

# Small Deterministic Omega Automata for LTL: A Second Generation Implementation

Linear time logic (LTL) is one of the most used specification languages for temporal properties of systems. For many applications this logic has to be translated to deterministic omegaAutomata as an intermediate step. A new approach recently developed [LTL2Det, cav14] aims to minimise the size of this intermediate construction in order to speed up the whole process. The goal of this thesis is to reimplement the algorithm incorporating various optimisations discovered in the last year. Furthermore this implementation has to be tested using the verified implementation of the algorithm.

## 1 Optional goals

- Comparison to other LTL translators
- Integration into existing model
- Checkers
- Benchmarks

## 2 Course Requirements

- Introduction to Theoretical Computer Science
- Automata Theory