

effect-rule^{11,40}

$\forall i, x:\text{Id}, k:\text{Knd}, ds:x:\text{Id} \text{ fp} \rightarrow \text{Type}, da:a:\text{Knd} \text{ fp} \rightarrow \text{Type},$
 $f:(\text{State}(ds) \rightarrow \text{Valtype}(da;k) \rightarrow \mathbb{Q} \rightarrow ds(x)?\text{Void}).$
 @i: with declarations
 $ds:ds$
 $da:da$

 effect of $k(v)$ is $x := f \text{ s } v$
 realizes es .
 $((\forall x:\text{Id}. \text{vartype}(i;x) \subseteq_r ds(x)?\text{Top})$
 $\& (\forall e:\text{E}. (\text{loc}(e) = i \in \text{Id}) \Rightarrow (\text{valtype}(e) \subseteq_r \text{Valtype}(da;\text{kind}(e))))$
 $\& (((\uparrow \text{isrcv}(k)) \Rightarrow (\text{destination}(\text{lnk}(k)) = i)) \Rightarrow (\text{kindtype}(i;k) \subseteq_r \text{Valtype}(da;k))))$
 $c \wedge (\forall e:\text{E}.$
 $\quad (\text{loc}(e) = i \in \text{Id})$
 $\quad \Rightarrow (\text{kind}(e) = k \in \text{Knd})$
 $\quad \Rightarrow ((\text{timed})\text{state after } e(x) = f((\text{state when } e), \text{val}(e)) \in \mathbb{Q} \rightarrow ds(x)?\text{Top}))$