Subject: Interesting advantage of using indices instead of iterators Posted by mirek on Wed, 10 Jan 2007 10:52:06 GMT View Forum Message <> Reply to Message

From alt.comp.lang.c++.moderated:

Jeff Koftinoff wrote:

- > My only issue with STL's iterator design is that the pointer-style
- > based algorithms make it a lot tougher for the compiler to optimize the
- > resulting code, taking advantage of cpu pipelining and parallel
- > execution units especially without having the 'restrict' keyword to
- > tell the compiler that the dereferenced iterators are not aliasing
- > other variables used within the loop. ie, with array indexing the
- > compiler can easily tell that certain lines of code can be
- > parallelized, but changing a pointer in the loop makes it very hard on
- > the compiler designers to track what optimizations can happen. In my
- > code on one platform, I've found I could optimize the loop time from
- > 170 clock cycles per iteration down to 10 just by using array indexing
- > instead of pointer increments! (TMSC6701 DSP, VLIW)

I had many reasons to avoid iterators, but this one is new to me )

--Mirek Fidler U++ team leader. http://www.ultimatepp.org

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