MaxRoster:Solver Description

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Abstract—**In this document, we briefly describe the techniques employed by the MaxRoster solver participating in MaxSAT competition 2017.**

I. INTRODUCTION

MaxRoster participates in Incomplete Track. MaxRoster has two engine,one is local search solver Ramp and another is MapleSAT with CHB. First, Ramp is used 6sec and then complete maxsat algorithm starts using MapleSAT. Our aim is to make feasible solution better, though it has ability of getting optimum solution.

II. IMPLEMENTATION

Weighted Instances:

For weighted instances, either incremental version of OLL algorithm or model-based algorithm is used. Initially, MaxRoster makes a call to the SAT solver using solely the hard clauses. If SAT,the cost of this model represents an initial upper bound on the MaxSAT solution.The ratio of the cost mainly determines which algorithm should be invoked later.In model based algorithm, we implemented special clause counting the inputs with same weight in MapleSAT to address large and different weights for the instance.

Unweighted Instances:

For unweighted instances, either incremental version of MCU3 algorithm or model-based algorithm is used. Initially, MCU3 algorithm is invoked. If predefined timeout occurs in the process, then MaxRoster switches to model based algorithm dynamically.

References

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