
Subject: Re: Pass by value and performance
Posted by [Rick Towler](#) on Fri, 16 Dec 2005 17:29:18 GMT
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Kenneth P. Bowman wrote:

> A cautionary note on argument passing ...
>
> I have a large code that does a lot of interpolation in
> multi-dimensional arrays. Being a clever IDL programmer (too clever by
> half, as it turns out), I package these arrays into structures along
> with various information about the arrays. When these arrays are then
> passed, for example, into INTERPOLATE, as
>
> result = INTERPOLATE(data.array, x, y, z)
>
> the array is passed by value, which entails making a copy of the array.
> When these arrays get large, this causes a big performance hit. So, I
> am in the process of making my code less clever (and uglier) but much
> faster.

It's nice that we have to worry about these things in IDL.

I'm working in MATLAB right now helping a colleague run a large simulation and managing memory when you can only pass by value is a real pain/annoyance. Talk about a performance hit:

??? Error using ==> zeros
Out of memory. Type HELP MEMORY for your options.

The inability to pass by reference in MATLAB is *insane*. An annoyance when writing everyday code, a real hindrance when array sizes balloon.

-Rick
