A Fast SAT Solver for Isabelle in Standard ML

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Abstract

This contribution contains a fast SAT solver for Isabelle written in Standard ML. By loading the theory DPT_SAT_Solver, the SAT solver installs itself (under the name “dptsat”) and certain Isabelle tools like Refute will start using it automatically. This is a port of the DPT (Decision Procedure Toolkit) SAT Solver written in OCaml.

Theory DPT_SAT_Tests tests the solver on a few hundred problems.

Contents

theory DPT_SAT_Solver
imports SAT
begin

(ML)

end

theory DPT_SAT_Tests
imports DPT_SAT_Solver
begin

(ML)

end