MAX-SAT 2012: `ubcsat-irots`

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Solver Description

For this competition, we submitted a new UBCSAT [2] implementation of Iterated Robust Tabu Search (IROTS) from Smyth, Hoos and Stützle [1]. The most significant change to the UBCSAT software framework was the internal representation of clause weights for the Weighted MAX-SAT problem. In prior releases of UBCSAT (version 1.1), clause weights were represented as floating point (real) values; henceforth they will be represented as 64-bit integers (from version 1.2). In addition, a report was added to UBCSAT to support the MAX-SAT input and output formats, and some minor improvements were made to ensure proper termination before the five minutes cutoff. The implementation of the IROTS algorithm was not changed, and the default parameter values for the algorithm were used. The software is available at the UBCSAT website: http://ubcsat.dtompkins.com.

References

[1] Kevin Smyth, Holger H. Hoos, and Thomas Stützle. Iterated robust tabu search for MAX-SAT. In *Proceedings of the Sixteenth Conference of the Canadian Society for Computational Studies of Intelligence (AI-03)*, volume 2671 of *Lecture Notes in Artificial Intelligence*, pages 129–144, 2003.

[2] Dave A. D. Tompkins and Holger H. Hoos. UBCSAT: An implementation and experimentation environment for SLS algorithms for SAT and MAX-SAT. In *Revised Selected Papers of the Seventh International Conference on Theory and Applications of Satisfiability Testing (SAT-04)*, volume 3542 of *Lecture Notes in Computer Science*, pages 306–320, 2005.