Subject: Re: About the bits reserved for float variable
Posted by Kenneth P. Bowman on Fri, 21 May 2004 22:22:01 GMT
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In article <MPG.1b17c91c4c958ba1989761@news.frii.com>,
David Fanning <davidf@dfanning.com> wrote:

> it this way, you can have fast or accurate, but you
> can't have both. That's about as much as I've ever
> needed to know using a computer. :-)

It used to be that integer arithmetic was faster than floating point,
but that is generally no longer the case. Just about all machines
that I know of can do integer or floating point ops in a single
clock cycle. Some cpus can do more than one op per clock cycle.
(That's what many of those millions of transistors on
modern cpus are used for.)

Additionally, many (but not all) architectures have double-precision
floating point hardware units. DP operations on those systems are as fast as
single precision. On many machines the only drawbacks to doing everything
in DP are: twice as much memory is required and twice as much file
space.

My rules of thumb:
Use integers for things you can count (i.e., no fractions).
Use doubles for "real numbers", unless memory is a problem.
Write files in single or double precision, as needed.

Ken Bowman