

Benchmark	O Flag	Time(s)	Instructions	Rel to Start	Rel to Prev	Improvement
Small Big	O0 O0	6.895 171.669	31,882,966,500 -	1.000 1.000	1.000 1.000	Starting Point
Small Big	O1 O1	4.661 115.193	26,510,279,136 -	0.676 0.671	0.676 0.671	Compiled with optimization 01
Small Big	O2 O2	4.581 114.938	26,335,011,755 -	0.664 0.670	0.983 0.998	Compiled with optimization 02
Small Big	O1 O1	4.047 99.656	14,128,407,031 -	0.587 0.580	0.883 0.867	Removed bitpack and made inline local version of bitpack_getu
Small Big	O2 O2	3.067 71.274	11,011,199,274 -	0.444 0.415	0.758 0.715	Inline parser and instruction modules
Small Big	O2 O2	3.069 71.363	11,011,199,280 -	0.445 0.416	1.001 1.002	Removed 1 pointer dereference
Small Big	O2 O2	2.182 54.406	7,948,658,647 -	0.316 0.317	0.710 0.762	Only load program segment when necessary
Small Big	O1 O1	1.295 32.016	5,783,010,846 -	0.189 0.186	0.593 0.588	Replaced Hanson Array's with our own data structure
Small Big	O1 O1	1.212 30.582	5,166,746,545 -	0.176 0.178	0.936 0.955	Used uintptr_t to avoid malloc / free with the elements of our stack
Small Big	O1 O1	1.207 30.412	4,782,353,095 -	0.175 0.177	0.996 0.994	Removed needless asserts
Small Big	O1 O1	0.887 22.374	4,575,474,179 -	0.129 0.130	0.735 0.736	Inlined remaining modules, took out repeated pointer dereference

Small Big	O1 O1	0.859 21.694	4,575,342,242 -	0.124 0.126	0.968 0.970	Replaced for loop with memcpy in arr_clone
Small Big	O1 O1	0.648 16.210	3,439,526,298 -	0.093 0.094	0.754 0.747	Replaced Hanson sequences with our own data structure
Small Big	O1 O1	0.626 15.591	3,345,472,473 -	0.091 0.091	0.966 0.962	Replaced Hanson stacks with our own data structure
Small Big	O1 O1	0.619 15.452	3,345,472,473 -	0.090 0.090	0.989 0.991	Tweaked alignment of structs