

**w-pred-bound**<sup>0,22</sup>

$\forall w:\text{World}, e:\text{E}, t:\mathbb{N}. \neg\text{isnull}(\text{a}(\text{loc}(e);t)) \Rightarrow t < \text{time}(e) \Rightarrow \{\neg\text{first}(e) \ \& \ t \leq \text{time}(\text{pred}(e))\}$