

better-d-comp-step^{0,22}

$\forall D:\text{Dsys}, \text{sched}:(\text{Id} \rightarrow (\mathbb{N} \rightarrow (\text{IdLnk} + \text{Id}) + \text{Unit})), v:(i:\text{Id} \rightarrow \text{M}(i).\text{state}),$
 $\text{dec}:(i,a:\text{Id} \rightarrow \text{M}(i).\text{state} \rightarrow (\text{M}(i).\text{da}(\text{locl}(a)) + \text{Unit})).$
Feasible(D)
 $\Rightarrow (\forall i:\text{Id}, t:\mathbb{N}.$
 $\exists s:\text{M}(i).\text{state}.$
 $s = \text{if } t=20 \rightarrow \lambda x.\text{M}(i).\text{init}(x)?v(i,x) \text{ else } 1\text{of}(\text{CV}(\text{d-comp}(D;v;\text{sched};\text{dec}))(t-1,i)) \text{ fi}$
 $\& \text{CV}(\text{d-comp}(D;v;\text{sched};\text{dec}))(t,i) = \text{stutter-state}(s) \in \text{d-world-state}(D;i)$
 $\vee (\exists k:\text{Knd}, \text{val}:\text{d-decl}(D;i)(k).$
 $\text{CV}(\text{d-comp}(D;v;\text{sched};\text{dec}))(t,i)$
 $=$
 $\text{next-world-state}(D;i;s;k;\text{val})$
 $\in \text{d-world-state}(D;i)$
 $\& \text{isrcv}(k)$
 $\& \text{destination}(\text{lnk}(k)) = i$
 $\& \|\text{queue}(\text{lnk}(k);t)\| \geq 1$
 $\& \text{hd}(\text{queue}(\text{lnk}(k);t))$
 $=$
 $\text{msg}(\text{lnk}(k);\text{tag}(k);\text{val})$
 $\in \text{Msg}(\lambda l, \text{tg}. \text{M}(\text{source}(l)).\text{dout}(l,\text{tg}))$
 $\vee \text{islocal}(k))$