Subject: Re: Code optimization
Posted by Kenneth P. Bowman on Thu, 17 Feb 2011 20:52:12 GMT
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In article
<ff8c9322-c3c0-4ed0-b9c2-73ae36c71a16@g10g2000vbv.googlegroups.com>,
 kisCA <kis93@hotmail.com> wrote:

> Jeremy, I am amazed how you manage so quickly to find a way to
> optimize the code. Do you have some tips to achieve it?

Here is my short list of priorities for code optimization in IDL:

  Optimize where it matters - Don't worry about optimizing code
    that does not affect the overall cpu time.
  Do binary I/O - NetCDF, HDF, or binary, not ASCII.
  Access memory in order - Think about the order in which you are
    likely to access your data before you define arrays.  This will
    make better use of caches in modern cpus.
  Use IDL built-in functions and operators - There are many
    tricks for using REBIN, REFORM, and HISTOGRAM, but be aware
    that they are often memory intensive.
  Optimize your innermost loop - Loops are not necessarily bad
    in IDL if the calculations within a loop are well optimized.
  Don't do unnecessary calculations (e.g., move constants out of loops)
  Buy the IMSL library if you need those functions - Your time is
    probably much more expensive than an IMSL license.

If you keep those things in mind, you will rarely have to resort
to the code profiler or external modules.

This seems sure to start a discussion.  ;-)

Ken Bowman