

Boolector at the SMT Competition 2011

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Abstract. This note serves as system description of our SMT solver Boolector submitted to the SMT Competition 2011.

The version of Boolector [3, 2] submitted to the competition in 2011 did not change much in the core SMT part. It is almost identical to the one entering the SMT competition in 2009.

Beside preliminary support for SMTLIB version 2, it also incorporates various bug fixes, including one which disables unconstrained input optimization. The major change was to use an internal version of our SAT solver Lingeling [1] as single back-end SAT solver for all supported theories (QF_BV and QF_A(UF)BV).

The original version of Boolector was co-developed by Robert Brummayer and Armin Biere at our Institute of Formal Models and Verification and is now extended and maintained by Armin Biere.

References

1. Armin Biere. Lingeling, Plingeling, PicoSAT and PrecoSAT at SAT Race 2010. FMV Report Series Technical Report 10/1, Johannes Kepler University, Linz, Austria, 2010.
2. Robert Brummayer. *Efficient SMT Solving for Bit-Vectors and the Extensional Theory of Arrays*. PhD thesis, Johannes Kepler University, Linz, Austria, 2009.
3. Robert Brummayer and Armin Biere. Boolector: An efficient SMT solver for bit-vectors and arrays. In Stefan Kowalewski and Anna Philippou, editors, *Proceedings of the 15th International Conference on Tools and Algorithms for the Construction and Analysis of Systems (TACAS 2009)*, volume 5505 of *Lecture Notes in Computer Science*, pages 174–177. Springer, 2009.

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