CASHWMaxSAT-Plus: Solver Description

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***Abstract*—This document describes the MaxSAT solver CASHWMaxSAT-Plus, submitted to the complete tracks (include unweighted and weighted track) of MaxSAT Evaluation 2022.**

I. Introduction

We developed a new complete MaxSAT solver called CASHWMaxSAT-Plus based on UWrMaxSat [1] and CASHWMaxSAT [2]. In addition, CASHWMaxSAT-Plus used an unsatisfiable-core-based OLL procedure [3]–[6]. In this work, we propose one novel idea to improve UWrMaxSat and CASHWMaxSAT, resulting in a new solver CASHWMaxSAT-Plus.

- When the SAT solver returns the "l_Undef" state, we mark all the relax variables in the current assumption as delayed relax variables and then we put them into the delay assumption.

II. Future work

First, we could use a simplified version of MaxSAT local search solvers such as FPS [7] to improve the satisfied solution.

Second, we could try to design a novel selection way for selecting an unsatisfiable-core on weighted cases.

References

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