
Subject: Re: Writing Bits object to disk
Posted by [crydev](#) on Tue, 25 Apr 2017 11:35:41 GMT
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Thanks for your replies Mirek! I fixed my testcases, I realized I had a wrong check in my loop. The results now are:

Then, I applied your optimizations, and Bits became a little faster. However, It still is not as fast as Vector<bool>.

Quote:Any ideas about the proper "raw data" interface?

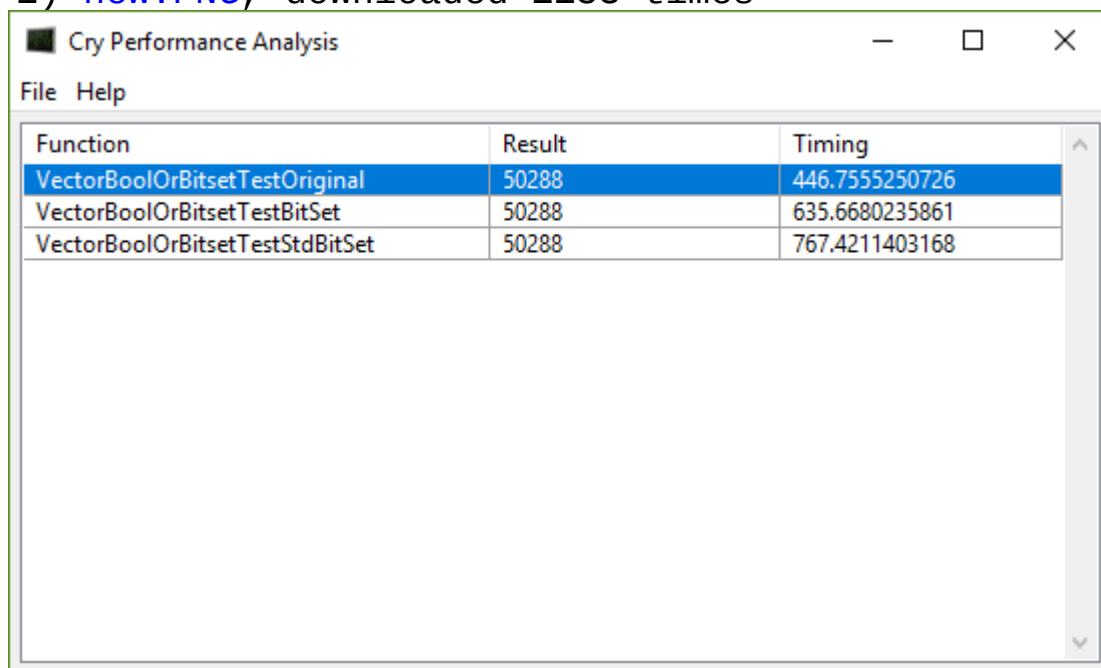
I thought about making a constructor that allows construction of Bits from an existing buffer.

I also thought about vectorizing Bits set method. In theory, we could gather 16 bools, invert the bits in this bool, such that the most significant bit is 1 if the bool value is true, and 0 if it is false. Then, the `_mm_movemask_epi8` intrinsic will generate an instruction that directly converts these 16 bools to a bitmask. We can also assume that 0x80 is true, for our inverted bool.

crydev

File Attachments

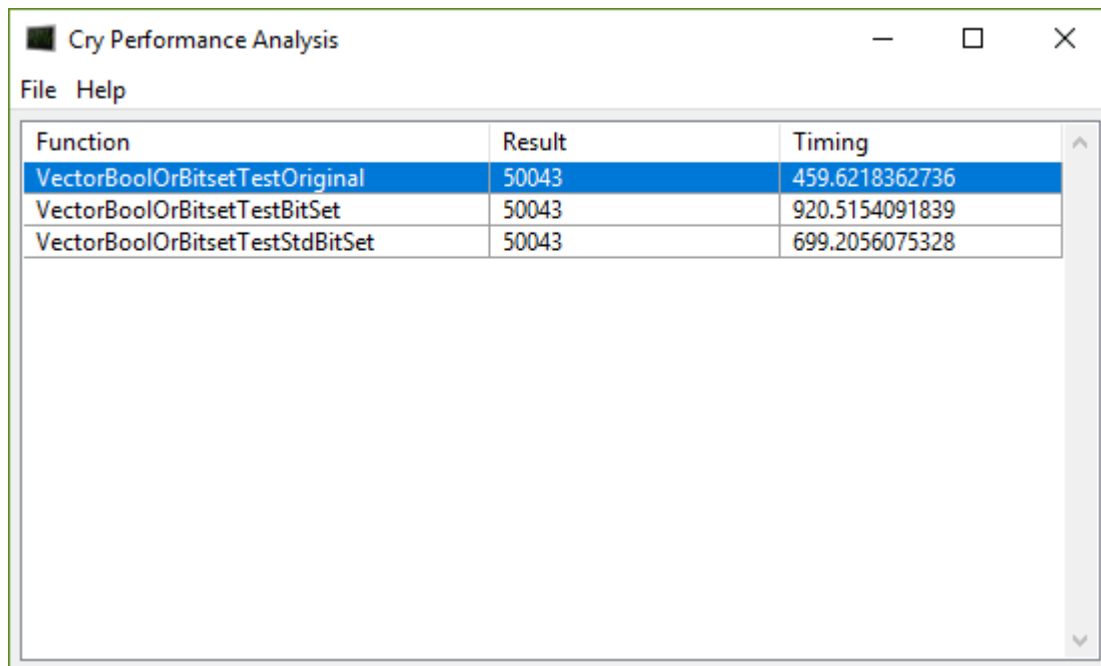
1) [new.PNG](#), downloaded 1183 times



The screenshot shows a window titled "Cry Performance Analysis" with a menu bar containing "File" and "Help". Inside the window is a table with three columns: "Function", "Result", and "Timing". The table contains three rows of data. The first row is highlighted in blue. The second and third rows are in white. The table is scrollable, as indicated by the vertical scrollbar on the right side.

Function	Result	Timing
VectorBoolOrBitsetTestOriginal	50288	446.7555250726
VectorBoolOrBitsetTestBitSet	50288	635.6680235861
VectorBoolOrBitsetTestStdBitSet	50288	767.4211403168

2) [Capture.PNG](#), downloaded 1194 times



The screenshot shows a window titled "Cry Performance Analysis" with a menu bar containing "File" and "Help". Below the menu bar is a table with three columns: "Function", "Result", and "Timing". The table contains three rows of data. The first row, "VectorBoolOrBitsetTestOriginal", is highlighted in blue. The second row is "VectorBoolOrBitsetTestBitSet" and the third is "VectorBoolOrBitsetTestStdBitSet". All three rows show a "Result" of 50043. The "Timing" values are 459.6218362736, 920.5154091839, and 699.2056075328 respectively. A vertical scrollbar is visible on the right side of the table.

Function	Result	Timing
VectorBoolOrBitsetTestOriginal	50043	459.6218362736
VectorBoolOrBitsetTestBitSet	50043	920.5154091839
VectorBoolOrBitsetTestStdBitSet	50043	699.2056075328