Implementation and Evaluation of a Compact Table Propagator in Gecode

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23rd January 2017

Contents

1 Introduction

The goal of this thesis is to implement a Compact Table (CT) progatator algorithm for the Table constraint in Gecode, an open-source constraint solver, and to evaluate its performance with respect to the existing propagators.

2 Background

This chapter gives an overview of preliminaries that are relevant for the following chapters. It is divided into three parts: Section 2.1 introduces Constraint Programming. Section 2.2 gives an overview of Gecode, a constraint solver. Finally, Section 2.3 introduces the Table constraint.

2.1 Constraint Programming

This section introduces the concept of Constraint Programming (CP).

2.2 Gecode

Gecode [1] is a popular constraint programming solver written in the C++ programming language.

2.3 The Table Constraint

The Table constraint?

3 Algorithms

4 Implementation

5 Evaluation

5.1 Evaluation Setup

5.2 Results

5.3 Discussion

6 Conclusions and Future Work

References

[1] Gecode Team. Gecode: A generic constraint development environment, 2016.

A Source Code