Logic program updates from the viewpoint of dependencies

Prof. Ján Šefránek
Comenius University Bratislava, Slowakei

Research on logic program updates is dominated by the causal rejection principle. However, there are two essential problems with that principle.

First, if only conflicts between rules are considered then an update is sometimes specified when there is no need to make the update. Second, some conflicts between programs cannot be identified and solved on the level of conflicts between rules.

We present some postulates which specify conditions for a semantics of logic program updates. Our postulates are based on a dependency theory: we consider not only conflicts between rules, but also conflicts between assumptions and between dependencies on assumptions.

Finally, a Kripkean semantics of logic program updates obeying the postulates is presented.