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**A Kripkean semantics for dynamic logic programming.** (English) [Zbl 0988.68030](#)

Parigot, Michel (ed.) et al., Logic for programming and automated reasoning. 7th international conference, LPAR 2000, Reunion Island, France, November 6-10, 2000. Proceedings. Berlin: Springer. Lect. Notes Comput. Sci. 1955, 469-486 (2000).

Summary: The main goal of the paper is to propose a tool for a semantic specification of program updates (in the context of dynamic logic programming paradigm). A notion of Kripke structure  $\mathcal{K}_P$  associated with a generalized logic program  $P$  is introduced. It is shown that some paths in  $\mathcal{K}_P$  specify stable models of  $P$  and vice versa, to each stable model of  $P$  corresponds a path in  $\mathcal{K}_P$ . An operation on Kripke structures is defined: for Kripke structures  $\mathcal{K}_P$  and  $\mathcal{K}_U$  associated with  $P$  (the original program) and  $U$  (the updating program), respectively, a Kripke structure  $\mathcal{K}_{P\oplus U}$  is constructed.  $\mathcal{K}_{P\oplus U}$  specifies (in a reasonable sense) a set of updates of  $P$  by  $U$ . There is a variety of possibilities for a selection of an updated program.

For the entire collection see [\[Zbl 0952.00026\]](#).

**MSC:**

[68N17](#) Logic programming  
[68Q55](#) Semantics in the theory of computing  
[68T27](#) Logic in artificial intelligence  
[68T30](#) Knowledge representation

Cited in 1 Review

**Keywords:**

knowledge representation and reasoning; nonmonotonic reasoning; knowledge evolution; updates; dynamic logic programming; stable model; Kripke structure; dynamic Kripke structure