Subject: Re: SSE2(/AVX) and alignment issues
Posted by mirek on Sun, 30 Jan 2011 19:08:45 GMT
View Forum Message <> Reply to Message

Novo wrote on Sun, 30 January 2011 13:35mirek wrote on Sun, 30 January 2011 12:24
Anyway, deeper research has revealed that all this is somewhat obsolete. Where I am heading now is larger vectors of values that are fully encapsulated in some object (which can keep proper alignment) and using the most advanced ISA available...

Could you please explain this in more details?
As far as I understand you are going to use CPU dispatching.

TIA

Well, first of all, all of this is so far purely theoretical.

Anyway, I think the right idea is to emulate "vector processor", define float/double vector classes and operations on them.

I mean something like

DoubleVector x(200), y(200);
double a;

x = a * x + y;

and then, in implementation, use SSE2 or AVX or whatever to speed things up...

At this point, allocation is internal bussines of DoubleVector and alignment does not cause any problems anymore.