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Task Parallelism in Constraint Programming: Parallel Consistency

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Abstract. Most research in parallel constraint solving has focused on data-parallelism (DP), in which the search space is split between solvers. However, this type of parallelism is highly unsuitable for some problems. Furthermore, few search spaces can be split indefinitely. In this paper we look at task-parallelism (TP), where consistency is enforced in parallel. Our results show that TP can give a speed-up where DP gives a slow-down. Our research aim is to combine DP and TP to increase scalability.