

## syn.1 Frames

mod:syn:fra:  
sec

**Definition syn.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 syn.2.** If  $\mathcal{F}$  is a class of frames, we write  $\mathcal{F} \models \varphi$ , “ $\varphi$  is valid in  $\mathcal{F}$ ,” to mean that  $\varphi$  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