Subject: Re: Dereferencing a Pointer Array
Posted by Art Burden on Tue, 01 May 2001 18:58:38 GMT

Thanks Liam, that worked beautifully. I knew I was making this complicated..
Sometimes it's easy to use the routines blindly without thinking about how
they are defined (such as, mean = sum/num)

"Liam E. Gumley" wrote:

> Art Burden wrote:
>> I have a structure that contains a pointer array that points to twelve
>> 512-by-512 images. I would like to find the mean image from the twelve
>> images in a simple and fast way. I understand that I can dereference
>> the pointer to an image or an individual element in an image by using,
>> for example
>>
>> img = (*info.images[0])
>> and
>> img_element = (*info.images[0])[240,240]
>>
>> but I can't figure out a way to dereference the pointers to all 12 pixel
>> values from a given coordinate in one step. At this stage, I pass the
>> structure into my averaging subroutine and I create a new array to
>> store the 12 images. I then fill the array by dereferencing the pointer
>> to each image in a loop. Finally, I loop through the rows and columns
>> to get each mean pixel value, as shown below. Can anyone think of a
>> better (mainly faster) way to do this?
>>
>> ;retrieve array of images
>> ffim = lonarr(12,512,512)
>> for num=0,11 do ffim[num,*,*] = *info.images[num]
>>
>> ;calculate mean of images
>> mean_ff = fltarr(512,512)
>> for ir = 0,511 do for ic = 0,511 do mean_im[ic,ir] = mean(ffim[*,ic,ir])
>
> Perhaps something like this (untested):
>
> sum = fltarr(512, 512)
> n = 12
> for i = 0L, n - 1L do sum = sum + *info.images[i]
> avg = sum / float(n)
>
> Cheers,
> Liam.
> http://cimss.ssec.wisc.edu/~gumley/