Subject: The continuing saga of WHERE and 2D
Posted by Sean Raffuse on Thu, 27 Feb 2003 20:37:32 GMT
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Ok, so I've found the nifty little WhereToMulti program that converts 1D where() results back to the original 2d or 3d indices. My question, and I am sensing that it is a dumb one, is how can I use these returned indices properly?

Example:

```
;the part that works (stolen wholesale from D Fanning's website)
index = WHERE(image EQ test)
s = SIZE(image)
ncol = s(1)
col = index MOD ncol
row = index / ncol

;the part I am confused about
image[col, row] = PassedTheTest
```

*** Error, too many elements in array. . . and you're ugly. ***

Thanks in advance,

Sean

Subject: Re: The continuing saga of WHERE and 2D
Posted by David Fanning on Fri, 28 Feb 2003 18:41:09 GMT
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Paul van Delst (paul.vandelst@noaa.gov) writes:

> Are you going to transplant JD's analysis to your webpage? (please) [*]

Oh, probably. I find myself completely unemployed at the moment and it has gotten so bad I've even started working on that object book. So I need something to keep me away from that hard work. :-)

And, anyway, the only alternative this morning seems to be fixing a stopped-up toilet (oh, joy!) or scrubbing the carpets where the dogs tracked mud in last night.

Sigh....

Cheers,

David

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Coyote's Guide to IDL Programming: http://www.dfanning.com/
Toll-Free IDL Book Orders: 1-888-461-0155

Subject: Re: The continuing saga of WHERE and 2D
Posted by Paul Van Delst[1] on Fri, 28 Feb 2003 18:42:56 GMT
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David Fanning wrote:
>
> Paul van Delst (paul.vandelst@noaa.gov) writes:
>
>> Are you going to transplant JD's analysis to your webpage? (please) [*]
>
> Oh, probably. I find myself completely unemployed at
> the moment and it has gotten so bad I've even started
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> me away from that hard work. :-)
>
> And, anyway, the only alternative this morning seems
> to be fixing a stopped-up toilet (oh, joy!) or scrubbing
> the carpets where the dogs tracked mud in last night.

Wow. Last night I left work early to mop up water leaking from stopped up bathtub pipes (so the plumber didn't burn himself due to the caustic-y liquid plumr in the water...ehem.) and to clean up dry cat puke from the rug. We seem to have a temporary convergence of some sort...except I was glad to leave my "sit in front of computer" work..... :o)

paulv

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Subject: Re: The continuing saga of WHERE and 2D
Posted by JD Smith on Fri, 28 Feb 2003 19:52:45 GMT

On Fri, 28 Feb 2003 11:15:11 -0700, Pavel Romashkin wrote:

> Hi JD,
> Is the same kind of allocation taking place when one simply calls
> FLTARR? I bet yes.
> I am still puzzled by the fact I can allocate 1.25 times more in the
> form of pointer arrays than as a single large array, like
>
> a = FLTARR(290000000) ; This is the limit, out of RAM over this (1.32
> Gb) a = PTRARR(3600, /allocate)
> temp = FLTARR(100000)
> for i = 0, 3599 do *a[i] = temp ; No problem at all
>

I'd go with the fragmentation argument. If so, this should be independent of pointer use. You could, e.g., assign a different variable name to each small array (execute comes to mind). The system's memory allocator might not be pleased to give you a single chunk of 1.32GB, but still be happy to hand out 100 chunks of 13.2 MB.

What if you repeat this a series of times, gradually reducing the number of pointers to 1, while preserving the total memory allocated? I'd bet it would slowly converge on the single-block limit, with fits and starts as you pass awkward memory sizes.

JD

Subject: Re: The continuing saga of WHERE and 2D
Posted by David Fanning on Mon, 03 Mar 2003 00:24:26 GMT

Paul van Delst (paul.vandelst@noaa.gov) writes:

> Are you going to transplant JD's analysis to your webpage? (please) [*]

Interestingly enough, Dick Jackson has reported this phenomenon with array subscripting taking a LOT of memory back in October and I had written an article about that then. I guess we *all* have to spend more time reading those articles. :-(

Anyway, I've updated that article with this new take on the same problem. If I see it one more time, even I'll probably begin to recognize it.

http://www.dfanning.com/misc_tips/submemory.html

Cheers,

David
--
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