

Algorithmic Model Theory — Assignment 8

Due: Tuesday, 17 June, 12:00

Exercise 1

Prove the decidability of the emptiness problem “ $L(\mathcal{A}) = \emptyset$?” for parity tree automata by showing that for each automaton \mathcal{A} over an alphabet Σ one can effectively construct an automaton \mathcal{A}' over the unary alphabet $\Sigma' = \{|\}$ such that \mathcal{A}' accepts the unique infinite binary tree over Σ' if and only if $L(\mathcal{A}) \neq \emptyset$.