in the array:

```
IDL> PatientName = dicomdir->GetValue('0010'x, '0010'x)
```

```
IDL> help, patientname
```

```
PATIENTNAME  POINTER  = Array[1]
```

```
IDL> help, *patientname
```

```
% Expression must be a scalar in this context: PATIENTNAME
```

I thought at first it was a pointer to an array, too. But that has a slightly different syntax:

```
IDL> ptr = Ptr_New([ 3,4,5])
IDL> help, ptr
PTR          POINTER  = <PtrHeapVar99>
```

What I really want is dereference syntax like this:

```
IDL> help, *(patientname)[0]
<PtrHeapVar98> STRING  = '3D KNEE '
```

In this case, the pointer only points to one thing, so there is not much point in a WHERE function. In your case, the pointer might point to several things, so a WHERE function might be appropriate. Or, you might have to dereference all your points into a large array, and *then* use the WHERE function. But, in any case, *something* ought to be possible. :-)

How did that ComputeMesh suggestion pan out for your stack of ROIs?

I put up a tip just the other day on my web page, by the way. The proper way to delete all these pointers when you are done with them (and you may not know at all how many you have!), is like this:

```
Heap_Free, dicomdir
```

Cheers,

David

--

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Subject: Re: WHERE and pointers
Posted by [sheryn.gillin](#) on Mon, 13 Jan 2003 00:23:10 GMT
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> % Expression must be a scalar in this context: PATIENTNAME

That's exactly the error message I get when trying to use WHERE. :(

> In this case, the pointer only points to one thing, so there
> is not much point in a WHERE function. In your case, the

- > pointer might point to several things, so a WHERE function
- > might be appropriate. Or, you might have to dereference all
- > your points into a large array, and *then* use the WHERE
- > function. But, in any case, *something* ought to be possible. :-)

Guess my FOR loop isn't looking so bad after all. :) Think I'll just stick to that method, for this instance.

- > How did that ComputeMesh suggestion pan out for your stack
- > of ROIs?

Absolutely fantastic. Thank you. Sent the 'displays' off to my supervisors this morning, and I hope they are as pleased/happy as me. :)

- > I put up a tip just the other day on my web page, by the way.
- > The proper way to delete all these pointers when you are done
- > with them (and you may not know at all how many you have!), is
- > like this:
- >
- > Heap_Free, dicomdir

Definitely cleaner than my multiple lines, destroying each object separately. I'll update my code tonight.

Thanks & Cheers
Sheryn
