Tiffany de Wintermonte

Trevor Hansen, Peter Schachte and Harald Søndergaard
The University of Melbourne

June 2012

Tiffany de Wintermonte (TdW), is an experimental eager solver for the combined theory of bit-vectors and arrays. TdW shares some code with STP2, another bit-vector and array solver.

TdW handles arbitrary precision integers using Steffen Beyers library. TdW encodes into CNF via the and-inverter graph package ABC of Alan Mishchenko et al. [BM10]. TdW uses Glucose 2.0 [AS09] as its SAT solver. We found many defects using Robert Brummayer and Armin Bieres fuzzing and delta debugging tools [BB09].

References

[AS09] Gilles Audemard and Laurent Simon. Predicting learnt clauses quality in modern SAT solvers. In *Proceedings of the 21st International Joint Conference on Artificial Intelligence*, IJCAI'09, pages 399–404, San Francisco, CA, USA, 2009. Morgan Kaufmann Publishers Inc.

[BB09] Robert Brummayer and Armin Biere. Lemmas on demand for the extensional theory of arrays. *Journal on Satisfiability, Boolean Modeling and Computation*, 6(1-3):165–201, 2009.

[BM10] Robert K. Brayton and Alan Mishchenko. ABC: An academic industrial-strength verification tool. In *CAV*, pages 24–40, 2010.