Timings for dotfloat. The test environment was an AMD Athlon X2 with 1.9 GHz under:

1. 32 bit Windows XP with SP 2, compiled with gcc 3.4.5 (MinGW).

2. 32 bit Ubuntu Linux (Hardy Heron), compiled with gcc 4.2.4.

Every function was called 5 Million times. It wasn't made any attempt to reduce background processes. The time measurement isn't always accurate, because the application runs inside a multiuser environment. But I did 20 program runs to compute the arithmetic mean of the calculation times, so they are meaningful.

Time was measured in seconds. Of course, different memory layouts and cpu speed settings will lead to other results.

Function	Win XP	Linux
Simple C++	21.77	21.88
C++ (2 Accumulators)	10.95	10.89
C++ with Intrinsics	5.55	5.53
SSE2 (4 floats)	5.51	5.49
SSE2 (8 floats)	3.53	3.51
SSE2 (16 floats)	3.20	3.17
SSE2 Code by Dioxin (16 floats)	3.88	3.86
SSE2 Code by Lingo (32 floats)	3.20	3.19
SSE2 Code with PATTERN (32 floats)	3.08	3.07

Table 1: Run Times

It would be interesting to test the application with other processors and other environments. Every help and recommendations to improving the code are welcome. Special thanks to Drizz, Jochen, Dioxin, and Lingo for providing code or making suggestions.

Gunther