Retroactive ordering heuristics for Asynchronous Backtracking on DisCSPs

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Abstract. A new type of ordering heuristics for dynamic ordering asynchronous backtracking (ABT DO) on DisCSPs is presented. Agents can be moved to a position that is higher than that of the target of the backtrack (Nogood). This new type of heuristics does not follow the restrictions on the heuristics of previous versions of ABT DO. The flexibility of the new type of heuristics is dependent on the size of additional Nogood storage agents are allowed to keep. This size is defined by a parameter k which limits the size of stored Nogoods. The performance of the retroactive ordered ABT is found to be worse when larger Nogood storage is used. The best performing version is the one that uses a specific min-domain heuristic with no additional storage of Nogoods.