Groups and Constraints: Symmetry Breaking During Search*

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Abstract. We present an interface between the ECL^{i}PS^e constraint logic programming system and the GAP computational abstract algebra system. The interface provides a method for efficiently dealing with large numbers of symmetries of constraint satisfaction problems for minimal programming effort. We also report an implementation of SBDS using the GAP-ECL^{i}PS^e interface which is capable of handling many more symmetries than previous implementations and provides improved search performance for symmetric constraint satisfaction problems.

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