System Description: MathSAT-HeavyBV

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MathSAT 5 is a lazy SMT solver based on the DPLL(T) architecture. It is the successor of the MathSAT 4 SMT solver. A great portion of the system has been reimplemented (still in C++) in order to address some limitations in the architecture of MathSAT 4 and to make the implementation more modular and maintainable. MathSAT 5 supports a more general and flexible type system than its predecessors, which should greatly simplify the integration of more theories and functionalities. Moreover, particular attention has been put in the interoperability among the various extended functionalities (like e.g. incremental usage, proof generation, unsat core extraction, interpolation, All-SMT) that the solver provides and in their compatiblity with the preprocessor and search-time optimizations implemented. MathSAT 5 is it is the default solver used in all the SMT-based tools at FBK.

This version participating in SMT-COMP12 is a version of MathSAT 5.1.7, extended with a SAT inprocessor procedure. The inprocessor was developed in the course of the Wolfling project. It supports: literal equivalence detection, (backwards) subsumption and variable elimination. This extended version will enter in the QF BV catagory. All theory solvers, except the BV solver will be disabled in the used configuration.

Main track: QF BV

Magic Number: 49