Efficient Grouping Mechanism in Boolean Game to Solving Unweighted MaxSAT Problem

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Abstract.

1 Introduction

par1 MaxSAT problem definition and its applications.

par2 Cooperative boolean game and the importance of grouping in boolean game.

par3 Introduce the main contributions of our work. (boolean game approach to solving MacSAT problem, map boolean game to undirected graph, efficient grouping mechanism)

par4 Organization of this paper.

2 Related Works

par1 Existing algorithms for MaxSAT problem, these algorithms advantages and disadvantages.

par2 Complete algorithms.(branch and bound solving schema, SAT based algoritms)

par3 Incomplete algorithms.(CCLS,IRoTS)

3 XXX Algorithm for MaxSAT Problem

3.1 Grouping Mechanism

par1 Players and its payoffs setting in boolean game to solve a MaxSAT instance.

par2 The detail of the grouping mechanism.

3.2 The Framwork of The XXX Algorithm

par1 The detail of the algorithm.

4 Experimental Evaluation

4.1 The Benchmarks and Experiment Setting

par1 Benchmarks of unweighted MaxSAT problem in MaxSAT 2016 Evaluation.(random, crafted and industrial)

par2 Experiments environment, PC's configuration and the settings of experiment parameters.

4.2 XXX and borealis on random benchmark

table

par1 results analysis and conclusion

4.3 XXX and CCLS on crafted benchmark

table

par1 results analysis and conclusion

4.4 XXX and CnC-LS on industrial benchmark

table

par1 results analysis and conclusion

5 Conclusion and Future Work

par1 Conclusion of our work in this paper. (grouping mechanism, cooperations in game,).

par2 The weakness of our approach, the future work.

References