Subject: Re: FOR loops and efficiency
Posted by Craig Markwardt on Thu, 28 May 2009 05:38:20 GMT
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On May 26, 5:51 pm, JDS <jdtsmith.nos...@yahoo.com> wrote:
>> I still stand by my rule of thumb. The problem with FOR loops is the
>> amount of time spent doing loop overhead stuff. If you run your loop
>> but *take all the calculations out*, and the total execution time is
>> not perceptible, then you probably won't gain by optimizing/
>> vectorizing.
>
> I find that analysis lacking for a few reasons. Consider this
> example:
...
> IDL> t=systime(1) & for i=0L,10000000L-2 do a[i+1]+=a[i] &print,systime(1)-t
...
> IDL> t=systime(1) & for i=0L,10000000L-2 do begin & end & print,systime(1)-t
> 0.12700295
...
> Loop overhead is one reason to avoid FOR loops with high iteration
> count, but it is by no means not the *only* reason. ...

I agree with everything you said. I still stand by my guideline as
rule of thumb to know when optimization is important. Note that the
rule of thumb didn't involve trying to compare the execution time of
an empty loop and a full loop. :-)

By the way, if you put a simple dummy statement like this,

t=systime(1) & for i=0L,10000000L-2 do begin & dummy = 0 & end &
print,systime(1)-t

Then the execution time is more like 0.5 seconds. While I agree that
this is not the same as 2.2 seconds, it is definitely more
comparable.

Craig