Subject: Re: simple array math question
Posted by Heinz Stege on Sat, 18 Jan 2003 00:51:51 GMT
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On Fri, 17 Jan 2003 16:10:49 -0600, "Sean Raffuse" <sean@me.wustl.edu>
wrote:

>
> "JD Smith" <jdsmith@as.arizona.edu> wrote in message
> news:pan.2003.01.17.21.46.58.749790.29842@as.arizona.edu...
>> On Thu, 16 Jan 2003 20:47:46 -0700, Craig Markwardt wrote:
>>
>>
>>> Heinz Stege <reply_to_posting@arcor.de> writes:
>>>> On Thu, 16 Jan 2003 14:05:27 -0600, "Sean Raffuse" <sean@me.wustl.edu>
>>>> wrote:
>>>>
>>>> >>> a=[[1,2,3],[4,5,6],[7,8,9]]
>>>> >
>>>> >>> b=[1,2,3]
>>>> >
>>>> >What is the best (read, fastest) way to multiply b by each individual
>>>> >row of a? I would like to return a result of:
>>>> >
>>>> >[[1,4,9],[4,10,18],[7,14,27]]
>>>>
>>>>
>>>> result=a*b(*,intarr(3))
>>>
>>> WOW! I've never seen that! It scares me how cool that is. :-)
>>>
>>> Craig
>>
>>
>> I may have to add that to the REBIN/REFORM tutorial. I'll see how fast
>> it is first. It's definitely one of the more readeable ways to add a new
>> trailing dimension. Doesn't work for leading or in-the-middle
>> dimensions, as far as I can tell.
>>
>> JD
>
> Yes, it worked wonders for me. Plenty fast compared to what I was doing
> before. I did have to use it on some leading dimensions and so am using
> transpose(). Not sure if it is the optimal solution, but good enough for my
> needs.
>

Yes, TRANSPOSE is also my favorite for the leading dimension:
```
result=a*(transpose(b))(intarr(3),*)
```

may be, you would prefer following syntax:
```
temp=transpose(b)
result=a*temp(intarr(3),*)
```

For middle dimensions REFORM does a good job :
```
c=fltarr(2,3,4)
...
d=fltarr(2,4)
...
result=c*(reform(d,2,1,4))(*,intarr(3),*)
```

(all tested with PV-Wave)

Heinz
