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Solving large combinatorial problems in logic programming. (English) Zbl 0719.68013

J. Logic Program. 8, No. 1-2, 75-93 (1990).

Many problems in operations research and hardware design are combinatorial problems which can be seen as search problems with constraints. We present an application of CHIP (Constraint Handling In Prolog) to large problems in disjunctive scheduling, graph coloring, and firmware design. CHIP is a constraint logic-programming language combining the declarative aspects of PROLOG with the efficiency of constraint-solving techniques. It is shown that it allows a natural expression of problems to be executed as efficiently as special-purpose programs written in procedural languages.

Reviewer: [T.M.Liebling \(Lausanne\)](#)

MSC:

[68N17](#) Logic programming

[68R05](#) Combinatorics in computer science

[68T27](#) Logic in artificial intelligence

[68R10](#) Graph theory (including graph drawing) in computer science

[90C27](#) Combinatorial optimization

Cited in **20** Documents

Keywords:

[logic programming](#); [scheduling](#)

Full Text: [DOI](#)