An Analysis of Merge Strategies for Merge-and-Shrink Heuristics

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The merge-and-shrink framework provides a general basis for the computation of abstraction heuristics for factored transition systems. Recent experimental and theoretical research demonstrated the utility of non-linear merge strategies, which have not been studied in depth. We experimentally analyze the quality of state-of-the-art merge strategies by comparing them to random strategies and with respect to tie-breaking, showing that there is considerable room for improvement. We finally describe a new merge strategy that experimentally outperforms the current state of the art.