Subject: Re: simple array math question
Posted by Craig Markwardt on Mon, 27 Jan 2003 19:54:18 GMT
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JD Smith <jdsmith@as.arizona.edu> writes:

> On Sun, 26 Jan 2003 13:11:31 -0700, Craig Markwardt wrote:
>
>
>> Heinz Stege <reply_to_posting@arcor.de> writes:
>>>
>>> Thanks a lot for this very instructive contribution! Since the
>>> proposal of the intarr() method was from me, the NG may allow me to
>>> state this here.
>>>
>>> REBIN(REFORM(...)) is the better alternative. This is obvious now.
>>
>> "Better" can be defined in a lot of ways. Your solution is by far the
>> most readable way, in my view, to extend arrays. And it's cool because
>> nobody seems to have discovered it before!
>>
>> Speed is only king when you need a king.
>
>
> Well put. Ideally, IDL would have an intrinsic, readable, "inflate"
> operator to do what we're all doing in roundabout, quasi-readable ways
> right now. Maybe something like:
>
> IDL> a=findgen(10,12,14)
> IDL> g=a[3;7]*randomu(sd,10,12,7,14)

Yorick, a language very similar to IDL, but sadly not very popular,
has some very cool ways to do this. The first is a "pseudo-index"
which automatically introduces dimensions of length one.

a[*,*,-,*] would be a 10x12x1x14 array, the "-" introducing the extra
dimension. Yorick has a separate meaning for the "*"
operator but I mean it here in the normal IDL sense.

The second thing is "broadcasting," which automatically extends
dimensions of length 1. Thus, in the expression,

a[*,*,-,*] * randomu(sd,10,12,7,14)

The 3rd dimension is automatically extended to length 7 by replicating
A. Someone has already thought about these things (Yorick's author,
David Munro), and they are very cool!

Craig

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