

com.1 Canonical Models

nml:com:cmd:
sec

The *canonical model* for a modal system Σ is a specific model \mathfrak{M}^Σ in which the worlds are all complete Σ -consistent sets. Its accessibility relation R^Σ and valuation V^Σ are defined so as to guarantee that the **formulas** true at a world Δ are exactly the **formulas** making up Δ .

Definition com.1. Let Σ be a normal modal logic. The *canonical model* for Σ is $\mathfrak{M}^\Sigma = \langle W^\Sigma, R^\Sigma, V^\Sigma \rangle$, where:

1. $W^\Sigma = \{\Delta : \Delta \text{ is complete } \Sigma\text{-consistent}\}$.
2. $R^\Sigma \Delta \Delta'$ holds if and only if $\Box^{-1}\Delta \subseteq \Delta'$.
3. $V^\Sigma(p) = \{\Delta : p \in \Delta\}$.

Photo Credits

Bibliography