frd.1 Frames

mod:frd:fra:sec

Definition frd.1. A *frame* is a pair $\mathfrak{F} = \langle W, R \rangle$ where W is a non-empty set of worlds and R a binary relation on W. A model $\mathfrak{M}$ is *based on* a frame $\mathfrak{F} = \langle W, R \rangle$ if and only if $\mathfrak{M} = \langle W, R, V \rangle$.

Definition frd.2. If $\mathcal{F}$ is a class of frames, we write $\mathcal{F} \vDash \varphi$, "$\varphi$ is valid in $\mathcal{F}$," to mean that φ is true in every model $\mathfrak{M}$ based on a frame $\mathfrak{F} \in \mathcal{F}$.

The reason frames are interesting is that correspondence between schemas and properties of the accessibility relation R is at the level of frames, *not of models*.

Remark 1. Obviously, if a formula or a schema is valid, i.e., valid with respect to the class of *all* models, it is also valid with respect to any class $\mathcal{F}$ of frames.

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Bibliography