

val-axiom_wf^{11,40}

$\forall E:\text{Type}, \text{pred?}:(E \rightarrow (?E)), \text{info}:(E \rightarrow ((:\text{Id} \times \text{Id}) + (:(:\text{IdLnk} \times E) \times \text{Id}))), V:(\text{Id} \rightarrow \text{Id} \rightarrow \text{Type}),$
 $M:(\text{IdLnk} \rightarrow \text{Id} \rightarrow \text{Type}), T:(\text{Id} \rightarrow \text{Id} \rightarrow \text{Type}), \text{init}:(i:\text{Id} \rightarrow \text{EState}((T(i))))),$
 $\text{Trans}:(i:\text{Id} \rightarrow k:\text{Knd} \rightarrow \text{kindcase}(k; a.(V(i,a)); l,t.(M(l,t))) \rightarrow \text{EState}((T(i))) \rightarrow \text{EState}$
 $((T(i))))),$
 $\text{Choose}:(i,a:\text{Id} \rightarrow \mathbb{N} \rightarrow (x:\text{Id} \rightarrow T(i,x)) \rightarrow (?V(i,a))), \text{Send}:(i:\text{Id} \rightarrow k:\text{Knd} \rightarrow \text{kindcase}(k;$
 $a.(V(i,a));$
 $l,t.(M(l,t))$
 $)$
 $\rightarrow (x:\text{Id} \rightarrow T(i,x)) \rightarrow (\text{Msg}(M) \text{ List})),$
 $\text{val}:(e:E \rightarrow \text{kindcase}(\text{kind}(e); a.(V(\text{loc}(e),a)); l,t.(M(l,t))))), \text{time}:(E \rightarrow \text{rationals}).$
 $(\forall e:E. (\neg(\uparrow \text{first}(e))) \Rightarrow (\text{loc}(\text{pred}(e)) = \text{loc}(e) \in \text{Id}))$
 $\Rightarrow \text{SWellFounded}(\text{pred}!(e;e'))$
 $\Rightarrow (\text{val-axiom}(E;V;M;\text{info};\text{pred?};\text{init};\text{Trans};\text{Choose};\text{Send};\text{val};\text{time}) \in \text{prop}\{i:l\})$