Re: Sun Studio Express 3 compilers available for download

Source: http://coding.derkeiler.com/Archive/Fortran/comp.lang.fortran/2007−01/msg00138.html

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- *Date*: 4 Jan 2007 11:23:39 −0800

In article <uRbnh.329175$Fi1.45780@xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx>,
Dick Hendrickson <dick.hendrickson@xxxxxxx> wrote:

> 1) In production codes, essentially all array operations are performed
> in subroutines on arrays with passed in dimensions. The compiler has
> no size information to help it decide what to do.

This is true, however, inlining, interprocedural analysis, and
constant propagation can often discover useful info. And F77 codes are
generally better than F9X codes: that straight−jacket that makes
dynamic sizes hard leads to better code.

In the unknown size case, some compilers generate multiple versions of
loops for different sizes, but it's easy to end up with a lot of code
bloat doing this.

> 3.5) Maybe the compiler can prove that J:K,L:M runs over the entire
> array, in which case it can use a single equivalent DO loop with no
> need to worry about loop order.

This optimization was very useful on vector machines, and today it
sometimes improves SIMDization.

−− greg
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