Subject: Re: Avoid loop in matrix operation
Posted by JD Smith on Fri, 07 Jul 2006 20:46:31 GMT
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On Fri, 07 Jul 2006 16:09:07 -0300, George N. White III wrote:

> On Thu, 6 Jul 2006, JD Smith wrote:
>
>> [quoted text muted]
>
> Other matrix languages have had this for years -- how far behind can IDL
> stay without going backwards?
>
> People following this thread might want to look at Matlab's recent
> implementation of new functions to vectorize operations over heterogeneous
> arrays and structures, described in
> < http://www.mathworks.com/company/newsletters/digest/2006/mar /vector.html>

Say what you will about IDL's arrays, but they are fast, I think a
good bit faster than any comparable solution among 4G languages. I do
have to say, this "cell array" concept mentioned is really quite nice.
It's essentially syntatic sugar for PTRARR, hiding the pointer
creation and de-referencing bit, with the ability to thread over
entire such arrays at once. IDL has nothing like it.

BTW, these new MATLAB functions don't allow you to collapse over array
dimensions, just operate on all elements of an array, or all fields of
a structure. IDL can already do the former (since it can dereference
arbitrary fields of arrays of structures), but not the latter (though
with .(i) notation it wouldn't be hard to generalize). I'm not sure
if Matlab has anything like the generic array threading of APL or J.

JD