CoSoCo 1.12

XCSP3 Competition in 2017

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CoSoCo is a constraint solver written in C++. It is the first release of this solver. The main goal is to build a simple, but efficient constraint solver. Indeed, the main part of the solver contains less than 2,000 lines of code. CoSoCo will be available on bitbucket as soon as possible. CoSoCo recognizes XCSP3 [2] by using the C++ parser that can be downloaded at https://github.com/xcsp3team/XCSP3-CPP-Parser. It can deal with almost all XCSP3 Core constraints. The part related to all constraint propagators contains around 4,500 lines of codes.

CoSoCo performs backtrack search, enforcing (generalized) arc consistency at each node (when possible). The main components are :

− *dom/wdeg* [1] as variable ordering heuristic;
− *lexico* as value ordering heuristic;
− lc(1), last-conflict reasoning with a collecting parameter k set to 1, as described in [4];
− a geometric restart policiy;
− a variable-oriented propagation scheme [5], where a queue Q records all variables with recently reduced domains (see Chapter 4 in [3]).

Acknowledgements

References

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