Improving BnB-ADOPT+-AC

Several multiagent tasks can be formulated and solved as DCOPs. BnB-ADOPT$^+$-AC is one of the most efficient algorithms for optimal DCOP solving. It is based on BnB-ADOPT, removing redundant messages and maintaining soft arc consistency during search. In this paper, we present several improvements for this algorithm, namely (i) a better implementation, (ii) processing exactly simultaneous deletions, and (iii) searching on arc consistent cost functions. We present empirical results showing the benefits of these improvements on several benchmarks.

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