

ON SIMPLICIAL SEMANTICS OF MODAL PREDICATE LOGICS

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Simplicial semantics for modal and superintuitionistic predicate logics was introduced by Dmitry Skvortsov in the early 1990s as a rather natural, but quite strong generalization of standard Kripke semantics. It also generalizes Silvio Ghilardi's functor semantics (1992). Basic results on simplicial semantics — soundness theorem and completeness theorem for a large class of logics were obtained by D.Skvortsov and V.Shehtman (1993).

In this talk we present some further results: a Sahlqvist-type completeness theorem for simplicial semantics; incompleteness of S. Ghilardi's semantics for a certain family of logics (predicate versions of nontrivial extensions of $\mathbf{K4.1} = \mathbf{K4} + \Box\Diamond p \rightarrow \Diamond\Box p$).

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