

d-comp-step^{11,40}

$\forall D:\text{Dsys}, \text{sched}:(\text{Id} \rightarrow ?(\mathbb{N} \rightarrow (\text{IdLnk} + \text{Id}))), v:(i:\text{Id} \rightarrow \text{M}(i).(\text{timed})\text{state}),$
 $\text{dec}:(i,a:\text{Id} \rightarrow \mathbb{N} \rightarrow \text{M}(i).\text{state} \rightarrow (? \text{if } a \in \text{dom}(\text{M}(i).\text{prob}) \text{ then Outcome else Void fi })),$
 $\text{discrete}:(\text{Id} \rightarrow \text{Id} \rightarrow \mathbb{B}).$
Feasible(D)
 $\Rightarrow (\forall i:\text{Id}, t:\mathbb{N}.$
 $\quad \exists s:\text{M}(i).(\text{timed})\text{state}$
 $\quad (s$
 $\quad =$
 $\quad \text{if } (t =_0 0)$
 $\quad \text{then } \lambda x.\text{M}(i).\text{init}(x)?v(i,x)$
 $\quad \text{else } (\text{CV}(\text{d-comp}(D; v; \text{sched}; \text{dec}; \text{discrete}))((t - 1), i)).1$
 $\quad \text{fi}$
 $\quad \& ((\text{CV}(\text{d-comp}(D; v; \text{sched}; \text{dec}; \text{discrete}))(t, i)$
 $\quad =$
 $\quad \text{stutter-state}(s)$
 $\quad \in \text{d-world-state}(D; i))$
 $\quad \vee (\exists k:\text{Knd}$
 $\quad \quad \exists \text{val}:\text{d-decl}(D; i)(k)$
 $\quad \quad (\text{CV}(\text{d-comp}(D; v; \text{sched}; \text{dec}; \text{discrete}))(t, i)$
 $\quad \quad =$
 $\quad \quad \text{next-world-state}(D; i; s; k; \text{val})$
 $\quad \quad \in \text{d-world-state}(D; i))))))$