

Finite model properties for modal logics

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Modal logics are extensions of classical logic by an additional operator \diamond and some additional axioms. There are two natural classes of models for modal logic - algebraic and relational. The algebraic models are boolean algebras with additional operations of type $\langle A, \wedge, \vee, \neg, 0, 1, \diamond \rangle$; the relational models are of type $\langle W, R, V \rangle$, where W is a set, R a binary relation on W and V a valuation that maps variables to subsets of W . In proving the finite model property for a modal logic, one may construct finite models using either algebraic or relational methods (i.e., filtrations). In this talk we discuss the connections between these two methods of finite model construction and how to translate from one to the other.