

Problem #76 (Solved !)

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Summary: Is cycle unification decidable?

Cycle unification [BHW92] has been defined in [BHW92]. Is cycle unification decidable?

Remark

Cycle unification [BHW92] is undecidable [Dev93][HW93]. This was a long standing open problem, related to the non-termination of simple logic programs.

Bibliography

- [BHW92] Wolfgang Bibel, S. Hölldobler, and Jörg Würtz. Cycle unification. In Deepak Kapur, editor, *11th International Conference on Automated Deduction*, volume 607 of *Lecture Notes in Computer Science*, pages 94–108, Saratoga Springs, NY, June 1992. Springer-Verlag.
- [Dev93] Phillipe Devienne. Personal communication, 1993.
- [HW93] Philipp Hanschke and Jörg Würtz. Satisfiability of the smallest binary program. *Information Processing Letters*, 45(5):237–241, April 1993.