

Bulletin of the Section of Logic
Volume 7/2 (1978), pp. 91–91
reedition 2011 [original edition, pp. 91–92]

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THE METHOD OF VALUATIONS IN MODAL LOGIC

In this paper we present a decision method for Kripke's modal calculus K , obtained from a new 0–1 valuation semantics for this calculus, by means of a weakening of the truth conditions concerning operations of necessity, dispense with central notions of Kripkean semantics, such as the notion of accessibility relation between worlds and of a plurality of worlds in the same model. The valuation semantics can be extended to many other calculi containing K , such as T , $S4$ etc. It can be adapted to weaker modal calculi as well as to deontic and temporal logics. (More about this kind of semantics can be found, for example, in N. C. A. da Costa and E. H. Alves, *Une sémantique pour le calcul C_1* , **C. R. Acad. Sc. Paris** 283 A (1976), pp. 729–731, and in A. Loparić, *Un étude sémantique de quelques calculs propositionnels*, **C. R. Acad. Sc. Paris** 284 A (1977), pp. 835–838).

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