

ma-knows-not^{11,40}

$$\begin{aligned} & \forall \text{poss}:(\text{ES}\{i\} \rightarrow \mathbb{P}\{i'\}), T:\text{Type}\{i\}, s:T, i:\text{Id}, P:(\text{possible-event}\{i:l\}(\text{poss}) \rightarrow \mathbb{P}\{i'\}), \\ & R:(\text{possible-event}\{i:l\}(\text{poss}) \rightarrow \text{possible-event}\{i:l\}(\text{poss}) \rightarrow \mathbb{P}\{i'\}), Rs:(T \rightarrow T \rightarrow \mathbb{P}\{i'\}). \\ & \text{EquivRel}(\text{possible-event}\{i:l\} \\ & \quad (\text{poss}; 1, 2, R(1, 2))) \\ & \Rightarrow (\forall e, e': \text{possible-event}\{i:l\}(\text{poss}). \\ & \quad \text{poss-consistent}(i; T; s; e; Rs) \Rightarrow \text{poss-consistent}(i; T; s; e'; Rs) \Rightarrow (R(e, e'))) \\ & \Rightarrow (\neg \text{ma-knows}\{i:l\} \\ & \quad (\text{poss}; i; T; s; P; Rs; R)) \\ & \Rightarrow \text{ma-knows}\{i:l\} \\ & \quad (\text{poss}; i; T; s; (\lambda e. \neg \text{es-knows}\{i:l\}(\text{poss}; R; P; e)); Rs; R) \end{aligned}$$