

Hello,

- 1) In the message put at the competition web page (<http://www.satlive.org/SATCompetition/index.jsp>) we promised to report results of running BerkMin under Solaris on competition benchmarks. (These benchmarks can be downloaded from the competition web page.) To reduce the amount of data the reader needs to digest we just report the results of running BerkMin on the industrial instances used at the second stage of the competition.
- 2) We ran BerkMin under Solaris on our SUN-server with clock frequency 450 MHZ. Table 1 compares the performance of our computer with that of computers used in the competition. The table shows that the performance of our computer is only slightly better (from 4% to 14%).
- 3) We ran exactly the same version that was used in the competition (modulo correcting one buggy spot). No special tuning to the second stage instances!!!!!!.
- 4) In table 2 we compare BerkMin's performance with that of winners of the competition in the category of industrial benchmarks namely Zchaff and limmat. The results of BerkMin are given for our computer (to approximate its performance on a competition computer one should multiply the runtime by 1.1). The results for limmat and Zchaff were downloaded (except for instance w08_14 for which the trace file is incomplete) from the competition web page. In table 2 we list only the instances of the second stage (in the category of industrial benchmarks) that were solved by at least one of the three SAT-solvers.
- 5) Marking an instance with "*" means exceeding by the corresponding SAT-solver the time limit (21600 sec. = 6 hours).
- 6) You don't have to take our word for it. We will gladly provide you with the binary of an older version of BerkMin, namely BerkMin56. (Just drop a line to egold@cadence.com or nov@newman.bas-net.by). The latter is one of the two SAT-engines used by the competition version (which is BerkMin62). Ironically, BerkMin56 alone is able to solve 15 instances of the second stage within the 6-hour time limit (that is BerkMin56 solves by one instance more than BerkMin62). So from the viewpoint of competition benchmarks BerkMin56 is even better than BerkMin62.
- 7) We are not going to revise the results of the competition!!!!!! The winners have been named and the decision is final. We just want to provide potential users with a more realistic data on BerkMin's performance.

Best regards,

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Table 1.

Name of example	BerkMin62 (competition)	BerkMin62 (solaris)	BerkMin (solaris/com- petiton) %
homer06	22.14	19.44	87
homer10	317.54	305.28	96
cnf-r4-b1-k1.1-comp	13074.31	11853.18	90
comb3	1025.11	891.51	86

Table 2.

Family	Instance	Sat / Unsat	BerkMin (sec.)	Limmat (sec.)	Zchaff (sec.)
bmc2	cnt10	Sat	15,591.78	*	*
Comb	Comb2	Unsat	1,822.84	*	*
Comb	Comb3	Unsat	891.58	*	*
dinphil- UNSAT	dp11u10	Unsat	2,543.47	*	*
f2clk	f2clk_40	Unsat	6,406.03	*	*
fifo	fifo8_300	Unsat	*	*	5,716.74
fifo	fifo8_400	Unsat	*	*	16,083.81
fvp-unsat-2.0	6pipe	Unsat	1,104.6	*	12,714.61
fvp-unsat-2.0	6pipe_6_ooo	Unsat	768.68	*	4,398.18
fvp-unsat-2.0	7pipe	Unsat	2,926.48	*	*
ip	ip36	Unsat	410.78	20,918.72	6,982.30
ip	ip38	Unsat	277.93	5,641	13,217.19
ip	ip50	Unsat	918.47	*	*
satex- challenges	cnf-r4-b1-k1.1- comp	Sat	11,853.18	21,339.27	*
satex- challenges	cnf-r4-b1-k1.2- comp	Sat	*	20,454.52	*
w08	w08_14	Sat	8917.15	*	solved
w08	w08_15	Sat	4596.77	*	*
<i>total number of solved instances</i>			14	4	7
<i>total number of solved satisfiable instances</i>			4	2	1