Cadoli, Marco; **Eiter, Thomas**; **Gottlob, Georg**
An efficient method for eliminating varying predicates from a circumscription. (English)
Zbl 0762.03013
Artif. Intell. 54, No. 3, 397-410 (1992).

Summary: Circumscription appears to be the most powerful and well-studied technique used in formalizing common-sense reasoning. The general form of predicate circumscription allows for fixed and varying (floating) predicates. We show that the inference problem under this form of circumscription is efficiently reducible to inferencing under circumscription without varying predicates. In fact, we transform this problem even into circumscription without fixed and varying predicates, that is where all predicates are minimized. Thus any theorem prover or algorithm for inferencing under circumscription without fixed and varying predicates is able to handle inferencing under the general form of predicate circumscription. As a consequence, algorithms that compute circumscription for an inference task can be simplified.

MSC:

03B80	Other applications of logic
68T27	Logic in artificial intelligence
68T15	Theorem proving (deduction, resolution, etc.) (MSC2010)

Cited in **3** Documents

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