

## com.1 Canonical Models

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sec

**Definition com.1.** A model  $\mathfrak{M}$  is said to *determine* a normal modal logic  $\Sigma$  precisely when  $\mathfrak{M} \models \varphi$  if and only if  $\Sigma \vdash \varphi$ , for all **formulas**  $\varphi$ .

**Definition com.2.** Let  $\Sigma$  be a normal modal logic. The *canonical model* for  $\Sigma$  is  $\mathfrak{M}^\Sigma = \langle W^\Sigma, R^\Sigma, V^\Sigma \rangle$ , where:

1.  $\mathfrak{M}^\Sigma = \{w \subseteq \text{Frm}(\mathcal{L}) : w \text{ is complete } \Sigma\text{-consistent}\}$ .
2.  $R^\Sigma ww'$  holds if and only if  $\{\varphi : \Box\varphi \in w\} \subseteq w'$ .
3.  $V^\Sigma(p) = \{w : p \in w\}$ .

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## Bibliography