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**Heterogeneous constraint solving.** (English) [Zbl 1355.68030](#)

Hanus, Michael (ed.) et al., Algebraic and logic programming. 5th international conference, ALP '96, Aachen, Germany, September 25–27, 1996. Proceedings. Berlin: Springer (ISBN 3-540-61735-3/pbk). Lect. Notes Comput. Sci. 1139, 62-76 (1996).

Summary: Most CLP languages designed in the past few years feature at least some combination of constraint solving capabilities. These combinations can take multiple forms since they achieve either the mixing of different domains or the use of different algorithms over the same domain. These solvers are also very different in nature. Some of them perform complete constraint solving while others are based on propagation methods. This paper is an attempt to design a unified framework describing the cooperation of constraint solving methods. Most techniques used in constraint-based systems are shown to be implementations of operators called constraint narrowing operators. A generalized notion of arc-consistency, called weak arc-consistency is proposed and is used to model heterogeneous constraint solving. We provide conditions on the constraint solving algorithms which guarantee termination, correctness and confluence of the resulting combined solver. This framework is shown to be general enough to describe the operational semantics of the basic constraint solving mechanisms in a number of current CLP systems.

For the entire collection see [\[Zbl 0856.68011\]](#).

**MSC:**

[68N17](#) Logic programming

Cited in **9** Documents

**Full Text:** [DOI](#)

**References:**

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